

# GROUP PUZZLES

## *Sudoku Generalized*

Variations on Harder Advanced Sudoku Logic Puzzles

I	M	P	O	N	D	E	R	A	B	L	Y
				I		Y					
	L										
			Y			L	P				I
		M	E								
	B									N	P
					M		A				
		I			P		O				
				E				Y			
Y				R		P	B				
		R	I	D							A
		N								I	L

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Step-By-Step Solutions Included

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# Chapter 1

## Teaching Logic Using Group Puzzles

### Logic Practice?

Everyone understands and encourages long hours of practice for sports, music, and many other endeavors. Logic should be no different. No one doubts that Olympic athletes and professional sports stars practice their craft constantly in spite of their obvious talents. Moreover, many motivational books and lectures often focus on the life story of someone who has “made it” in their chosen field through hard work and determination in spite of abilities that do not make them stand out among their peers. Ask someone to practice thinking ... Or worse, practice logic ... Suddenly all of those lessons do not seem to apply, even though most of life’s challenges come from making important decisions off the field and require most of all, the ability to think clearly.

Many people, especially those that enjoy working puzzles of any type, believe that practice does make one a stronger and more agile thinker (to use the sports metaphor) and that such abilities do carry over to the rest of life. Many start every morning with a puzzle as a type of mental calisthenics to get “warmed up. ” Moreover, education research has shown that *active* mental exercises, even simple ones like reading a book, have a more positive impact on learning than *passive* activities, such as watching videos. Puzzles of any sort, therefore, offer an even greater opportunity to exercise your mind because they require a more active involvement in the material than reading. Just as word puzzles can exercise verbal skills and math puzzles can exercise math skills, logic puzzles exercise logic and deductive reasoning skills that can help lead to clear-minded decision making.

Unfortunately, even some ardent puzzle lovers have found Sudoku-type Group Puzzles too hard or difficult, and in the final analysis, simply not fun. Starting a brief survey of why these people did not work group logic puzzles, such as Sudoku, quickly revealed what should have been obvious: most puzzles are published for those people who already know and love group logic puzzles. Even puzzles marked as “Easy” in newspapers and magazines can prove daunting to someone who has never worked such a puzzle unless they have someone available to tutor them briefly about the basics. At the very least, they need step-by-step solutions to puzzles describing how someone can deductively reason from the particular puzzle that they are currently working on to the completed grid. The answer grid published with most Sudoku puzzles as puzzle solutions, in contrast, only tells you whether you have arrived, not *how to get there*. Although we do not expect students to learn a subject like math from just a set of problems and answers, with no explanation, tutoring, or step-by-step solutions, most sources of logic puzzles do exactly this. Thus, these publications limit their audience to those who already know and like such puzzles and, more importantly, limit their usefulness in teaching logic in an educational environment.

## Teaching Logic and Deduction.

For many people who enjoy working logic puzzles it is simply “obvious” that puzzles are a good tool for teaching logic, and nothing further needs to be said. For people who enjoy these puzzles and understand how to work them, that is true. For many others, however, especially for children and those who teach them, there are a number of challenges and potential pitfalls facing the use of puzzles to teach logic in the general population and in schools.

## Purely Deductive Puzzles.

Teaching logic is difficult. Teaching guessing is unnecessary. In order to teach logic using Group Puzzles, like traditional Sudoku puzzles, there must be at least one purely deductive set of steps that shows how to logically get from every puzzle to its answer grid that requires no guessing or backtracking. Students must know that the easiest way to solve the puzzle is to use logic so that they actively and habitually look for solutions that are deductive. Purely deductive solutions for other published Sudoku puzzles may exist, but such solutions are rarely *guaranteed*. This is one barrier to the effective use of existing puzzle sources to teach logic. Another barrier to this use of puzzles is the lack of availability of step-by-step deductive solutions. Detailed step-by-step instructions are required not only for instructors who wish to use puzzles, but may not have the time to work each puzzle before the students, but also for anyone who has never worked such a puzzle and wishes to teach themselves. Existing publishers for Sudoku puzzles do not provide step-by-step instructions that describe what values can be placed where in a puzzle, and why. Indeed, a number of puzzles in some publications have been found to have no simple deductive solution and require guessing and backtracking. These are usually “symmetric” puzzles, so named because they are constructed from a solution grid using a pattern of empty cells that is reflectively symmetric about one or more axes. Symmetric puzzles are an attempt to approximate puzzle difficulty by use of these patterns. When puzzles are **rated quantitatively**, however, symmetric puzzles have been found to provide only a coarse probabilistic approximation to puzzle difficulty in terms of the number of deductive steps required to solve the puzzle.

## Guaranteed Correct Puzzles.

Like any other educational tool, the effectiveness of using puzzles to teach logic requires educational materials, including puzzles, strategy guides, step-by-step solutions, and hints, that are *always* correct. Incorrect puzzles teach students that logic and deduction do not work. Incorrect puzzles teach students to guess rather than to reason and solve. Incorrect puzzles drive students away from logic. Students must know that the effort expended in logically deducing solutions is not a wasted effort or the puzzles are no longer fun and become just another school chore. Puzzle correctness can be guaranteed by the use of a set of automated tools and stringent quality control measures that eliminate errors in the puzzle generation, rating, and type setting processes.

## Carefully Calibrated Puzzle Difficulty.

The educational effectiveness of puzzles is also strongly dependent on matching puzzle difficulty to the solver’s current abilities. Puzzles that are too hard make students frustrated and risk the most important advantage they have for teaching: making learning fun. Puzzles that are too simple have little teaching value or make students bored, also risking the fun factor. Thus, educational logic puzzles require a very accurate puzzle difficulty rating system. This, however, is yet another barrier to the effective use of existing puzzle sources. Most publishers separate puzzles into sections with labels, such as Easy, Medium, and Hard.



The detailed quantitative classification algorithm [described here](#), however, has been used to show that there is tremendous overlap in the difficulty ratings in sections of some existing publications with supposedly different difficulty classifications. Indeed, in one publication there were puzzles that required guessing (i.e. they were nondeterministic) in the section labeled “medium” rather than in the section labeled “hard,” although there were fewer nondeterministic puzzles in that section. In addition, the puzzle with the most difficult deterministic solution in the entire book was found in the medium section, not the hard section.

### **Diverse Puzzle Difficulty Levels.**

Carefully calibrated puzzle difficulty is only as effective as the availability of puzzles at a wide variety of difficulty levels. Working puzzles provides vital practice of logic skills, but these skills must be exercised regularly and the exercise itself must be well-suited to each person’s current ability level so that they are challenged without being overwhelmed. This requires puzzles at many difficulty levels, from very simple to extremely challenging, for puzzles *of every type*. The easy availability of puzzles at the appropriate level of difficulty helps students make steady progress without risking frustration or boredom.

### **Diverse Logic Puzzle Types.**

There are several reasons why many different types of logic puzzles are essential to teaching logic. First, new and different puzzle types help to keep and hold the interest of students. If they are not fun, then one of the key advantage of puzzles is lost. Second, smaller puzzles are inherently easier to work than larger puzzles and choosing the type of puzzle is the first and most important part of selecting the appropriate difficulty of a puzzle for a particular audience. A simple 3x3 grid puzzle, such as the one shown here, may prove

Simple 3x3 Grid Puzzle

1		2
	1	
3		1

challenging for most younger children, but boring and unappealing to older grades. Larger Group Puzzles (such as size 12 or 16) also greatly increase the difficulty of a puzzle, more so than just the overall size. For example, a 12x12 grid with 12 distinct group values and an overall size of 144 cells can be much more difficult than one of the Sunday newspaper puzzles with five overlapping traditional Sudoku puzzle with 9 distinct group values on a 21x21 grid with an overall size of 369 cells. Third, and perhaps most importantly, new types of puzzles help students generalize their solving techniques and logic skills rather than focusing on the puzzles themselves and developing mental habits that are useful only in solving one particular type of puzzle, such as the traditional Sudoku puzzle. Since group logic puzzle are mathematical constraint satisfaction problems, there is no simple algorithm to deductively solve all such puzzles, so children can (and should) be encouraged to discover their own puzzle solving rules and heuristics and then check them for correctness and usefulness by applying them to new puzzles. Since the rules for checking solutions to these puzzle are simple enough that even young children can understand the rules of the smaller puzzles, Group Puzzles offer a wonderful opportunity to combine both logic and fun for everyone.

## Puzzles Annotated with Step Numbers.

Another way to focus on learning logic is to solve one of the harder or larger puzzles using a grid that shows the step in which each empty cell can be deduced using the rules outlined in the [general strategy guide](#). Knowing which cells *can* be filled in given the current state of the puzzle is often the hardest part of finding a solution. Specifying that information in the puzzle itself eliminates the question of where to work on the puzzle next and allows the solver to focus on looking for a specific solution using only logic, since they know there has to be a way for the value of the cells in the current step to be deduced from the given information. While this approach can be used for any puzzle type and any difficulty level, it is particularly useful for very large or very difficult puzzles where there are many more options to consider that lead to a solution. For example, in the tournament-level puzzle shown here, there are 25 dependent steps that lead to the solution using the standard algorithm. The step number is annotated in the top right corner of each empty cell. All

Tournament-level

<b>6</b>	<b>7</b>	22	24	24	<b>2</b>	23	<b>4</b>	21	1
<b>1</b>	24	23	23	21	8	24	22	20	
18	19	14	24	<b>3</b>	<b>5</b>	24	<b>8</b>	23	
17	18	1	<b>2</b>	23	24	13	2	11	4
16	15	<b>2</b>	7	<b>1</b>	8	9	12	10	
<b>7</b>	<b>8</b>	2	8	7	6	<b>6</b>	1	<b>5</b>	
16	23	23	<b>4</b>	22	<b>9</b>	2	24	<b>1</b>	7
15	3	24	25	<b>2</b>	24	<b>9</b>	23	22	
<b>2</b>	<b>6</b>	1	5	6	4	2	<b>7</b>	<b>8</b>	
1			4			7			

cells with the same number can be logically deduced independently of one another from only the initial givens and all the cells with lower step numbers. Using these types of puzzles annotated with the solution step information can change the problem solving experience significantly because the frustration associated with fruitlessly searching for the next move can be avoided for those that have not yet acquired those skills. Thus, these types of puzzles with step numbers annotated in all the empty cells are, in a very real sense, a new type of puzzle in and of themselves.

Another variation on this type of puzzle is to fill in some, but not all, of the step numbers on the harder or larger puzzles. For example, annotating the first several steps of puzzles provides the opportunity for solvers to tackle harder puzzles than they usually attempt. Annotating the last few steps is another possible variation that outlines to the solver the more difficult areas of the puzzle to help them avoid wasting effort, without providing them with an explicit road map of how to go about solving the puzzle.

The beauty of these types of puzzles is that there are an enormous number of logical ways to solve each puzzle and many different heuristics and strategies for each solver to discover, practice, and evaluate. The key is to enable this type of learning without limiting future opportunities for additional learning, by

First three steps

	<sup>2</sup>		<sup>1</sup>	<b>2</b>		<sup>3</sup>		<b>3</b>	<b>4</b>	<b>1</b>	<sup>3</sup>
					<b>6</b>	<b>1</b>	<b>8</b>		<sup>3</sup>		<sup>2</sup>
			<b>3</b>			<b>8</b>		<sup>1</sup>	<b>9</b>	<b>7</b>	
						<b>2</b>		<sup>3</sup>	<sup>3</sup>		<b>1</b>
<b>3</b>		<sup>1</sup>	<b>6</b>		<sup>2</sup>			<b>7</b>	<b>5</b>		<sup>2</sup>
		<b>4</b>			<b>8</b>		<sup>1</sup>	<sup>2</sup>			
		<sup>3</sup>		<b>8</b>	<b>7</b>		<sup>1</sup>	<b>5</b>	<b>2</b>		<sup>2</sup>
<b>6</b>	<b>9</b>		<sup>3</sup>					<b>1</b>		<sup>1</sup>	<sup>3</sup>
<b>2</b>		<b>7</b>		<b>1</b>					<sup>3</sup>		<b>6</b>

providing a wide variety of puzzles and only general guidance.

## What Exactly are Group Puzzles?

The short answer is that Group Puzzles are a generalization of Sudoku puzzles, just as Sudoku puzzles are a generalization of Latin Squares. The long answer requires a brief history of Sudoku puzzles.

### Latin Squares.

Sudoku puzzles are often described as a special type of *Latin Square* of size 9 that has additional constraints. A Latin Square is a well-known mathematical construct that has been the subject of study for decades. A Latin Square of size N is defined to be a square matrix with N rows and N columns containing only integers from 1 to N arranged so that there are no duplicate integers in any row or column. A Latin Square the size and shape of a traditional Sudoku puzzle is, therefore, a Latin Square of size 9.

Valid Latin Square

1	9	8	7	6	5	4	3	2
2	1	9	8	7	6	5	4	3
3	2	1	9	8	7	6	5	4
4	3	2	1	9	8	7	6	5
5	4	3	2	1	9	8	7	6
6	5	4	3	2	1	9	8	7
7	6	5	4	3	2	1	9	8
8	7	6	5	4	3	2	1	9
9	8	7	6	5	4	3	2	1

The particular Latin Square shown here, however, is not a valid Sudoku puzzle solution because (among other problems) the 3x3 square in the upper left corner has duplicate integers and is missing some of the integers, such as 4, 5, 6, and 7. It does however meet all the constraints of a Latin Square because each row and column contains a full set of the integers ranging from 1 to 9.

A Latin Square puzzle can be generated from a Latin Square by replacing some of the numbers with empty cells. Care must be taken when selecting which cells to leave empty or the puzzle that is generated from the Latin Square may not be solvable. In order to create a useful puzzle, the values of all of the empty cells must be able to be determined by examining the numbers remaining in the puzzle, given the row and column group constraints which define a Latin Square. If too many cells are left empty, there may be more than one valid Latin Square that contain the initial values given in the puzzle. Even greater care must be taken to ensure that the puzzle has a purely deductive deterministic solution that does not require guessing or backtracking.

Latin Square Puzzle

1	9	8	7		5	4	3	2
2	1	9	8		6	5	4	3
3	2	1	9		7	6	5	4
4	3	2	1		8	7	6	5
6	5	4	3		1	9	8	7
7	6	5	4		2	1	9	8
8	7	6	5		3	2	1	9
9	8	7	6		4	3	2	1

## Sudoku Puzzles.

Although not all Latin Squares are valid Sudoku puzzles, the reverse is true: all traditional Sudoku puzzles are valid Latin Squares. This is because a traditional Sudoku puzzle constrains not only the rows and the columns to be complete groups of the integers from 1 through 9, but also constrains all of the 3x3 squares to be complete groups as well.

## Group Puzzles.

Group puzzles include many variations on traditional Sudoku puzzles that typically fall into several different categories: group sizes other than 9, additional constraint groups, such as diagonals, inner squares or jigsaw shapes, groups of unique values other than numbers (such as letters) and multiple overlapping puzzles of various types (quilted puzzles). One thing all of these puzzles types have in common is the specification of a group of unique symbols or values that make up each constraint group defined for a particular type of puzzle. Like Latin Squares, elements of a complete valid Sudoku or Group Puzzle grid can be removed to create a puzzle where the missing items can be logically deduced from the remaining values and the constraints on the groups.

Group puzzles also include an even broader set of generalizations of Sudoku puzzles in that groups need not be contiguous shapes, rows and columns need not be groups (i.e., the puzzle need not be a valid Latin Square), and the values in the groups can contain duplicates.

A non-contiguous group is a group where the members of the group are not immediately next to each other in the puzzle, such as the outside corners of a 4x4 puzzle. In this type of puzzle, the non-contiguous outside corners of the puzzle form a group in addition to the contiguous 4-element groups consisting of rows, columns, and 2x2 squares. Non-contiguous groups are logically no different from puzzles with only contiguous groups, but they pose two different challenges for human puzzle solvers. The first difficulty concerns how to visually identify which cells in a non-contiguous group actually make up a non-contiguous group. The most common way to show this is to use a single color or shade of gray to indicate that the

Outside Corners as a Group

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>2</b>			<b>3</b>

cells of the same shade belong to the same group. In cases where the non-contiguous group follows a clear enough pattern, such as the upper right corners of every rectangle, the group members may be outlined rather than shaded. The second difficulty is developing the habit of perceiving diverse disconnected cells as part of the same group.

Group puzzles that are not valid Latin Squares also pose additional challenges for human puzzle solvers for several reasons. First, rows and columns are visually obvious groups for human solvers that are difficult to ignore. Second, in-grained habits are often difficult to break. Moreover, additional constraint groups can make logical deductions easier when there are more unknowns, so removing the constraints on rows or columns can make it more difficult to deduce other unknowns in the puzzle. For this reason, non-Latin puzzles typically require additional constraint groups that take up the slack for a missing row or column constraint. The next example illustrates one of these types of Group Puzzles that is neither a traditional Sudoku puzzle nor a Latin Square. In this puzzle, rows are not constrained to be groups, but the columns,

Non-Latin Square Puzzle

<b>6</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>4</b>
<b>4</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>2</b>
<b>5</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>1</b>
<b>2</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>6</b>
<b>1</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>3</b>
<b>3</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>5</b>

2x3 rectangles, the one diagonal, and the group comprised of the upper right corners of the 2x3 rectangles are all constraint groups.

Group puzzles, unlike traditional Sudoku puzzles, can contain repeated elements in a group. An example of one such puzzle uses the familiar Sudoku 9x9 grid with a group size of 9, but the group contains only the numbers 1 through 8 with the value 1 present twice in each row, column, and 3x3 square. In other words, the group for the puzzle is (1, 1, 2, 3, 4, 5, 6, 7, 8). These types of puzzles offer a different type of challenge, since groups with duplicate values can make for more difficult puzzles that requires new strategies to deal the the fact that some symbols can be repeated.

Group Puzzle with duplicate 1s

4	3	6	8	7	1	1	2	5
1	7	1	5	2	3	6	8	4
5	2	8	1	6	4	1	7	3
6	5	7	3	8	1	4	1	2
3	1	4	2	5	7	8	1	6
8	1	2	1	4	6	5	3	7
1	4	5	7	1	2	3	6	8
7	6	3	4	1	8	2	5	1
2	8	1	6	3	5	7	4	1

## Naming New Puzzle Types.

The name of a puzzle should describe its most important characteristics, since creating new and different puzzle types is one of the important ways, from a teaching perspective, to keep puzzle solving fresh and useful. Although creators of Sudoku puzzles have typically limited themselves to a relatively small number of puzzle types with an ad-hoc collection of names, the goal of introducing dozens or even hundreds of new group puzzle types into common usage requires a naming convention for puzzles, such as the one described below, in which the name of the puzzle suggests some of its most important attributes.

### Group Puzzle Size.

One of the most important attributes of a Group Puzzles is the size of its constraint group. For traditional Sudoku puzzles which require the placement of the values 1 through 9 exactly once in each of the 9 rows, columns, and 3x3 squares, the group size is 9. The puzzles that consist of 5 overlapping traditional Sudoku puzzles, also have a group size of 9 (even though the 5 overlapping puzzles are part of a larger 21x21 grid) because there are exactly 9 different values that must be placed in each row, column, and 3x3 square. The standard name for a traditional Sudoku puzzle in this new naming convention, therefore, would be **Sudoku-9**.

### Group Puzzle Base Constraints.

Group puzzles of size 9 that do not require both the rows and columns to be constraint groups are not valid Latin Squares. The standard name would reflect this lack of constraints with the name **Nonlatin-9**. Similarly, the name **Latin-9** implies that all of the rows and columns are constraint groups, but that there are no additional square constraint groups. The name **Sudoku** would be retained only for those puzzles that require rows, columns, and any type of rectangular constraint group that covers the entire puzzle. Thus, in

the standard naming convention, any puzzle named **Sudoku-N** has a group size of N with all of the rows, columns, and rectangles being constraint groups.

### Group Puzzle Rectangular Constraints.

Group sizes that are integer squares, such as 4, 9, 16, and up, have the obvious square constraint groups of 2x2, 3x3, and 4x4, respectively. Puzzle sizes that are not integer squares, but are even integers, can be divided into N rectangles of the same shape and orientation. These rectangles can be oriented either horizontally or vertically. The horizontal layout is considered standard and requires no addition to the standard name. The vertical layout is designated in the name by adding the word *up* after the size. Thus, the name **Sudoku-6** indicates a puzzle that has six 3x2 horizontal rectangle constraint groups and a **Sudoku-6up** puzzle has six 2x3 vertical rectangles. A more common name for a Sudoku-6 puzzle is **Sudoku-Junior**

Sudoku-6up

1	2	3	4	5	6
6					
5					
4					
3					
2					

just as the common name for a Sudoku-9 puzzle is just **Sudoku**. Some group sizes, such as 12, can be

Sudoku-Junior

1	2	3	4	5	6
6					
5					
4					
3					
2					

divided into either 2x6 or 3x4 rectangles. Puzzles with narrow rectangles are usually more difficult to create and solve, so the more square-like shapes are favored in the standard naming. The name **Sudoku-12up**, therefore, refers to a puzzle with 12 vertical 3x4 rectangles.



SuperSudoku-8

1	2	3	4	5	6	7	8
8							
7							
6							
5							
4							
3							
2							

There is no logical limitation on creating Group Puzzles with both horizontal and vertical rectangles as constraint groups. The primary limitation is how to display the puzzles in such a way so as to *show* both the horizontal and vertical rectangles as constraint groups. The compromise described here appears to be the best solution: display the puzzle with the vertical rectangles outlined and the horizontal rectangles alternately shaded. If all of the horizontal rectangles were shaded, the entire puzzle would be shaded. By shading them in a checker board fashion, the horizontal rectangles are fairly clearly marked. The standard naming convention for puzzles in which both the horizontal and vertical rectangles are constraint groups is to attach the prefix “Super.” to the standard name. Thus, a Group Puzzle of size 8 with both the 2x4 and 4x2 rectangles as constraint groups would be called **SuperSudoku-8**.

### Group Puzzle Jigsaw Shapes.

Group sizes that are neither integer squares nor even integers cannot be divided into N identical rectangles, so some other shapes must be devised. The simplest solution is to use irregular contiguous jigsaw-puzzle shapes. There are many ways to divide squares into jigsaw shaped pieces of size N. One possible set of jigsaw puzzle shapes is illustrated for the **Sudoku-5** puzzle shown here.

Sudoku-5

1	2	3	4	5
5				
4				
3				
2				

Not all possible divisions into jigsaw-puzzle type shapes, however, result in puzzle types that have any solutions. In general, the shapes cannot overlap any particular row or column in too many cells, or the resulting puzzle definition has few or no solutions that can be turned into puzzles. Because there are so many possible jigsaw puzzle shapes, multiple types of jigsaw puzzles may be defined for a particular group size. The naming convention for these additional puzzles of the same size is to add an additional letter following the standard name. For example, the following **Sudoku-5B** puzzle has a different set of jigsaw puzzle shapes from the previous Sudoku-5 puzzle as shown here. The letter 'B' is used in this name because

Sudoku-5B

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>5</b>				
<b>4</b>				
<b>3</b>				
<b>2</b>				

it is assumed that the initial jigsaw puzzle of the particular size is the 'A' puzzle. The third variant of size 5 would be named **Sudoku-5C**, etc.

### Group Puzzle Diagonal Constraints.

One fairly common addition to the the standard row, column, and rectangular constraint groups is to add the diagonals of a square of size N as constraints. The two diagonals represent constraints in addition to the other constraints, even though there are only two diagonals and not every cell is a member of a diagonal constraint. The standard naming convention is to add the suffix "-X" to a base puzzle type. For example, a **Sudoku-9-X** or **Sudoku-X** puzzle is a standard Sudoku puzzle of size 9 with the addition of both diagonals as constraint groups. In order to visually show the presence of the diagonals as a constraint group, they are usually shaded, as shown below. The naming convention of adding an 'X' to the puzzle name is because the two shaded diagonals look like the letter X. Adding both diagonals to many puzzles smaller than size 8 results in a puzzle definition that has no valid answer grids that can be made into puzzles. For some of these, a single diagonal can be added to produce puzzles. The standard naming convention for puzzles with a single diagonal rather than both diagonals is to append a 'D' to the name rather than an 'X'.

### Additional Group Puzzle Rectangular Constraints.

Another way to define puzzles with additional group constraints is to have interior shapes that overlay several of the standard rectangles or squares of an existing puzzle. These puzzles are named by adding a prefix of "Hyper" to the standard puzzle name, following the pattern set by the most common puzzle of this type, the **HyperSudoku** puzzle. The HyperSudoku puzzle, shown below, derives its name from the fact that it adds a fourth constraint group to the usual three constraint groups of a traditional Sudoku puzzle, just as a hypercube adds a fourth dimension to the normal three dimensional of a traditional cube.

There are many different types of interior shapes that can be chosen for various types of Hyper-Sudoku puzzles. As usual, the most difficult part is to design the puzzle in a way that clearly indicates which cells

Sudoku-X

1	2	3	4	5	6	7	8	9
9								
8								
7								
6								
5								
4								
3								
2								

HyperSudoku

1	2	3	4	5	6	7	8	9
9								
8								
7								
6								
5								
4								
3								
2								

are in a group. Most often this is done using shading. For example, the **HyperSudoku-12** puzzle has four 4x3 interior rectangles and one 6x2 rectangle, all shaded gray to show their location. Like diagonals, adding too many interior rectangular constraints or not overlapping the interior shapes over enough other puzzle constraint groups can severely limit or eliminate the number of possible completed grids that can be turned into puzzles.

Overlapping interior shapes can be logically defined and implemented, but the problem is finding ways

HyperSudoku-12

0	1	2	3	4	5	6	7	8	9	A	B
B											
A											
9											
8											
7											
6											
5											
4											
3											
2											
1											

to express the constraint groups clearly to the solver. One way to show an additional overlapping set of interior shapes, is to use an additional shade of gray, another color, or a shading pattern for the second set of constraint groups. All such indicators, however, must be clearly distinguishable by the solver even when the groups overlap. The **HyperSudoku-X** puzzle is one such puzzle with two different overlapping shaded constraint groups. A HyperSudoku-X puzzle combines the constraint groups of a HyperSudoku and a Sudoku-X puzzle, as the name implies.

### Non-Contiguous Group Puzzle Constraints.

A non-contiguous constraint group has group elements that are not immediately next to each other in the puzzle, such as the outside corners of a Sudoku-4 puzzle. In this puzzle, the non-contiguous outside corners of the puzzle form a constraint group in addition to the contiguous 4-element rows, columns, and 2x2 squares. No standard naming convention for non-contiguous groups has been defined, as yet, and ad-hoc abbreviations for the non-contiguous groups is recommended. Thus, the Sudoku-4 puzzle in which the outside corners also make up a constraint group, the name is chosen to be **Sudoku-4-OC**. The most common way to show this is to use a single color or shade of gray to indicate that the cells of the same shade belong to the same group. In cases where the non-contiguous group follows a clear enough pattern, such as the upper right corners of every rectangle, the group members may be outlined rather than shaded. For example, the following puzzle is named **Sudoku-6up-UR-D** because the base puzzle is a Sudoku-6up with the additional constraints that the upper-right corners of the rectangles are a constraint group, as is the single descending diagonal.

HyperSudoku-X

1	2	3	4	5	6	7	8	9
9								
8								
7								
6								
5								
4								
3								
2								

Sudoku-4-OC

1	2	3	4
2			3

Sudoku-6up-UR-D

1	2	3	4	5	6
6					
5					
4					
3					
2					

## Signature Puzzles.

A signature puzzle is a standard Group Puzzle type in which the usual sequence of numbers, or letters for the larger puzzles, are replaced with a specific set of letters or numbers that spell out a word or message. One

First Row

E	D	U	C	A	T	I	O	N
				I				
I					U			
	I				E			C
	T	D	A				N	
	E			C		O	T	
				U				
D		I						T
A			I	T		C		E

singularly appropriate signature puzzle for educational purposes, is one that is created using a traditional Sudoku puzzle and substituting the letters that make up the word “EDUCATION” for the digits 1 through 9. If a puzzle were created randomly using these letters, however, there is little chance of the word “education” appearing anywhere in the puzzle. So, for a signature puzzle to be recognized as such, the word should appear in order in one of the constraint groups. The first row of the puzzle is the most prominent location to place the word or phrase when creating a signature puzzle.

First Column

W		D	
O			
R			
D	W		

The *signature*, however, can be placed in other prominent places, such as the first column, or any constraint group of any type of puzzle.

In fact, a signature can be placed in more than one spot in a puzzle. Placing the signature in more than one spot in a puzzle, however, can be challenging for two reasons. First, it is difficult in most puzzles to place a signature that is readable in two different constraint groups that does not violate the group constraints of the puzzle. For example, you may want to place the signature in both the first column and the first row. This is not possible using any of the Group Puzzles that have the traditional Sudoku constraint groups consisting of all rows and columns because it results in duplicate letters in the first rectangle. However, in some groups of certain types of puzzles, such as HyperSudoku puzzles, it can be done.

				C				
	E	D	U				I	
	C	A	T					
	I	O	N					C
						E		
		C			E	D	U	
					C	A	T	
			D		I	O	N	
D								

### Quilted Puzzles.

New types of Group Puzzles can be created by overlapping more than one of the smaller Group Puzzles. By overlapping smaller compatible puzzle types these larger puzzles are *quilted together*. The simplest way to ensure that the smaller quilted puzzles types are compatible is to make sure that they all use the same set of symbols as the constraint group for the quilted puzzle. The most common type of quilted puzzle is the set of five overlapping traditional Sudoku puzzles often found in the Sunday newspapers under a variety of different names. In the standard naming convention, it is called Sudoku-by5 because the base type of puzzle is a Sudoku and there are five overlapping puzzles. The smaller puzzles do not need to be the exact same type of puzzle, as illustrated by the Sudoku-Xtreme puzzle type which consists of 4 Sudoku-X puzzles linked together with a single traditional Sudoku puzzle. Signature puzzles can be derived from quilted puzzles as easily as from regular non-quilted puzzles with the added advantage that the signature word can easily be placed in at least one constraint group in each of the smaller Group Puzzles, enhancing the overall effect.

1								
8					2	6		
							1	5
2	9			8				1
		7		1		2		
				7	4		6	
	2							
	1		4				9	
3					5			

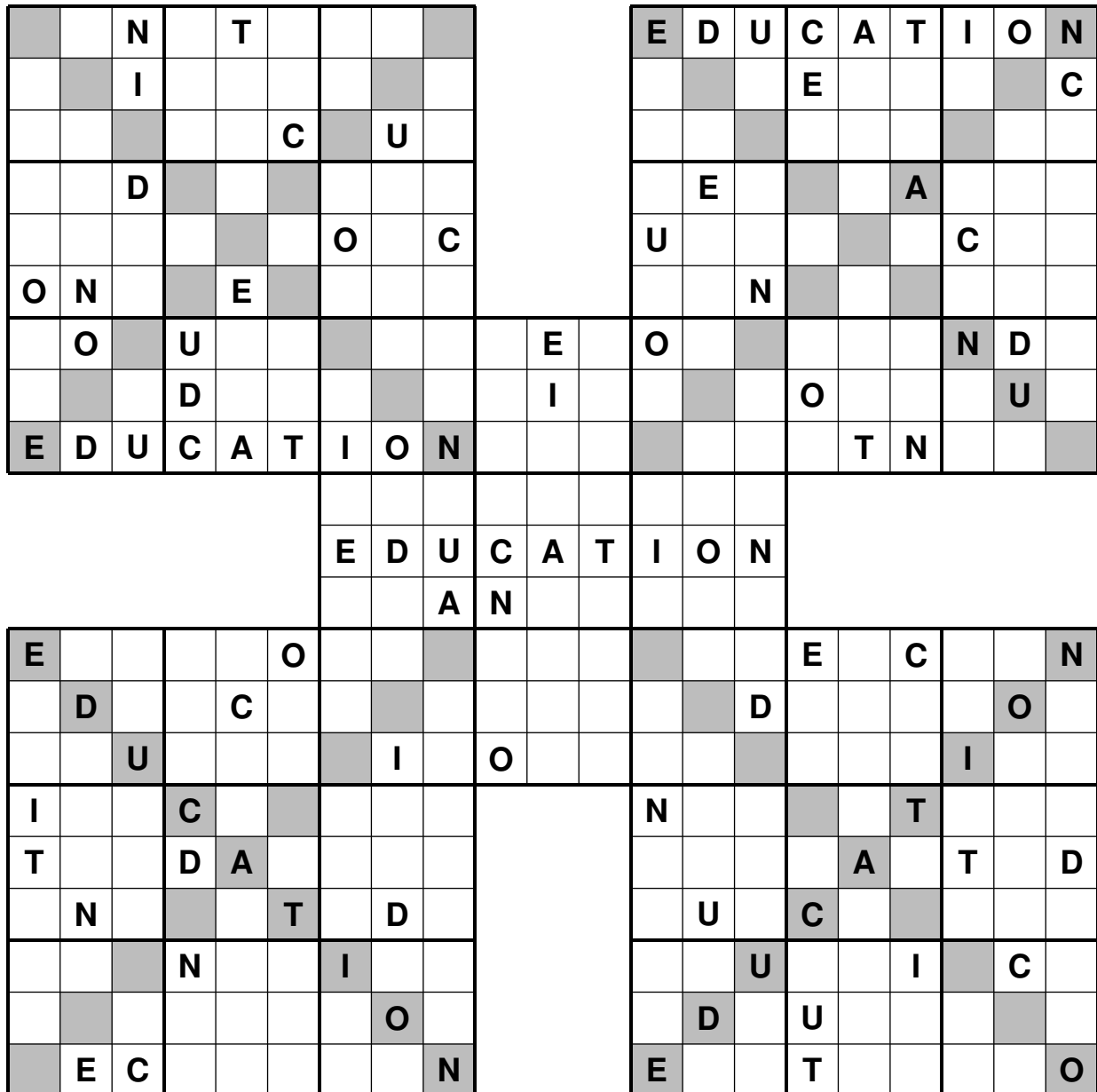
	8							3
							1	
5	2			1				
1			3					2
		8			9			
			4				9	
			8		5		4	
				7				1
					6		5	

		5	6			7		
	1							3
				2		5		

2			5					
				4	3			
1				3				5
					9			4
	8		7					
				8	2	9		
5			4			6		
		2						

4								
			2					
			3		7		4	
	6	5			1			
				6		4		8
7					5	9		
				8				7
	3						9	
		9			6	5		





## Chapter 2

# Solving Group Logic Puzzles

### Help with those 'Simple Rules.'

The instructions for a traditional Sudoku puzzles are simple: Place all of the elements 1 through 9 exactly once in each row, column, and 3x3 square. The beauty, as well as the challenge, of all types of group logic puzzles like Sudoku is the minimalist nature of these rules. Knowing *how to check* for a correct solution, however, does not mean that the solution is easy to *logically deduce*.

In fact, the class of computer science problems that have a simple solution check but no known optimal algorithm are proven to be the most difficult class of problems to solve, with the optimal solutions requiring guessing correctly at every possible choice point. For these types of puzzles, there does not exist a single set of rules or algorithm that will always produce a set of solution steps that leads the solver deductively from puzzle to solution, for every possible puzzle that has a solution. Thus, computers and humans alike, must guess at solutions for certain Sudoku and Group Puzzles and check the group constraints to see whether the solution is in fact valid. Although computers can guess, check, and backtrack quickly if they are wrong, **puzzles designed to be worked by humans should not require guessing or backtracking if the purpose is to teach deductive logic.** For teaching purposes, puzzles should be selected only if there exists a sequence of deductive step-by-step moves that lead from the puzzle to the solution.

Although there does not exist a simple definitive set of rules for deductively solving all puzzles, there do exist general strategies, which computer scientists often call *heuristics*, that can be used to solve most puzzles. For Group Puzzles there are two basic strategies that encompass most of the strategies in common use: find the only spot in a particular group where a certain value can occur (given the group constraints) and find the only value that can be placed in a particular spot (given the group constraints).

### Strategy 1.

The first and most common approach to solving these puzzles is to figure out all the spots in a constraint group where a particular value cannot be placed, and when there is only one spot left in the group where it is allowed, you have found the spot where the value must be put. To do this, check if one value in the puzzle appears in several places and constrains where that value can appear in another group. In example 1, the value 4 must appear at the top of the first column at coordinates (1, 1) because the value 4 appears outside the 1st 3x3 square (top left 3x3 square) in rows 2 and 3 as well as columns 2 and 3. So, *the only spot left for 4 in the 1st 3x3 square is at (1, 1).*

Although the application of this technique to 3x3 squares is by far the most common way for people to work towards a puzzle solution, the same logic applies to rows and columns as well. In the next puzzle, the value 5 must appear at (1, 1) because the 5 in the second row means that 5 cannot appear in the last 3

Example 1

	*	*						
*	*	*	*	*	*	*	*	4
*	*	*	*	*	4			
	4	*						
		*						
		*						
		*						
		4						

columns of row 1, and the 5 in the fifth row means that it cannot appear in column 5 of row 1. Furthermore, the 5 in the last row rules out a 5 in column 3, and there are already values of 2, 3, and 4 in the second, fourth, and sixth columns of row 1. Thus, *the only spot left for 5 in the 1st row is at (1,1).*

Example 2

	2	*	3	*	4	*	*	*
		*		*		*	5	*
		*		*		*	*	*
		*		*				
		*		5				
		*						
		*						
		*						
		5						

The values in columns can be similarly deduced. In the puzzle below, a 6 must be placed at (1, 1) because the value 6 in the third column eliminates the last three rows as spots for a 6 in column 1, and the values 1, 2, and 3 in column 1, as well as the 6s in columns 5 and 9, rule out the remaining spots. Thus, *the*

Example 3

<b>2</b>								
*	*	*	*	*	*	*	*	<b>6</b>
*	*	*	*	<b>6</b>				
<b>3</b>								
<b>1</b>								
*	*	<b>6</b>						
*	*	*						
*	*	*						

only spot left for 6 in the 1st column is at (1,1).

This same strategy can be used to deduce values in other types of Group Puzzles as well. In the HyperSudoku puzzle below, the four inner squares that are colored gray are additional groups that must also contain the values 1 through 9. Here, the only spot left for a 4 in the 1st 3x3 square is at (2, 1), because

Example 4

*		*						
*	*	*	*					
*	*	*	*					
*	*	<b>4</b>	*					
*								
*								
*								
*								
<b>4</b>								

the 4 in the last row rules out all of the spots in the first column, and the 4 in the fourth row rules out all of the gray squares and the third column of the 1st 3x3 square. Additional groups, like the inner 3x3 squares,

provide additional constraints that make this strategy more effective with fewer givens; only two 4s outside the completely empty 1st 3x3 square were required to determine where in the 1st 3x3 square the 4 must be placed.

## Strategy 2.

Another strategy that is useful in some puzzles is to determine what values cannot possibly be placed in a particular spot, and if there is only one possible value left, then the spot must hold that value. The values that cannot appear in a spot can be determined by finding all the values that already appear in any of the groups that include the spot. Thus, in example 5 below, *a 9 must be placed at (1, 1) because it is the only value left that is not already in the 1st 3x3 square, the 1st column or the 1st row*. A 1, 2, or 3 placed at (1, 1) would

Example 5

	-	-	<b>1</b>	<b>2</b>	<b>3</b>			
-	-	-						
-	<b>5</b>	<b>4</b>						
-								
-								
-								
<b>6</b>								
<b>7</b>								
<b>8</b>								

conflict with the values in row 1. Similarly, a 6, 7, or 8 would conflict with the values in column 1 and both a 4 and 5 can already be found in the 1st 3x3 square. This strategy is often called *counting* in Sudoku puzzle solving guides.

## Strategy 3.

One deterministic strategy that is often found in advanced Sudoku puzzle solving guides under a wide variety of names is illustrated in the puzzle below. Since only 8 and 9 are missing from the second 3x3 square, they must both be located in the third row, even though which number goes where in the two empty spots cannot yet be determined. This, however, implies that there must be an 8 in the third row in the 2nd 3x3 square, and that 8, therefore, cannot appear in the third row of either the 1st or 3rd 3x3 squares. Additional constraints shown in the puzzle imply that 8 cannot be placed anywhere in the 1st 3x3 square other than at (1, 1). Unlike the previous techniques that apply equally to rows and columns, this one can only be used when there are two groups that overlap in at least two spots. Thus it can only be applied to 3x3 squares and rows or 3x3 squares and columns in a traditional Sudoku puzzle, because any two rows and columns overlap only in one

Example 5

	*	*	1	2	3			
1	*	*	4	5	6			
*	*	*	7					
	8	*						
		*						
		*						
		8						

spot. In the published puzzles that have been evaluated to date, this deterministic strategy has not proven necessary to solve puzzles when the first two deterministic methods are combined. Any moves determined by this strategy can almost always be determined by using only the first two methods, although each empty spot cannot necessarily be determined at the same point in the solution. For this reason, this third strategy is not currently used in the **puzzle difficulty key algorithm** used to rate puzzles. If a puzzle were designed so that this strategy was required when the first two were insufficient to make progress toward the solution, the current puzzle difficulty algorithm would search for a nondeterministic guess that would allow for a solution. Thus, in effect, the puzzle rating system would rate this or any other type of deterministic strategy that was not implemented in the rating algorithm as a nondeterministic step.

### Nondeterministic Strategies.

The strategies listed so far are all *deterministic* because they allow the value to be logically determined without any question or doubt so long as no mistakes have been made in the puzzle. Another technique is called *nondeterministic* or more colloquially, “guess and check,” because it requires guessing that a step is correct without any logical guarantees that it is correct. Nondeterministic steps may not lead to a solution and may in fact lead to a contradiction in the sense that you may reach a point where no value is valid for a spot. If all of your other steps before and after your guess were deterministic and based solely on logic, then by reaching a contradiction you have logically shown that your guess was incorrect and that the value cannot be placed in the spot specified by your guess. Multiple guesses are much more complex and require negative results on all possible combinations to draw any conclusions about the validity of the initial guess. Nondeterministic algorithms that check all possible guesses are often used by computers to solve these puzzles. This technique, however, often proves difficult and error prone for most human solvers. Nevertheless, some puzzles are published that require a nondeterministic step (or guess) and if you reach a point in the solution of a puzzle where it seems that you cannot make any further deterministic progress, you may need to make a guess at that spot and backtrack to the exact same puzzle where you made your guess if you eventually reach a contradiction. Multiple levels of guesses have never proven necessary to solve and

rate any published puzzles tested to date. Indeed, many argue that it is not a valid Sudoku puzzle unless there exists a deterministic solution that does not require guessing.

Although there are many other types of deterministic and nondeterministic strategies that can be used to solve these types of puzzles, the two deterministic strategies described above and in the section on **computing difficulty keys** have been found to be sufficient to solve the vast majority of the published puzzles tested so far. By allowing a single guess (nondeterministic step), all published puzzles tested have been solved. This indicates that these two deterministic strategies are general enough to replace all of the rules and patterns that make up most Sudoku strategy guides.

## Puzzle Difficulty Levels Explained.

Puzzle difficulty is ranked using the number of deductive steps required to solve the puzzle. Each deductive step consists of one or more logically independent deductions of empty cell values. Each empty cell value can be determined based only on the puzzle information from the previous steps. None of the values deduced in the current step are required to determine other moves in the current step.

Puzzles that are too hard, or too easy, can be one of the most frustrating aspects of puzzle solving for both serious and casual solvers. For this reason, rating puzzles is one of the most important parts of creating Group Puzzles. It is also, however, one of the most difficult. Even apparently simple rating systems, like one to five stars, or “easy,” “medium,” and “hard,” often make assumptions about whether the reader is a serious or casual puzzle solver. The wide variety of Group Puzzles types makes ranking puzzles even more complex. The difficulty ranking system used here is designed to help both casual and serious solvers understand the difficulty of a particular puzzle before attempting a solution.

This difficulty ranking system is not just a simple set of group labels. The “Difficulty Key” or *DiffKey* is a string of digits and the letters A-D that is derived directly from the deductive solution steps, one character for each step in the solution. The meaning of each character for the step is described in detail in the remainder of this section. The “Difficulty” of a puzzle is just the length of this string, and is, therefore, the number of steps in the deductive solution. This single number provides less information than the DiffKey, but more than a simple rating word. Labels like “Medium” or “Challenging” can then also be used to describe ranges of difficulty levels of puzzles for the purposes of grouping puzzles in book sections. The following names have been chosen for each indicated range of solution steps: With rare exceptions, only puzzles larger than

Difficulty Level:	Number of Deductive Steps
Easiest :	1 or 2 steps
Easy:	3 or 4 steps
Medium:	5 to 8 steps
Difficult:	9 to 14 steps
Challenging:	15 to 20 steps
Tournament:	21 to 29 steps
TournamentPlus:	30 to 45 steps
Perplexing:	46 or more steps

a traditional Sudoku 9x9 puzzle grid require more than 30 steps.

When the character in the DiffKey string for a particular step is a digit from 1 to 8, there are 1 to 8 empty locations that can be deduced directly from just the information given in the puzzle before the step. Thus, a DiffKey of “1” means that the puzzle has only one open empty location, and that location can be filled in based on the information in the puzzle. The digit 9 indicates that nine or more moves are possible in the particular step. Thus, a DiffKey of “9” means that there are nine or more empty locations in the puzzle being

rated and that they can all be filled in independently of one another to complete the puzzle. The DiffKey of “993” computed for the puzzle in the indicated figure means that there are two different groups of nine or more empty locations and that, once the first group (marked with a 1 in the upper right corner) that can be deduced directly from the puzzle are filled in, the second group of empty locations (marked with a 2) can all be figured out. The 3 at the end of the DiffKey refers to the last three empty cells that cannot be filled in using strategy one or two without first filling in some of the ones marked as 2. Note, however, that some of

DiffKey = 993

1	3	1	9	4	1	7	2	3
9	2	2	3	7	2	8	1	1
1	2	4	5	1	2	3	2	9
8	4	2	1	1	7	2	3	1
6	1	9	2	2	1	2	4	1
2	2	1	1	3	4	1	8	7
1	8	1	7	5	3	1	9	2
5	1	7	1	6	1	2	1	1
2	9	1	2	1	1	4	7	5

the second group can often be deduced once some of the first group are found, but all of the second cannot generally be completed until all of the first are done. Conversely, a DiffKey that begins “112...” means that there is only one empty location in the given puzzle that can be filled in deductively by this algorithm, and once that single filled in location is deduced, one more empty location can be figured out and filled in, but then two additional moves can be determined using both of those filled in locations, *etc.*

Moves within a step are deduced by the software using one of two methods. The first method works by eliminating all of the other locations within a group for a particular value, *i.e.*, “*The only spot left for a 5 in row N is ...*” This method is always tried first for a step and if there are 1 to 8 possible moves using this method, the corresponding digit between 1 to 8 is added to the DiffKey; if there are nine or more moves, a 9 is added to the key for the step.

The second method is only used when no deductions are possible using the first method. This method deduces the value for a location by checking if all other possible values for the location already exist in one or more of the other groups (such as a row or column) that include the location, *i.e.*, “*5 must be place at (X, Y) because it is the only value left that is not in the 1st column, 6th row, or ...*” The letter A is added to the DiffKey if there is only one move of this type possible at that step. B is used if there are two possible moves of this type, and so on, with D representing 4 or more possible moves.

A quick glance at a DiffKey gives a lot of information about the solution. Puzzles are simpler to solve when there are fewer steps (*i.e.*, the DiffKey is shorter). Puzzles are also simpler to solve when there are more moves within each step. For example, a DiffKey that begins “999975” indicates that there are many moves available in each of the first four steps before moves become more restricted in the subsequent two steps. The simplest puzzles have short DiffKey values of all 9s. The most difficult puzzles have long strings



of low value digits, from 1 to 3 or so, that indicate deductive bottlenecks. Moves that use deductive method 1, and are represented with digits in the DiffKey, are typically easier for most people to find than deductive moves found using method 2, which are represented using the letters A-D.

There exist many other possible deductive methods to solve Sudoku-like Group Puzzles beyond the two used to construct DiffKeys. Indeed, the only method that is guaranteed to eventually solve all possible puzzles that can be solved (*i.e.*, they have a single unique solution), is the non-deterministic guess-and-check method with backtracking. Puzzles without deterministic deductive solutions, however, are typically much harder to solve (at least for humans) and can take much more time (for computers and humans alike) because each guess requires backtracking to the point of the guess if a logical inconsistency is ever encountered after the guess. An asterisk, “\*” is added to the DiffKey if neither of the deterministic methods yields a solution and a guess is required to solve the puzzle. The DiffKey algorithm currently rates the puzzle as having no solution DiffKey if a solution cannot be found that requires only a single guess. For this reason, a DiffKey will not contain more than one asterisk. The DiffKey puzzle rating system may be extended in the future to include specific types of non-deterministic steps, as well as other types of deductive deterministic reasoning steps, by defining additional character codes for DiffKey strings which indicate that these types of steps are required at that particular point in the solution.

## Detailed Instructions for Sudoku-12 puzzles

There are twelve elements in each group of a Sudoku-12 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, and B**. Every group in the puzzle must contain *exactly* this set of elements.

Sudoku-12

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th

In a Sudoku-12 puzzle, each row is a group numbered as shown in the figure above.

Sudoku-12

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

In a Sudoku-12 puzzle, each column is a group numbered as shown in the figure above.

Sudoku-12

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th

In a Sudoku-12 puzzle, each 4x3 rectangle is a group numbered as shown in the figure above.

## Detailed Instructions for Sudoku-12up puzzles

There are twelve elements in each group of a Sudoku-12up puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, and B**. Every group in the puzzle must contain *exactly* this set of elements.

Sudoku-12up

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th

In a Sudoku-12up puzzle, each row is a group numbered as shown in the figure above.

Sudoku-12up

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

In a Sudoku-12up puzzle, each column is a group numbered as shown in the figure above.

Sudoku-12up

1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th
5th	5th	5th	6th	6th	6th	7th	7th	7th	8th	8th	8th
5th	5th	5th	6th	6th	6th	7th	7th	7th	8th	8th	8th
5th	5th	5th	6th	6th	6th	7th	7th	7th	8th	8th	8th
5th	5th	5th	6th	6th	6th	7th	7th	7th	8th	8th	8th
9th	9th	9th	10th	10th	10th	11th	11th	11th	12th	12th	12th
9th	9th	9th	10th	10th	10th	11th	11th	11th	12th	12th	12th
9th	9th	9th	10th	10th	10th	11th	11th	11th	12th	12th	12th
9th	9th	9th	10th	10th	10th	11th	11th	11th	12th	12th	12th

In a Sudoku-12up puzzle, each 3x4 rectangle is a group numbered as shown in the figure above.

## Detailed Instructions for HyperSudoku-12 puzzles

There are twelve elements in each group of a HyperSudoku-12 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, and B**. Every group in the puzzle must contain *exactly* this set of elements.

HyperSudoku-12

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th

In a HyperSudoku-12 puzzle, each row is a group numbered as shown in the figure above.



HyperSudoku-12

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

In a HyperSudoku-12 puzzle, each column is a group numbered as shown in the figure above.

HyperSudoku-12

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th

In a HyperSudoku-12 puzzle, each 4x3 rectangle is a group numbered as shown in the figure above.

HyperSudoku-12

	1st	1st	1st	1st			2nd	2nd	2nd	2nd	
	1st	1st	1st	1st			2nd	2nd	2nd	2nd	
	1st	1st	1st	1st			2nd	2nd	2nd	2nd	
	3rd	3rd	3rd	3rd			4th	4th	4th	4th	
	3rd	3rd	3rd	3rd			4th	4th	4th	4th	
	3rd	3rd	3rd	3rd			4th	4th	4th	4th	

In a HyperSudoku-12 puzzle, each 4x3 inner rectangle is a group numbered as shown in the figure above.

HyperSudoku-12

			1st	1st	1st	1st	1st	1st			
			1st	1st	1st	1st	1st	1st			

In a HyperSudoku-12 puzzle, the 6x2 center elements are a group and are marked with '1st' in the figure above.

## Detailed Instructions for tpsmith puzzles

There are twelve elements in each group of a tpsmith puzzle. The elements are: **0**, **1**, **2**, **3**, **4**, **5**, **6**, **7**, **8**, **9**, **A**, and **B**. Every group in the puzzle must contain *exactly* this set of elements.

tpsmith

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th

In a tpsmith puzzle, each row is a group numbered as shown in the figure above.

tpsmith

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

In a tpsmith puzzle, each column is a group numbered as shown in the figure above.

tpsmith

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th

In a tpsmith puzzle, each 4x3 rectangle is a group numbered as shown in the figure above.

[illegible]

In a tpsmith puzzle, each eye is a group numbered as shown in the figure above.



---

tpsmith

			1st						1st		
			1st					1st			
			1st	1st			1st	1st			
				1st	1st	1st	1st				

In a tpsmith puzzle, the elements that make up the smile are a group and are marked with '1st' in the figure above.

## Detailed Instructions for tpsmith-serious puzzles

There are twelve elements in each group of a tpsmith-serious puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, and B**. Every group in the puzzle must contain *exactly* this set of elements.

tpsmith-serious

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th

In a tpsmith-serious puzzle, each row is a group numbered as shown in the figure above.

tpsmith-serious

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th

In a tpsmith-serious puzzle, each column is a group numbered as shown in the figure above.

tpsmith-serious

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
4th	4th	4th	4th	5th	5th	5th	5th	6th	6th	6th	6th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
7th	7th	7th	7th	8th	8th	8th	8th	9th	9th	9th	9th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th

In a tpsmith-serious puzzle, each 4x3 rectangle is a group numbered as shown in the figure above.

tpsmith-serious

	1st	1st	1st	1st			2nd	2nd	2nd	2nd	
	1st			1st			2nd			2nd	
	1st	1st	1st	1st			2nd	2nd	2nd	2nd	
		1st	1st					2nd	2nd		

In a tpsmith-serious puzzle, each eye is a group numbered as shown in the figure above.

tpsmith-serious

		1st	1st	1st	1st	1st	1st	1st	1st		
				1st	1st	1st	1st				

In a tpsmith-serious puzzle, the elements that make up the mouth are a group and are marked with '1st' in the figure above.

## Detailed Instructions for Sudoku-15 puzzles

There are fifteen elements in each group of a Sudoku-15 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, and E**. Every group in the puzzle must contain *exactly* this set of elements.

Sudoku-15

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th
14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th
15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th

In a Sudoku-15 puzzle, each row is a group numbered as shown in the figure above.

Sudoku-15

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th

In a Sudoku-15 puzzle, each column is a group numbered as shown in the figure above.



Sudoku-15

1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th

In a Sudoku-15 puzzle, each 5x3 rectangle is a group numbered as shown in the figure above.

## Detailed Instructions for Sudoku-15up puzzles

There are fifteen elements in each group of a Sudoku-15up puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, and E**. Every group in the puzzle must contain *exactly* this set of elements.

Sudoku-15up

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th
14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th
15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th

In a Sudoku-15up puzzle, each row is a group numbered as shown in the figure above.

Sudoku-15up

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th

In a Sudoku-15up puzzle, each column is a group numbered as shown in the figure above.

Sudoku-15up

1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th	5th	5th	5th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th	5th	5th	5th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th	5th	5th	5th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th	5th	5th	5th
1st	1st	1st	2nd	2nd	2nd	3rd	3rd	3rd	4th	4th	4th	5th	5th	5th
6th	6th	6th	7th	7th	7th	8th	8th	8th	9th	9th	9th	10th	10th	10th
6th	6th	6th	7th	7th	7th	8th	8th	8th	9th	9th	9th	10th	10th	10th
6th	6th	6th	7th	7th	7th	8th	8th	8th	9th	9th	9th	10th	10th	10th
6th	6th	6th	7th	7th	7th	8th	8th	8th	9th	9th	9th	10th	10th	10th
6th	6th	6th	7th	7th	7th	8th	8th	8th	9th	9th	9th	10th	10th	10th
11th	11th	11th	12th	12th	12th	13th	13th	13th	14th	14th	14th	15th	15th	15th
11th	11th	11th	12th	12th	12th	13th	13th	13th	14th	14th	14th	15th	15th	15th
11th	11th	11th	12th	12th	12th	13th	13th	13th	14th	14th	14th	15th	15th	15th
11th	11th	11th	12th	12th	12th	13th	13th	13th	14th	14th	14th	15th	15th	15th
11th	11th	11th	12th	12th	12th	13th	13th	13th	14th	14th	14th	15th	15th	15th

In a Sudoku-15up puzzle, each 3x5 rectangle is a group numbered as shown in the figure above.

## Detailed Instructions for HyperSudoku-15 puzzles

There are fifteen elements in each group of a HyperSudoku-15 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, and E**. Every group in the puzzle must contain *exactly* this set of elements.

HyperSudoku-15

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th
14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th
15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th

In a HyperSudoku-15 puzzle, each row is a group numbered as shown in the figure above.

HyperSudoku-15

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th

In a HyperSudoku-15 puzzle, each column is a group numbered as shown in the figure above.

HyperSudoku-15

1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
1st	1st	1st	1st	1st	2nd	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
4th	4th	4th	4th	4th	5th	5th	5th	5th	5th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
7th	7th	7th	7th	7th	8th	8th	8th	8th	8th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
10th	10th	10th	10th	10th	11th	11th	11th	11th	11th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th
13th	13th	13th	13th	13th	14th	14th	14th	14th	14th	15th	15th	15th	15th	15th

In a HyperSudoku-15 puzzle, each 5x3 rectangle is a group numbered as shown in the figure above.

HyperSudoku-15

			1st	1st	1st					2nd	2nd	2nd		
			1st	1st	1st					2nd	2nd	2nd		
			1st	1st	1st					2nd	2nd	2nd		
			1st	1st	1st					2nd	2nd	2nd		
			1st	1st	1st					2nd	2nd	2nd		
			3rd	3rd	3rd					4th	4th	4th		
			3rd	3rd	3rd					4th	4th	4th		
			3rd	3rd	3rd					4th	4th	4th		
			3rd	3rd	3rd					4th	4th	4th		
			3rd	3rd	3rd					4th	4th	4th		

In a HyperSudoku-15 puzzle, each 3x5 inner rectangle is a group numbered as shown in the figure above.



## Detailed Instructions for Sudoku-16 puzzles

There are sixteen elements in each group of a Sudoku-16 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F**. Every group in the puzzle must contain *exactly* this set of elements.

Sudoku-16

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th
14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th
15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th
16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th

In a Sudoku-16 puzzle, each row is a group numbered as shown in the figure above.

[illegible]

In a Sudoku-16 puzzle, each column is a group numbered as shown in the figure above.

Sudoku-16

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th

In a Sudoku-16 puzzle, each 4x4 square is a group numbered as shown in the figure above.

## Detailed Instructions for HyperSudoku-16 puzzles

There are sixteen elements in each group of a HyperSudoku-16 puzzle. The elements are: **0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F**. Every group in the puzzle must contain *exactly* this set of elements.

HyperSudoku-16

1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st	1st
2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd	2nd
3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd	3rd
4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th	4th
5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th	5th
6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th	6th
7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th	7th
8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th	8th
9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th	9th
10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th	10th
11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th	11th
12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th	12th
13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th	13th
14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th	14th
15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th	15th
16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th	16th

In a HyperSudoku-16 puzzle, each row is a group numbered as shown in the figure above.

HyperSudoku-16

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th
1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th	13th	14th	15th	16th

In a HyperSudoku-16 puzzle, each column is a group numbered as shown in the figure above.

HyperSudoku-16

1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
1st	1st	1st	1st	2nd	2nd	2nd	2nd	3rd	3rd	3rd	3rd	4th	4th	4th	4th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
5th	5th	5th	5th	6th	6th	6th	6th	7th	7th	7th	7th	8th	8th	8th	8th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
9th	9th	9th	9th	10th	10th	10th	10th	11th	11th	11th	11th	12th	12th	12th	12th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th
13th	13th	13th	13th	14th	14th	14th	14th	15th	15th	15th	15th	16th	16th	16th	16th

In a HyperSudoku-16 puzzle, each 4x4 square is a group numbered as shown in the figure above.

HyperSudoku-16

		1st	1st	1st	1st					2nd	2nd	2nd	2nd		
		1st	1st	1st	1st					2nd	2nd	2nd	2nd		
		1st	1st	1st	1st					2nd	2nd	2nd	2nd		
		1st	1st	1st	1st					2nd	2nd	2nd	2nd		
		3rd	3rd	3rd	3rd					4th	4th	4th	4th		
		3rd	3rd	3rd	3rd					4th	4th	4th	4th		
		3rd	3rd	3rd	3rd					4th	4th	4th	4th		
		3rd	3rd	3rd	3rd					4th	4th	4th	4th		

In a HyperSudoku-16 puzzle, each 4x4 inner square is a group numbered as shown in the figure above.

## Chapter 3

# Two Challenging Sudoku-12 Puzzles

All two puzzles in this section are at difficulty level twenty. The puzzles are arranged by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 1** (87/144) DiffKey 20 / 9732.3233.4534.5224.7882

**Puzzle 2** (90/144) DiffKey 20 / 5312.2555.8744.4455.7581



## Sudoku-12 Puzzle 1, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

87/144

	1				5			2			8
8	4			A	B				0	6	
			6		0	3	9		4		
		7	4				0	A			
9				2	4		A		B		
		0					3		8	2	9
	9	6	7			5				1	2
1				0		9		6			7
	2			7		1				4	
4					8	A				5	
B	6			9			7	3			
	3		A						2		4

Challenging

Diff: 20 / 9732.3233.4534.5224.7882

[Next](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 20 steps required to solve the puzzle above with a total of 87 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 1

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

87/144

	<b>1</b>				<b>5</b>	<sup>3</sup>		<b>2</b>			<b>8</b>
<b>8</b>	<b>4</b>			<b>A</b>	<b>B</b>	<sup>2</sup>	<sup>2</sup>	<sup>3</sup>	<b>0</b>	<b>6</b>	
	<sup>2</sup>	<sup>2</sup>	<b>6</b>	<sup>1</sup>	<b>0</b>	<b>3</b>	<b>9</b>		<b>4</b>		
<sup>1</sup>		<b>7</b>	<b>4</b>		<sup>1</sup>		<b>0</b>	<b>A</b>			
<b>9</b>				<b>2</b>	<b>4</b>		<b>A</b>		<b>B</b>		
<sup>2</sup>	<sup>3</sup>	<b>0</b>			<sup>1</sup>		<b>3</b>	<sup>1</sup>	<b>8</b>	<b>2</b>	<b>9</b>
	<b>9</b>	<b>6</b>	<b>7</b>			<b>5</b>				<b>1</b>	<b>2</b>
<b>1</b>		<sup>1</sup>		<b>0</b>		<b>9</b>		<b>6</b>			<b>7</b>
	<b>2</b>			<b>7</b>		<b>1</b>				<b>4</b>	
<b>4</b>	<sup>1</sup>			<sup>1</sup>	<b>8</b>	<b>A</b>				<b>5</b>	
<b>B</b>	<b>6</b>			<b>9</b>		<sup>1</sup>	<b>7</b>	<b>3</b>			
<sup>2</sup>	<b>3</b>		<b>A</b>			<sup>2</sup>	<sup>1</sup>		<b>2</b>		<b>4</b>

Challenging

Diff: 20 / 9732.3233.4534.5224.7882

[Next](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 87 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 1

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

87/144

18	<b>1</b>	14	13	10	<b>5</b>	3	9	<b>2</b>	19	13	<b>8</b>	<sup>1</sup>
<b>8</b>	<b>4</b>	17	13	<b>A</b>	<b>B</b>	2	2	3	<b>0</b>	<b>6</b>	18	
19	2	2	<b>6</b>	1	<b>0</b>	<b>3</b>	<b>9</b>	16	<b>4</b>	18	17	
1	9	<b>7</b>	<b>4</b>	17	1	7	<b>0</b>	<b>A</b>	5	17	16	<sup>4</sup>
<b>9</b>	15	18	19	<b>2</b>	<b>4</b>	6	<b>A</b>	17	<b>B</b>	4	18	
2	3	<b>0</b>	17	16	1	8	<b>3</b>	1	<b>8</b>	<b>2</b>	<b>9</b>	
12	<b>9</b>	<b>6</b>	<b>7</b>	9	20	<b>5</b>	10	11	19	<b>1</b>	<b>2</b>	<sup>7</sup>
<b>1</b>	16	1	19	<b>0</b>	20	<b>9</b>	10	<b>6</b>	14	19	<b>7</b>	
17	<b>2</b>	15	19	<b>7</b>	8	<b>1</b>	11	18	13	<b>4</b>	18	
<b>4</b>	1	11	10	1	<b>8</b>	<b>A</b>	9	12	4	<b>5</b>	5	<sup>10</sup>
<b>B</b>	<b>6</b>	19	18	<b>9</b>	10	1	<b>7</b>	<b>3</b>	6	5	7	
2	<b>3</b>	12	<b>A</b>	8	7	2	1	13	<b>2</b>	12	<b>4</b>	

<sup>1</sup>  
Challenging

<sup>5</sup>

<sup>9</sup>  
Diff: 20 / 9732.3233.4534.5224.7882

[Next](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 87 empty locations that must be determined, out of a total puzzle size of 144.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 10 independent moves.

- \* The only spot for 0 in the 2nd column is (2, 10).
- \* The only spot for 7 in the 6th column is (6, 6).
- \* The only spot for 5 in the 8th column is (8, 12).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (5, 3).
- \* The only spot for 2 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 9 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 4 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 4 in the 7th 4x3 rectangle is (3, 8).
- \* The only spot for 4 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 3 in the 11th 4x3 rectangle is (5, 10).

Step 2: There are 7 independent moves.

- \* The only spot for 2 in the 3rd row is (3, 3).
- \* The only spot for 7 in the 2nd column is (2, 3).
- \* The only spot for 2 in the 7th column is (7, 2).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 6 in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 7 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 0 in the 11th 4x3 rectangle is (7, 12).

Step 3: There are 3 independent moves.

- \* The only spot for 7 in the 2nd row is (9, 2).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for A in the 4th 4x3 rectangle is (2, 6).

Step 4: There are 2 independent moves.

- \* The only spot for 7 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for 7 in the 12th 4x3 rectangle is (10, 10).

Step 5: There are 3 independent moves.

- \* The only spot for 6 in the 10th column is (10, 4).
- \* The only spot for 0 in the 11th column is (11, 11).
- \* The only spot for 6 in the 12th 4x3 rectangle is (12, 10).

Step 6: There are 2 independent moves.

- \* The only spot for 1 in the 10th column is (10, 11).
- \* The only spot for 6 in the 5th 4x3 rectangle is (7, 5).

Step 7: There are 3 independent moves.

- \* The only spot for 1 in the 6th column is (6, 12).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for A in the 12th 4x3 rectangle is (12, 11).

Step 8: There are 3 independent moves.

- \* The only spot for 6 in the 6th column is (6, 9).
- \* The only spot for B in the 7th column is (7, 6).
- \* The only spot for 6 in the 11th 4x3 rectangle is (5, 12).

Step 9: There are 4 independent moves.

- \* The only spot for B in the 5th column is (5, 7).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (8, 1).

- \* The only spot for B in the 4th 4x3 rectangle is (2, 4).
- \* The only spot for B in the 11th 4x3 rectangle is (8, 10).

Step 10: There are 5 independent moves.

- \* The only spot for 2 in the 10th row is (4, 10).
- \* The only spot for 2 in the 8th column is (8, 8).
- \* The only spot for 4 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 4 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 2 in the 11th 4x3 rectangle is (6, 11).

Step 11: There are 3 independent moves.

- \* The only spot for 8 in the 7th row is (9, 7).
- \* The only spot for 8 in the 8th 4x3 rectangle is (8, 9).
- \* The only spot for 1 in the 10th 4x3 rectangle is (3, 10).

Step 12: There are 4 independent moves.

- \* The only spot for 0 in the 7th row is (1, 7).
- \* The only spot for 9 in the 10th row is (9, 10).
- \* The only spot for 9 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 8 in the 12th 4x3 rectangle is (11, 12).

Step 13: There are 5 independent moves.

- \* The only spot for 9 in the 2nd row is (4, 2).
- \* The only spot for 9 in the 11th column is (11, 1).
- \* The only spot for 0 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 9 in the 9th 4x3 rectangle is (10, 9).
- \* The only spot for B in the 12th 4x3 rectangle is (9, 12).

Step 14: There are 2 independent moves.

- \* The only spot for 5 in the 10th column is (10, 8).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 1).

Step 15: There are 2 independent moves.

- \* The only spot for 5 in the 2nd column is (2, 5).
- \* The only spot for A in the 3rd column is (3, 9).

Step 16: There are 4 independent moves.

- \* The only spot for 5 in the 6th row is (5, 6).
- \* The only spot for 8 in the 2nd column is (2, 8).
- \* The only spot for 5 in the 9th column is (9, 3).
- \* The only spot for 5 in the 6th 4x3 rectangle is (12, 4).

Step 17: There are 7 independent moves.

- \* The only spot for 3 in the 4th row is (11, 4).
- \* The only spot for 1 in the 6th row is (4, 6).
- \* The only spot for 5 in the 1st column is (1, 9).
- \* The only spot for 1 in the 9th column is (9, 5).
- \* The only spot for 5 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 1 in the 5th 4x3 rectangle is (5, 4).

Step 18: There are 8 independent moves.

- \* The only spot for 3 in the 2nd row is (12, 2).

- \* The only spot for 3 in the 3rd column is (3, 5).
- \* The only spot for 0 in the 9th column is (9, 9).
- \* The only spot for B in the 12th column is (12, 9).
- \* The only spot for 3 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for B in the 3rd 4x3 rectangle is (11, 3).
- \* The only spot for 0 in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for 5 in the 10th 4x3 rectangle is (4, 11).

Step 19: There are 8 independent moves.

- \* The only spot for 3 in the 9th row is (4, 9).
- \* The only spot for A in the 11th column is (11, 8).
- \* The only spot for A in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for A in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 8 in the 4th 4x3 rectangle is (4, 5).
- \* The only spot for B in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for 3 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 8 in the 10th 4x3 rectangle is (3, 11).

Step 20: There are 2 independent moves.

- \* The only spot for 3 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for A in the 8th 4x3 rectangle is (6, 7).

## Solution for Puzzle 1

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

3	1	B	0	4	5	7	6	2	A	9	8
8	4	5	9	A	B	2	1	7	0	6	3
A	7	2	6	8	0	3	9	5	4	B	1
2	B	7	4	1	9	8	0	A	6	3	5
9	5	3	8	2	4	6	A	1	B	7	0
6	A	0	1	5	7	B	3	4	8	2	9
0	9	6	7	B	A	5	4	8	3	1	2
1	8	4	B	0	3	9	2	6	5	A	7
5	2	A	3	7	6	1	8	0	9	4	B
4	0	1	2	3	8	A	B	9	7	5	6
B	6	8	5	9	2	4	7	3	1	0	A
7	3	9	A	6	1	0	5	B	2	8	4

Challenging

[Next](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [All steps](#).

## Sudoku-12 Puzzle 2, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

90/144

				0		6		1		5	9
		5			B					8	
A	2			8			4	7	3		
	8		0						9		
		6		3			7				2
	3		2						8	6	B
		B					1			9	
3				4	5	A			6	2	
0	9			6	3				7		
2	A						3	4		0	
	5		7				0	6			A
B			4		A	1					

Challenging

Diff: 20 / 5312.2555.8744.4455.7581

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 20 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.



## First Three Steps to Solve Puzzle 2

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

90/144

			<sup>2</sup>	0		6		1		5	9
		5			B	<sup>1</sup>		<sup>2</sup>		8	
A	2			8		<sup>1</sup>	4	7	3		
	8		0						9		
		6		3			7				2
	3		2						8	6	B
		B					1			9	
3				4	5	A	<sup>1</sup>	<sup>2</sup>	6	2	<sup>3</sup>
0	9	<sup>1</sup>		6	3				7		
2	A						3	4		0	
	5		7				0	6			A
B			4		A	1		<sup>1</sup>			

Challenging

Diff: 20 / 5312.2555.8744.4455.7581

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 2

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

90/144

14	6	15	2	0	16	6	9	1	5	5	9	<sup>1</sup>
16	10	5	19	18	B	1	10	2	4	8	6	
A	2	4	19	8	19	1	4	7	3	6	7	
11	8	17	0	17	7	16	8	9	9	11	12	<sup>4</sup>
17	12	6	7	3	18	19	7	10	8	10	2	
15	3	16	2	17	18	19	9	11	8	6	B	
10	9	B	9	17	17	18	1	8	10	9	9	<sup>7</sup>
3	11	12	9	4	5	A	1	2	6	2	3	
0	9	1	10	6	3	8	7	9	7	7	8	
2	A	20	6	14	19	17	3	4	13	0	15	<sup>10</sup>
13	5	19	7	19	16	18	0	6	14	13	A	
B	5	13	4	15	A	1	6	1	15	12	14	

<sup>1</sup>  
Challenging

<sup>5</sup>

<sup>9</sup>  
Diff: 20 / 5312.2555.8744.4455.7581

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 5 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 2 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 9 in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for 9 in the 12th 4x3 rectangle is (9, 12).

Step 2: There are 3 independent moves.

- \* The only spot for B in the 8th row is (9, 8).
- \* The only spot for 3 in the 4th column is (4, 1).
- \* The only spot for 2 in the 9th column is (9, 2).

Step 3: There is 1 independent move.

- \* The only spot for 0 in the 8th row is (12, 8).

Step 4: There are 2 independent moves.

- \* The only spot for 0 in the 3rd row is (3, 3).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (10, 2).

Step 5: There are 2 independent moves.

- \* The only spot for A in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 0 in the 10th 4x3 rectangle is (2, 12).

Step 6: There are 5 independent moves.

- \* The only spot for B in the 1st row is (2, 1).
- \* The only spot for 6 in the 12th row is (8, 12).
- \* The only spot for B in the 3rd 4x3 rectangle is (11, 3).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 6 in the 10th 4x3 rectangle is (4, 10).

Step 7: There are 5 independent moves.

- \* The only spot for 4 in the 9th row is (11, 9).
- \* The only spot for 8 in the 8th column is (8, 9).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for B in the 4th 4x3 rectangle is (4, 5).
- \* The only spot for 6 in the 5th 4x3 rectangle is (6, 4).

Step 8: There are 5 independent moves.

- \* The only spot for B in the 8th column is (8, 4).
- \* The only spot for 8 in the 9th column is (9, 7).
- \* The only spot for 4 in the 6th 4x3 rectangle is (10, 5).
- \* The only spot for B in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for 1 in the 9th 4x3 rectangle is (12, 9).

Step 9: There are 8 independent moves.

- \* The only spot for A in the 7th row is (4, 7).
- \* The only spot for 4 in the 2nd column is (2, 7).
- \* The only spot for 8 in the 4th column is (4, 8).
- \* The only spot for 5 in the 8th column is (8, 6).
- \* The only spot for 2 in the 8th column is (8, 1).
- \* The only spot for 3 in the 9th column is (9, 4).
- \* The only spot for A in the 9th 4x3 rectangle is (9, 9).

- \* The only spot for 3 in the 9th 4x3 rectangle is (12, 7).

Step 10: There are 7 independent moves.

- \* The only spot for A in the 5th row is (11, 5).
- \* The only spot for 6 in the 2nd column is (2, 2).
- \* The only spot for 5 in the 4th column is (4, 9).
- \* The only spot for A in the 8th column is (8, 2).
- \* The only spot for 5 in the 9th column is (9, 5).
- \* The only spot for 6 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 5 in the 9th 4x3 rectangle is (10, 7).

Step 11: There are 4 independent moves.

- \* The only spot for 7 in the 2nd column is (2, 8).
- \* The only spot for 5 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 0 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 1 in the 6th 4x3 rectangle is (11, 4).

Step 12: There are 4 independent moves.

- \* The only spot for 1 in the 2nd column is (2, 5).
- \* The only spot for 7 in the 11th column is (11, 12).
- \* The only spot for 7 in the 6th 4x3 rectangle is (12, 4).
- \* The only spot for 1 in the 7th 4x3 rectangle is (3, 8).

Step 13: There are 4 independent moves.

- \* The only spot for 1 in the 10th row is (10, 10).
- \* The only spot for 3 in the 12th row is (3, 12).
- \* The only spot for 1 in the 10th 4x3 rectangle is (1, 11).
- \* The only spot for 3 in the 12th 4x3 rectangle is (11, 11).

Step 14: There are 4 independent moves.

- \* The only spot for B in the 10th row is (5, 10).
- \* The only spot for 8 in the 12th row is (12, 12).
- \* The only spot for 8 in the 1st column is (1, 1).
- \* The only spot for B in the 12th 4x3 rectangle is (10, 11).

Step 15: There are 5 independent moves.

- \* The only spot for 4 in the 1st column is (1, 6).
- \* The only spot for 4 in the 1st 4x3 rectangle is (3, 1).
- \* The only spot for 5 in the 11th 4x3 rectangle is (5, 12).
- \* The only spot for 2 in the 12th 4x3 rectangle is (10, 12).
- \* The only spot for 5 in the 12th 4x3 rectangle is (12, 10).

Step 16: There are 5 independent moves.

- \* The only spot for 7 in the 1st row is (6, 1).
- \* The only spot for 4 in the 6th column is (6, 11).
- \* The only spot for 7 in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for 7 in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 4 in the 5th 4x3 rectangle is (7, 4).

Step 17: There are 7 independent moves.

- \* The only spot for A in the 6th row is (5, 6).
- \* The only spot for 7 in the 5th column is (5, 7).

- \* The only spot for 2 in the 6th column is (6, 7).
- \* The only spot for 9 in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for A in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 2 in the 5th 4x3 rectangle is (5, 4).
- \* The only spot for 7 in the 11th 4x3 rectangle is (7, 10).

Step 18: There are 5 independent moves.

- \* The only spot for 1 in the 5th column is (5, 2).
- \* The only spot for 0 in the 6th column is (6, 5).
- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 6).
- \* The only spot for 0 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 2 in the 11th 4x3 rectangle is (7, 11).

Step 19: There are 8 independent moves.

- \* The only spot for 9 in the 2nd row is (4, 2).
- \* The only spot for 8 in the 11th row is (3, 11).
- \* The only spot for 9 in the 5th column is (5, 11).
- \* The only spot for 1 in the 1st 4x3 rectangle is (4, 3).
- \* The only spot for 9 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 9 in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 8 in the 11th 4x3 rectangle is (6, 10).

Step 20: There is 1 independent move.

- \* The only spot for 9 in the 10th 4x3 rectangle is (3, 10).

## Solution for Puzzle 2

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

8	B	4	3	0	7	6	2	1	A	5	9
7	6	5	9	1	B	3	A	2	0	8	4
A	2	0	1	8	9	5	4	7	3	B	6
5	8	A	0	2	6	4	B	3	9	1	7
9	1	6	B	3	0	8	7	5	4	A	2
4	3	7	2	A	1	9	5	0	8	6	B
6	4	B	A	7	2	0	1	8	5	9	3
3	7	1	8	4	5	A	9	B	6	2	0
0	9	2	5	6	3	B	8	A	7	4	1
2	A	9	6	B	8	7	3	4	1	0	5
1	5	8	7	9	4	2	0	6	B	3	A
B	0	3	4	5	A	1	6	9	2	7	8

Challenging

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [All steps](#).

## Chapter 4

# Two Tournament Sudoku-12 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-three to twenty-seven. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 3** (95/144) DiffKey 23 / 542.3545.A112.1355.8723.6498

**Puzzle 4** (93/144) DiffKey 27 / 733.5382.2121.221A.1A1A.3354.9964

## Sudoku-12 Puzzle 3, Tournament/23

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

95/144

			8							5	
5				A					7		3
		4			0	2		1	B		
4			0	2				3		9	
9				0	4		3				
6	3							5	2		
		8		4			B	A	6		
	4			7	2		9			0	
	1	2									9
		9			3			B	0		
	B					1					8
	0	1	7				8			A	

Tournament

Diff: 23 / 542.3545.A112.1355.8723.6498

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 23 steps required to solve the puzzle above with a total of 95 empty locations that must be determined, out of a total puzzle size of 144.



## First Three Steps to Solve Puzzle 3

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

95/144

<sup>1</sup>			8				<sup>3</sup>			5	
5				A			<sup>2</sup>		7		3
		4			0	2		1	B		
4			0	2				3		9	
9			<sup>3</sup>	0	4		3				
6	3			<sup>2</sup>				5	2	<sup>2</sup>	<sup>1</sup>
		8		4	<sup>1</sup>		B	A	6		
	4			7	2		9			0	
	1	2									9
<sup>1</sup>		9			3		<sup>2</sup>	B	0		
	B					1	<sup>1</sup>				8
	0	1	7				8			A	

Tournament

Diff: 23 / 542.3545.A112.1355.8723.6498

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 23 steps required to solve the puzzle above with a total of 95 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 3

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

95/144

1	7	6	<b>8</b>	17	16	18	3	5	6	<b>5</b>	6	<sup>1</sup>
<b>5</b>	23	5	5	<b>A</b>	22	23	2	4	<b>7</b>	22	<b>3</b>	
15	22	<b>4</b>	16	22	<b>0</b>	<b>2</b>	20	<b>1</b>	<b>B</b>	21	7	
<b>4</b>	5	20	<b>0</b>	<b>2</b>	21	22	19	<b>3</b>	10	<b>9</b>	11	<sup>4</sup>
<b>9</b>	4	21	3	<b>0</b>	<b>4</b>	22	<b>3</b>	16	9	13	15	
<b>6</b>	<b>3</b>	22	7	2	23	23	20	<b>5</b>	<b>2</b>	2	1	
14	15	<b>8</b>	16	<b>4</b>	1	17	<b>B</b>	<b>A</b>	<b>6</b>	7	14	<sup>7</sup>
17	<b>4</b>	18	19	<b>7</b>	<b>2</b>	20	<b>9</b>	8	11	<b>0</b>	13	
13	<b>1</b>	<b>2</b>	20	20	19	14	17	14	5	12	<b>9</b>	
1	15	<b>9</b>	16	17	<b>3</b>	15	2	<b>B</b>	<b>0</b>	4	16	<sup>10</sup>
23	<b>B</b>	17	6	21	16	<b>1</b>	1	22	23	14	<b>8</b>	
23	<b>0</b>	<b>1</b>	<b>7</b>	7	22	16	<b>8</b>	23	22	<b>A</b>	17	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Tournament

Diff: 23 / 542.3545.A112.1355.8723.6498

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 23 steps required to solve the puzzle above with a total of 95 empty locations that must be determined, out of a total puzzle size of 144.

All 23 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 8 in the 1st column is (1, 10).
- \* The only spot for 1 in the 1st column is (1, 1).
- \* The only spot for 0 in the 6th 4x3 rectangle is (12, 6).
- \* The only spot for 1 in the 8th 4x3 rectangle is (6, 7).
- \* The only spot for 0 in the 11th 4x3 rectangle is (8, 11).

Step 2: There are 4 independent moves.

- \* The only spot for 1 in the 5th column is (5, 6).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 4 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 2 in the 11th 4x3 rectangle is (8, 10).

Step 3: There are 2 independent moves.

- \* The only spot for 4 in the 8th column is (8, 1).
- \* The only spot for 1 in the 4th 4x3 rectangle is (4, 5).

Step 4: There are 3 independent moves.

- \* The only spot for 1 in the 11th column is (11, 10).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (9, 2).
- \* The only spot for 2 in the 4th 4x3 rectangle is (2, 5).

Step 5: There are 5 independent moves.

- \* The only spot for 0 in the 2nd row is (3, 2).
- \* The only spot for 2 in the 1st 4x3 rectangle is (4, 2).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for 8 in the 4th 4x3 rectangle is (2, 4).
- \* The only spot for 4 in the 9th 4x3 rectangle is (10, 9).

Step 6: There are 4 independent moves.

- \* The only spot for 4 in the 11th row is (4, 11).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 1).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (10, 1).

Step 7: There are 5 independent moves.

- \* The only spot for A in the 1st row is (2, 1).
- \* The only spot for B in the 5th column is (5, 12).
- \* The only spot for A in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for B in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 2 in the 9th 4x3 rectangle is (11, 7).

Step 8: There is 1 independent move.

- \* 8 must be placed at (9, 8) because it is the only value left that is not already in the 8th row, the 9th column or the 9th 4x3 rectangle.

Step 9: There is 1 independent move.

- \* The only spot for 8 in the 10th column is (10, 5).

Step 10: There is 1 independent move.

- \* The only spot for A in the 6th 4x3 rectangle is (10, 4).

Step 11: There are 2 independent moves.

- \* The only spot for 1 in the 10th column is (10, 8).

- \* The only spot for 1 in the 6th 4x3 rectangle is (12, 4).

Step 12: There is 1 independent move.

- \* The only spot for 3 in the 9th 4x3 rectangle is (11, 9).

Step 13: There are 3 independent moves.

- \* The only spot for B in the 9th row is (1, 9).
- \* The only spot for B in the 11th column is (11, 5).
- \* The only spot for B in the 9th 4x3 rectangle is (12, 8).

Step 14: There are 5 independent moves.

- \* The only spot for 7 in the 9th row is (9, 9).
- \* The only spot for 0 in the 9th row is (7, 9).
- \* The only spot for 7 in the 11th column is (11, 11).
- \* The only spot for 0 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 5 in the 9th 4x3 rectangle is (12, 7).

Step 15: There are 5 independent moves.

- \* The only spot for 7 in the 1st column is (1, 3).
- \* The only spot for 5 in the 2nd column is (2, 10).
- \* The only spot for 7 in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for 7 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 7 in the 11th 4x3 rectangle is (7, 10).

Step 16: There are 8 independent moves.

- \* The only spot for 4 in the 10th row is (12, 10).
- \* The only spot for A in the 10th row is (4, 10).
- \* The only spot for 3 in the 1st 4x3 rectangle is (4, 3).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 6 in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 9 in the 7th 4x3 rectangle is (4, 7).
- \* The only spot for 4 in the 11th 4x3 rectangle is (7, 12).
- \* The only spot for A in the 11th 4x3 rectangle is (6, 11).

Step 17: There are 7 independent moves.

- \* The only spot for 3 in the 7th row is (7, 7).
- \* The only spot for A in the 9th row is (8, 9).
- \* The only spot for 6 in the 10th row is (5, 10).
- \* The only spot for A in the 1st column is (1, 8).
- \* The only spot for 3 in the 5th column is (5, 1).
- \* The only spot for 6 in the 10th 4x3 rectangle is (3, 11).
- \* The only spot for 6 in the 12th 4x3 rectangle is (12, 12).

Step 18: There are 2 independent moves.

- \* The only spot for 6 in the 1st row is (7, 1).
- \* The only spot for 3 in the 7th 4x3 rectangle is (3, 8).

Step 19: There are 3 independent moves.

- \* The only spot for 6 in the 8th row is (4, 8).
- \* The only spot for 6 in the 8th column is (8, 4).
- \* The only spot for 6 in the 8th 4x3 rectangle is (6, 9).

Step 20: There are 6 independent moves.

- \* The only spot for 7 in the 4th row is (3, 4).
- \* The only spot for 5 in the 8th row is (7, 8).
- \* The only spot for 5 in the 8th column is (8, 3).
- \* The only spot for 7 in the 5th 4x3 rectangle is (8, 6).
- \* The only spot for 5 in the 7th 4x3 rectangle is (4, 9).
- \* The only spot for 8 in the 8th 4x3 rectangle is (5, 9).

Step 21: There are 4 independent moves.

- \* The only spot for 8 in the 3rd row is (11, 3).
- \* The only spot for 5 in the 5th column is (5, 11).
- \* The only spot for 5 in the 4th 4x3 rectangle is (3, 5).
- \* The only spot for 5 in the 5th 4x3 rectangle is (6, 4).

Step 22: There are 10 independent moves.

- \* The only spot for 6 in the 3rd row is (2, 3).
- \* The only spot for A in the 5th row is (7, 5).
- \* The only spot for 9 in the 11th row is (9, 11).
- \* The only spot for 9 in the 5th column is (5, 3).
- \* The only spot for B in the 6th column is (6, 2).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (11, 2).
- \* The only spot for A in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for B in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 9 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 5 in the 12th 4x3 rectangle is (10, 12).

Step 23: There are 8 independent moves.

- \* The only spot for 2 in the 11th row is (1, 11).
- \* The only spot for 3 in the 12th row is (1, 12).
- \* The only spot for 8 in the 6th column is (6, 6).
- \* The only spot for 9 in the 1st 4x3 rectangle is (2, 2).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 9 in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 2 in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for 3 in the 12th 4x3 rectangle is (10, 11).

## Solution for Puzzle 3

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

1	A	B	8	3	7	6	4	0	9	5	2
5	9	0	2	A	B	8	1	4	7	6	3
7	6	4	3	9	0	2	5	1	B	8	A
4	8	7	0	2	5	B	6	3	A	9	1
9	2	5	1	0	4	A	3	6	8	B	7
6	3	A	B	1	8	9	7	5	2	4	0
0	7	8	9	4	1	3	B	A	6	2	5
A	4	3	6	7	2	5	9	8	1	0	B
B	1	2	5	8	6	0	A	7	4	3	9
8	5	9	A	6	3	7	2	B	0	1	4
2	B	6	4	5	A	1	0	9	3	7	8
3	0	1	7	B	9	4	8	2	5	A	6

Tournament

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## Sudoku-12 Puzzle 4, Tournament/27

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	0	3				1		9		8	
	A						B		0		2
			1	8					6	5	
		9		6		7		4			8
6					1	0		B	A		
4		0					A	2			9
		6	0	4		9					A
B	4									3	
	3				B		8	7			
			3		4		7		B		
1			2	0	6						
		4				8					7

Tournament

Diff: 27 / 733.5382.2121.221A.1A1A.3354.9964

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 27 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 4

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

93/144

	0	3				1		9		8	
	A						B		0		2
			1	8				<sup>1</sup>	6	5	
<sup>1</sup>	<sup>3</sup>	9	<sup>2</sup>	6		7		4		<sup>1</sup>	8
6				<sup>2</sup>	1	0	<sup>1</sup>	B	A		<sup>3</sup>
4		0			<sup>1</sup>		A	2		<sup>1</sup>	9
		6	0	4		9				<sup>1</sup>	A
B	4									3	
	3				B	<sup>3</sup>	8	7			<sup>2</sup>
			3		4		7		B		
1			2	0	6						
		4				8					7

Tournament

Diff: 27 / 733.5382.2121.221A.1A1A.3354.9964

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 27 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.



## Deductive Steps to Solve Puzzle 4

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

93/144

16	<b>0</b>	<b>3</b>	5	26	25	<b>1</b>	4	<b>9</b>	6	<b>8</b>	6	1
25	<b>A</b>	24	4	20	18	6	<b>B</b>	4	<b>0</b>	5	<b>2</b>	
19	17	6	<b>1</b>	<b>8</b>	21	15	22	1	<b>6</b>	<b>5</b>	6	
1	3	<b>9</b>	2	<b>6</b>	25	<b>7</b>	24	<b>4</b>	4	1	<b>8</b>	4
<b>6</b>	25	22	24	2	<b>1</b>	<b>0</b>	1	<b>B</b>	<b>A</b>	6	3	
<b>4</b>	4	<b>0</b>	6	7	1	8	<b>A</b>	<b>2</b>	5	1	<b>9</b>	
23	22	<b>6</b>	<b>0</b>	<b>4</b>	20	<b>9</b>	21	22	24	1	<b>A</b>	7
<b>B</b>	<b>4</b>	20	24	24	22	25	25	23	25	<b>3</b>	24	
12	<b>3</b>	21	25	24	<b>B</b>	3	<b>8</b>	<b>7</b>	10	25	2	
27	26	25	<b>3</b>	25	<b>4</b>	24	<b>7</b>	27	<b>B</b>	26	23	10
<b>1</b>	12	11	<b>2</b>	<b>0</b>	<b>6</b>	7	13	13	9	10	14	
27	25	<b>4</b>	6	8	26	<b>8</b>	23	26	26	27	<b>7</b>	
1				5				9				

Tournament

Diff: 27 / 733.5382.2121.221A.1A1A.3354.9964

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 27 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

All 27 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 7 independent moves.

- \* The only spot for A in the 3rd 4x3 rectangle is (9, 3).
- \* The only spot for 3 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 8 in the 5th 4x3 rectangle is (6, 6).
- \* The only spot for 4 in the 5th 4x3 rectangle is (8, 5).
- \* The only spot for 6 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 0 in the 6th 4x3 rectangle is (11, 4).
- \* The only spot for B in the 9th 4x3 rectangle is (11, 7).

Step 2: There are 3 independent moves.

- \* The only spot for 0 in the 9th row is (12, 9).
- \* The only spot for A in the 4th 4x3 rectangle is (4, 4).
- \* The only spot for 9 in the 5th 4x3 rectangle is (5, 5).

Step 3: There are 3 independent moves.

- \* The only spot for B in the 4th row is (2, 4).
- \* The only spot for 3 in the 5th row is (12, 5).
- \* The only spot for 6 in the 9th row is (7, 9).

Step 4: There are 5 independent moves.

- \* The only spot for 6 in the 2nd row is (4, 2).
- \* The only spot for 1 in the 4th row is (10, 4).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (9, 2).
- \* The only spot for 1 in the 4th 4x3 rectangle is (2, 6).

Step 5: There are 3 independent moves.

- \* The only spot for 4 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (11, 2).
- \* The only spot for 5 in the 6th 4x3 rectangle is (10, 6).

Step 6: There are 8 independent moves.

- \* The only spot for B in the 1st row is (12, 1).
- \* The only spot for 4 in the 2nd row is (7, 2).
- \* The only spot for 7 in the 6th row is (4, 6).
- \* The only spot for B in the 4th column is (4, 12).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 3).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 7 in the 6th 4x3 rectangle is (11, 5).

Step 7: There are 2 independent moves.

- \* The only spot for B in the 5th column is (5, 6).
- \* The only spot for B in the 11th 4x3 rectangle is (7, 11).

Step 8: There are 2 independent moves.

- \* The only spot for 3 in the 5th column is (5, 12).
- \* The only spot for 3 in the 5th 4x3 rectangle is (7, 6).

Step 9: There is 1 independent move.

- \* The only spot for 3 in the 12th 4x3 rectangle is (10, 11).

Step 10: There are 2 independent moves.

- \* The only spot for 4 in the 10th column is (10, 9).
- \* The only spot for 4 in the 12th 4x3 rectangle is (11, 11).

Step 11: There is 1 independent move.

- \* The only spot for A in the 11th row is (3, 11).

Step 12: There are 2 independent moves.

- \* The only spot for A in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 7 in the 10th 4x3 rectangle is (2, 11).

Step 13: There are 2 independent moves.

- \* The only spot for 8 in the 11th row is (9, 11).
- \* The only spot for 9 in the 11th row is (8, 11).

Step 14: There is 1 independent move.

- \* The only spot for 5 in the 11th row is (12, 11).

Step 15: There is 1 independent move.

- \* 2 must be placed at (7, 3) because it is the only value left that is not already in the 3rd row, the 7th column or the 2nd 4x3 rectangle.

Step 16: There is 1 independent move.

- \* The only spot for 2 in the 1st 4x3 rectangle is (1, 1).

Step 17: There is 1 independent move.

- \* 9 must be placed at (2, 3) because it is the only value left that is not already in the 3rd row, the 2nd column or the 1st 4x3 rectangle.

Step 18: There is 1 independent move.

- \* The only spot for 9 in the 2nd 4x3 rectangle is (6, 2).

Step 19: There is 1 independent move.

- \* 7 must be placed at (1, 3) because it is the only value left that is not already in the 3rd row, the 1st column or the 1st 4x3 rectangle.

Step 20: There are 3 independent moves.

- \* The only spot for 7 in the 7th row is (6, 7).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (5, 2).
- \* The only spot for 7 in the 7th 4x3 rectangle is (3, 8).

Step 21: There are 3 independent moves.

- \* The only spot for 3 in the 6th column is (6, 3).
- \* The only spot for 1 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 3 in the 8th 4x3 rectangle is (8, 7).

Step 22: There are 5 independent moves.

- \* The only spot for 1 in the 7th row is (9, 7).
- \* The only spot for 2 in the 3rd column is (3, 5).
- \* The only spot for 0 in the 6th column is (6, 8).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (8, 3).
- \* The only spot for 2 in the 7th 4x3 rectangle is (2, 7).

Step 23: There are 4 independent moves.

- \* The only spot for 5 in the 7th row is (1, 7).
- \* The only spot for 1 in the 12th row is (8, 12).
- \* The only spot for 5 in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for 1 in the 12th 4x3 rectangle is (12, 10).

Step 24: There are 9 independent moves.

- \* The only spot for 8 in the 7th row is (10, 7).
- \* The only spot for 5 in the 4th column is (4, 5).
- \* The only spot for 5 in the 7th column is (7, 10).
- \* The only spot for 5 in the 8th column is (8, 4).
- \* The only spot for 5 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for 8 in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for 5 in the 8th 4x3 rectangle is (5, 9).
- \* The only spot for 1 in the 8th 4x3 rectangle is (5, 8).
- \* The only spot for 6 in the 9th 4x3 rectangle is (12, 8).

Step 25: There are 12 independent moves.

- \* The only spot for 9 in the 8th row is (10, 8).
- \* The only spot for 2 in the 9th row is (11, 9).
- \* The only spot for 8 in the 3rd column is (3, 10).
- \* The only spot for 2 in the 5th column is (5, 10).
- \* The only spot for 8 in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for 5 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 8 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for 2 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 9 in the 7th 4x3 rectangle is (4, 9).
- \* The only spot for 2 in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for A in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 5 in the 10th 4x3 rectangle is (2, 12).

Step 26: There are 6 independent moves.

- \* The only spot for A in the 10th row is (11, 10).
- \* The only spot for 6 in the 12th row is (9, 12).
- \* The only spot for A in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 6 in the 10th 4x3 rectangle is (2, 10).
- \* The only spot for A in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 2 in the 12th 4x3 rectangle is (10, 12).

Step 27: There are 4 independent moves.

- \* The only spot for 9 in the 10th row is (1, 10).
- \* The only spot for 0 in the 12th row is (1, 12).
- \* The only spot for 9 in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for 0 in the 12th 4x3 rectangle is (9, 10).

## Solution for Puzzle 4

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	0	3	4	A	5	1	6	9	7	8	B
8	A	5	6	7	9	4	B	3	0	1	2
7	9	B	1	8	3	2	0	A	6	5	4
3	B	9	A	6	2	7	5	4	1	0	8
6	8	2	5	9	1	0	4	B	A	7	3
4	1	0	7	B	8	3	A	2	5	6	9
5	2	6	0	4	7	9	3	1	8	B	A
B	4	7	8	1	0	A	2	5	9	3	6
A	3	1	9	5	B	6	8	7	4	2	0
9	6	8	3	2	4	5	7	0	B	A	1
1	7	A	2	0	6	B	9	8	3	4	5
0	5	4	B	3	A	8	1	6	2	9	7

Tournament

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## Chapter 5

# Two TournamentPlus Sudoku-12 Puzzles

There are two puzzles in this section ranging in difficulty from thirty-one to forty-two. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 5** (86/144) DiffKey 31 / 834.1321.1211.1BA1.3376.2444.1B24.2343

**Puzzle 6** (92/144) DiffKey 42 / 52.1111.B233.31B1.A122.1232.1A21.2533.B122.2231+

## Sudoku-12 Puzzle 5, TournamentPlus/31

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

86/144

4				1		A			3		0
1	A			6				5			B
2			3		0	5		8		1	
9				3		8	2				
	6	8	7							2	4
			1		4		6	9	A		8
				0	7	2		A			1
	3	A	5						9		
	0	1		A		B	5				7
		2	B					7	1		
					1				8	B	
	1		8			7	A			4	

TournamentPlus

Diff: 31 / 834.1321.1211.1BA1.3376.2444.1B24.2343

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 31 steps required to solve the puzzle above with a total of 86 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 5

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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4	<sup>1</sup>	<sup>2</sup>		1		A			3		0
1	A			6				5			B
2			3		0	5		8		1	<sup>1</sup>
9				3		8	2	<sup>1</sup>			
	6	8	7							2	4
	<sup>1</sup>		1	<sup>1</sup>	4		6	9	A		8
				0	7	2	<sup>3</sup>	A			1
<sup>1</sup>	3	A	5					<sup>2</sup>	9	<sup>3</sup>	<sup>3</sup>
	0	1	<sup>1</sup>	A	<sup>2</sup>	B	5	<sup>3</sup>			7
		2	B					7	1	<sup>1</sup>	
					1				8	B	
	1		8			7	A			4	

TournamentPlus

Diff: 31 / 834.1321.1211.1BA1.3376.2444.1B24.2343

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 31 steps required to solve the puzzle above with a total of 86 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.



## Deductive Steps to Solve Puzzle 5

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>4</b>	<sup>1</sup>	<sup>2</sup>	<sup>11</sup>	<b>1</b>	<sup>17</sup>	<b>A</b>	<sup>16</sup>	<sup>18</sup>	<b>3</b>	<sup>15</sup>	<b>0</b>	<sup>1</sup>
<b>1</b>	<b>A</b>	<sup>9</sup>	<sup>10</sup>	<b>6</b>	<sup>18</sup>	<sup>19</sup>	<sup>19</sup>	<b>5</b>	<sup>17</sup>	<sup>12</sup>	<b>B</b>	
<b>2</b>	<sup>8</sup>	<sup>7</sup>	<b>3</b>	<sup>21</sup>	<b>0</b>	<b>5</b>	<sup>20</sup>	<b>8</b>	<sup>16</sup>	<b>1</b>	<sup>1</sup>	
<b>9</b>	<sup>21</sup>	<sup>19</sup>	<sup>22</sup>	<b>3</b>	<sup>23</sup>	<b>8</b>	<b>2</b>	<sup>1</sup>	<sup>18</sup>	<sup>16</sup>	<sup>14</sup>	<sup>4</sup>
<sup>23</sup>	<b>6</b>	<b>8</b>	<b>7</b>	<sup>19</sup>	<sup>22</sup>	<sup>18</sup>	<sup>17</sup>	<sup>5</sup>	<sup>19</sup>	<b>2</b>	<b>4</b>	
<sup>27</sup>	<sup>1</sup>	<sup>26</sup>	<b>1</b>	<sup>1</sup>	<b>4</b>	<sup>13</sup>	<b>6</b>	<b>9</b>	<b>A</b>	<sup>13</sup>	<b>8</b>	
<sup>25</sup>	<sup>26</sup>	<sup>27</sup>	<sup>24</sup>	<b>0</b>	<b>7</b>	<b>2</b>	<sup>3</sup>	<b>A</b>	<sup>6</sup>	<sup>5</sup>	<b>1</b>	<sup>7</sup>
<sup>1</sup>	<b>3</b>	<b>A</b>	<b>5</b>	<sup>21</sup>	<sup>23</sup>	<sup>22</sup>	<sup>18</sup>	<sup>2</sup>	<b>9</b>	<sup>3</sup>	<sup>3</sup>	
<sup>5</sup>	<b>0</b>	<b>1</b>	<sup>1</sup>	<b>A</b>	<sup>2</sup>	<b>B</b>	<b>5</b>	<sup>3</sup>	<sup>6</sup>	<sup>4</sup>	<b>7</b>	
<sup>30</sup>	<sup>27</sup>	<b>2</b>	<b>B</b>	<sup>20</sup>	<sup>21</sup>	<sup>29</sup>	<sup>29</sup>	<b>7</b>	<b>1</b>	<sup>1</sup>	<sup>28</sup>	<sup>10</sup>
<sup>30</sup>	<sup>9</sup>	<sup>27</sup>	<sup>23</sup>	<sup>19</sup>	<b>1</b>	<sup>30</sup>	<sup>28</sup>	<sup>31</sup>	<b>8</b>	<b>B</b>	<sup>29</sup>	
<sup>31</sup>	<b>1</b>	<sup>25</sup>	<b>8</b>	<sup>18</sup>	<sup>22</sup>	<b>7</b>	<b>A</b>	<sup>31</sup>	<sup>18</sup>	<b>4</b>	<sup>30</sup>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

TournamentPlus

Diff: 31 / 834.1321.1211.1BA1.3376.2444.1B24.2343

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 31 steps required to solve the puzzle above with a total of 86 empty locations that must be determined, out of a total puzzle size of 144.

All 31 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 8 independent moves.

- \* The only spot for 1 in the 4th row is (9, 4).
- \* The only spot for A in the 11th column is (11, 10).
- \* The only spot for 8 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for A in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 2 in the 4th 4x3 rectangle is (2, 6).
- \* The only spot for 7 in the 5th 4x3 rectangle is (5, 6).
- \* The only spot for 2 in the 7th 4x3 rectangle is (4, 9).
- \* The only spot for 7 in the 7th 4x3 rectangle is (1, 8).

Step 2: There are 3 independent moves.

- \* The only spot for B in the 8th row is (9, 8).
- \* The only spot for 9 in the 9th row is (6, 9).
- \* The only spot for 5 in the 1st 4x3 rectangle is (3, 1).

Step 3: There are 4 independent moves.

- \* The only spot for 4 in the 9th column is (9, 9).
- \* The only spot for 3 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 2 in the 9th 4x3 rectangle is (12, 8).
- \* The only spot for 0 in the 9th 4x3 rectangle is (11, 8).

Step 4: There is 1 independent move.

- \* The only spot for 3 in the 9th 4x3 rectangle is (11, 9).

Step 5: There are 3 independent moves.

- \* The only spot for 8 in the 9th row is (1, 9).
- \* The only spot for 3 in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 8 in the 9th 4x3 rectangle is (11, 7).

Step 6: There are 2 independent moves.

- \* The only spot for 6 in the 9th row is (10, 9).
- \* The only spot for 5 in the 9th 4x3 rectangle is (10, 7).

Step 7: There is 1 independent move.

- \* The only spot for 6 in the 3rd row is (3, 3).

Step 8: There is 1 independent move.

- \* The only spot for B in the 1st 4x3 rectangle is (2, 3).

Step 9: There are 2 independent moves.

- \* The only spot for 7 in the 2nd column is (2, 11).
- \* The only spot for 7 in the 1st 4x3 rectangle is (3, 2).

Step 10: There is 1 independent move.

- \* The only spot for 0 in the 1st 4x3 rectangle is (4, 2).

Step 11: There is 1 independent move.

- \* The only spot for 9 in the 1st 4x3 rectangle is (4, 1).

Step 12: There is 1 independent move.

- \* The only spot for 9 in the 3rd 4x3 rectangle is (11, 2).

Step 13: There are 2 independent moves.

- \* 5 must be placed at (11, 6) because it is the only value left that is not already in the 6th row, the 11th column or the 6th 4x3 rectangle.

- \* 0 must be placed at (7, 6) because it is the only value left that is not already in the 6th row, the 7th column or the 5th 4x3 rectangle.

Step 14: There is 1 independent move.

- \* 6 must be placed at (12, 4) because it is the only value left that is not already in the 4th row, the 12th column or the 6th 4x3 rectangle.

Step 15: There is 1 independent move.

- \* The only spot for 6 in the 11th column is (11, 1).

Step 16: There are 3 independent moves.

- \* The only spot for 7 in the 1st row is (8, 1).
- \* The only spot for 7 in the 11th column is (11, 4).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (10, 3).

Step 17: There are 3 independent moves.

- \* The only spot for B in the 8th column is (8, 5).
- \* The only spot for B in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (10, 2).

Step 18: There are 7 independent moves.

- \* The only spot for 1 in the 8th column is (8, 8).
- \* The only spot for 2 in the 10th column is (10, 12).
- \* The only spot for 2 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for 1 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for B in the 6th 4x3 rectangle is (10, 4).
- \* The only spot for B in the 11th 4x3 rectangle is (5, 12).

Step 19: There are 6 independent moves.

- \* The only spot for 0 in the 4th row is (3, 4).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 9 in the 5th 4x3 rectangle is (5, 5).
- \* The only spot for 0 in the 6th 4x3 rectangle is (10, 5).
- \* The only spot for 2 in the 11th 4x3 rectangle is (5, 11).

Step 20: There are 2 independent moves.

- \* The only spot for 5 in the 5th column is (5, 10).
- \* The only spot for 9 in the 2nd 4x3 rectangle is (8, 3).

Step 21: There are 4 independent moves.

- \* The only spot for 5 in the 2nd column is (2, 4).
- \* The only spot for 8 in the 5th column is (5, 8).
- \* The only spot for 4 in the 2nd 4x3 rectangle is (5, 3).
- \* The only spot for 8 in the 11th 4x3 rectangle is (6, 10).

Step 22: There are 4 independent moves.

- \* The only spot for 4 in the 4th 4x3 rectangle is (4, 4).
- \* The only spot for 5 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 4 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 3 in the 11th 4x3 rectangle is (6, 12).

Step 23: There are 4 independent moves.

- \* The only spot for A in the 4th column is (4, 11).
- \* The only spot for A in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for A in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 6 in the 8th 4x3 rectangle is (6, 8).

Step 24: There is 1 independent move.

- \* The only spot for 6 in the 4th column is (4, 7).

Step 25: There are 2 independent moves.

- \* 9 must be placed at (3, 12) because it is the only value left that is not already in the 12th row, the 3rd column or the 10th 4x3 rectangle.
- \* B must be placed at (1, 7) because it is the only value left that is not already in the 7th row, the 1st column or the 7th 4x3 rectangle.

Step 26: There are 2 independent moves.

- \* The only spot for B in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 9 in the 7th 4x3 rectangle is (2, 7).

Step 27: There are 4 independent moves.

- \* The only spot for 4 in the 2nd column is (2, 10).
- \* The only spot for 3 in the 3rd column is (3, 11).
- \* The only spot for 3 in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 4 in the 7th 4x3 rectangle is (3, 7).

Step 28: There are 2 independent moves.

- \* The only spot for 4 in the 11th 4x3 rectangle is (8, 11).
- \* The only spot for 3 in the 12th 4x3 rectangle is (12, 10).

Step 29: There are 3 independent moves.

- \* The only spot for 9 in the 10th row is (7, 10).
- \* The only spot for 0 in the 11th 4x3 rectangle is (8, 10).
- \* The only spot for 9 in the 12th 4x3 rectangle is (12, 11).

Step 30: There are 4 independent moves.

- \* The only spot for 6 in the 10th row is (1, 10).
- \* The only spot for 5 in the 11th row is (1, 11).
- \* The only spot for 6 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 5 in the 12th 4x3 rectangle is (12, 12).

Step 31: There are 3 independent moves.

- \* The only spot for 0 in the 11th row is (9, 11).
- \* The only spot for 0 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 6 in the 12th 4x3 rectangle is (9, 12).

## Solution for Puzzle 5

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

4	8	5	9	1	B	A	7	2	3	6	0
1	A	7	0	6	2	3	8	5	4	9	B
2	B	6	3	4	0	5	9	8	7	1	A
9	5	0	4	3	A	8	2	1	B	7	6
A	6	8	7	9	5	1	B	3	0	2	4
3	2	B	1	7	4	0	6	9	A	5	8
B	9	4	6	0	7	2	3	A	5	8	1
7	3	A	5	8	6	4	1	B	9	0	2
8	0	1	2	A	9	B	5	4	6	3	7
6	4	2	B	5	8	9	0	7	1	A	3
5	7	3	A	2	1	6	4	0	8	B	9
0	1	9	8	B	3	7	A	6	2	4	5

TournamentPlus

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## Sudoku-12 Puzzle 6, TournamentPlus/42

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		2				6		9	8		
	B		7	5		9					
		3			1			B	A		7
3				2			7		1		
0					4	1	3		5	6	
7	8	1								4	9
			8			A					
	7	B					4				3
		A	4		8			1			5
						3	5	6		9	
		7	6	9	0				2		
	A			4			8			B	

TournamentPlus

Diff: 42 / 52.1111.B233.31B1.A122.1232.1A21.2533.B122+

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 4x3 rectangle.

There are 42 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 6

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

92/144

		2				6		9	8		
	B		7	5		9					
		3		<sup>2</sup>	1	<sup>1</sup>		B	A		7
3				2	<sup>1</sup>	<sup>2</sup>	7		1		
0					4	1	3	<sup>1</sup>	5	6	<sup>3</sup>
7	8	1								4	9
			8			A					
	7	B					4				3
		A	4		8			1			5
						3	5	6		9	
		7	6	9	0				2		
	A		<sup>1</sup>	4	<sup>1</sup>		8			B	

TournamentPlus

Diff: 42 / 52.1111.B233.31B1.A122.1232.1A21.2533.B122+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 42 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 6

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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11	28	<b>2</b>	17	34	33	<b>6</b>	31	<b>9</b>	<b>8</b>	19	29	<sup>1</sup>
10	<b>B</b>	28	<b>7</b>	<b>5</b>	35	<b>9</b>	41	20	42	11	41	
25	26	<b>3</b>	27	2	<b>1</b>	1	42	<b>B</b>	<b>A</b>	41	<b>7</b>	
<b>3</b>	28	27	24	<b>2</b>	1	2	<b>7</b>	23	<b>1</b>	22	6	<sup>4</sup>
<b>0</b>	13	7	36	37	<b>4</b>	<b>1</b>	<b>3</b>	1	<b>5</b>	<b>6</b>	3	
<b>7</b>	<b>8</b>	<b>1</b>	37	37	30	29	36	4	5	<b>4</b>	<b>9</b>	
39	41	25	<b>8</b>	42	32	<b>A</b>	40	21	41	11	40	<sup>7</sup>
38	<b>7</b>	<b>B</b>	28	39	31	30	<b>4</b>	22	28	21	<b>3</b>	
40	40	<b>A</b>	<b>4</b>	41	<b>8</b>	10	39	<b>1</b>	33	42	<b>5</b>	
8	16	9	14	35	34	<b>3</b>	<b>5</b>	<b>6</b>	29	<b>9</b>	30	<sup>10</sup>
12	18	<b>7</b>	<b>6</b>	<b>9</b>	<b>0</b>	7	15	21	<b>2</b>	20	13	
8	<b>A</b>	17	1	<b>4</b>	1	9	<b>8</b>	18	10	<b>B</b>	9	

<sup>1</sup>  
TournamentPlus

<sup>5</sup>  
Diff: 42 / 52.1111.B233.31B1.A122.1232.1A21.2533.B122+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 42 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

All 42 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 5 independent moves.

- \* The only spot for 3 in the 4th column is (4, 12).
- \* The only spot for 4 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 9 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 7 in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 6 in the 11th 4x3 rectangle is (6, 12).

Step 2: There are 2 independent moves.

- \* The only spot for 8 in the 7th column is (7, 4).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (5, 3).

Step 3: There is 1 independent move.

- \* The only spot for 8 in the 6th 4x3 rectangle is (12, 5).

Step 4: There is 1 independent move.

- \* The only spot for 2 in the 6th 4x3 rectangle is (9, 6).

Step 5: There is 1 independent move.

- \* The only spot for 3 in the 6th 4x3 rectangle is (10, 6).

Step 6: There is 1 independent move.

- \* The only spot for B in the 6th 4x3 rectangle is (12, 4).

Step 7: There are 2 independent moves.

- \* B must be placed at (7, 11) because it is the only value left that is not already in the 11th row, the 7th column or the 11th 4x3 rectangle.
- \* 9 must be placed at (3, 5) because it is the only value left that is not already in the 5th row, the 3rd column or the 4th 4x3 rectangle.

Step 8: There are 2 independent moves.

- \* The only spot for B in the 1st column is (1, 10).
- \* The only spot for 9 in the 10th 4x3 rectangle is (1, 12).

Step 9: There are 3 independent moves.

- \* The only spot for 8 in the 10th row is (3, 10).
- \* The only spot for 1 in the 12th row is (12, 12).
- \* The only spot for 2 in the 12th row is (7, 12).

Step 10: There are 3 independent moves.

- \* The only spot for 7 in the 12th row is (10, 12).
- \* The only spot for 7 in the 7th column is (7, 9).
- \* The only spot for 8 in the 1st 4x3 rectangle is (1, 2).

Step 11: There are 3 independent moves.

- \* The only spot for 1 in the 2nd row is (11, 2).
- \* The only spot for A in the 1st column is (1, 1).
- \* The only spot for 7 in the 9th 4x3 rectangle is (11, 7).

Step 12: There is 1 independent move.

- \* The only spot for 4 in the 1st column is (1, 11).

Step 13: There are 2 independent moves.

- \* A must be placed at (12, 11) because it is the only value left that is not already in the 11th row, the 12th column or the 12th 4x3 rectangle.
- \* 2 must be placed at (2, 5) because it is the only value left that is not already in the 5th row, the 2nd column or the 4th 4x3 rectangle.

Step 14: There is 1 independent move.

- \* The only spot for 2 in the 10th 4x3 rectangle is (4, 10).

Step 15: There is 1 independent move.

- \* 1 must be placed at (8, 11) because it is the only value left that is not already in the 11th row, the 8th column or the 11th 4x3 rectangle.

Step 16: There is 1 independent move.

- \* The only spot for 1 in the 10th 4x3 rectangle is (2, 10).

Step 17: There are 2 independent moves.

- \* The only spot for 1 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 0 in the 10th 4x3 rectangle is (3, 12).

Step 18: There are 2 independent moves.

- \* The only spot for 5 in the 12th row is (9, 12).
- \* The only spot for 5 in the 10th 4x3 rectangle is (2, 11).

Step 19: There is 1 independent move.

- \* The only spot for 5 in the 1st row is (11, 1).

Step 20: There are 2 independent moves.

- \* The only spot for 3 in the 11th column is (11, 11).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (9, 2).

Step 21: There are 3 independent moves.

- \* The only spot for 4 in the 9th column is (9, 7).
- \* The only spot for 8 in the 11th column is (11, 8).
- \* The only spot for 8 in the 12th 4x3 rectangle is (9, 11).

Step 22: There are 2 independent moves.

- \* The only spot for A in the 11th column is (11, 4).
- \* The only spot for A in the 9th 4x3 rectangle is (9, 8).

Step 23: There is 1 independent move.

- \* The only spot for 0 in the 6th 4x3 rectangle is (9, 4).

Step 24: There is 1 independent move.

- \* 5 must be placed at (4, 4) because it is the only value left that is not already in the 4th row, the 4th column or the 4th 4x3 rectangle.

Step 25: There are 2 independent moves.

- \* The only spot for 5 in the 3rd column is (3, 7).
- \* The only spot for 5 in the 1st 4x3 rectangle is (1, 3).

Step 26: There is 1 independent move.

- \* The only spot for 6 in the 3rd row is (2, 3).

Step 27: There are 2 independent moves.

- \* The only spot for 9 in the 1st 4x3 rectangle is (4, 3).
- \* The only spot for 6 in the 4th 4x3 rectangle is (3, 4).

Step 28: There are 5 independent moves.

- \* The only spot for 9 in the 8th row is (10, 8).
- \* The only spot for 4 in the 3rd column is (3, 2).
- \* The only spot for 0 in the 4th column is (4, 8).
- \* The only spot for 0 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 4 in the 4th 4x3 rectangle is (2, 4).

Step 29: There are 3 independent moves.

- \* The only spot for 0 in the 7th column is (7, 6).
- \* The only spot for 4 in the 10th column is (10, 10).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 1).

Step 30: There are 3 independent moves.

- \* The only spot for 5 in the 7th column is (7, 8).
- \* The only spot for 5 in the 5th 4x3 rectangle is (6, 6).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 10).

Step 31: There are 2 independent moves.

- \* 2 must be placed at (6, 8) because it is the only value left that is not already in the 8th row, the 6th column or the 8th 4x3 rectangle.
- \* B must be placed at (8, 1) because it is the only value left that is not already in the 1st row, the 8th column or the 2nd 4x3 rectangle.

Step 32: There is 1 independent move.

- \* The only spot for B in the 6th column is (6, 7).

Step 33: There are 2 independent moves.

- \* The only spot for 3 in the 6th column is (6, 1).
- \* The only spot for B in the 9th 4x3 rectangle is (10, 9).

Step 34: There are 2 independent moves.

- \* The only spot for 7 in the 6th column is (6, 10).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (5, 1).

Step 35: There are 2 independent moves.

- \* The only spot for A in the 6th column is (6, 2).
- \* The only spot for A in the 11th 4x3 rectangle is (5, 10).

Step 36: There are 2 independent moves.

- \* The only spot for A in the 5th row is (4, 5).
- \* The only spot for A in the 5th 4x3 rectangle is (8, 6).

Step 37: There are 3 independent moves.

- \* The only spot for B in the 5th row is (5, 5).
- \* The only spot for B in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 6 in the 5th 4x3 rectangle is (5, 6).

Step 38: There is 1 independent move.

- \* The only spot for 6 in the 8th row is (1, 8).

Step 39: There are 3 independent moves.

- \* The only spot for 1 in the 8th row is (5, 8).
- \* The only spot for 6 in the 9th row is (8, 9).
- \* The only spot for 1 in the 7th 4x3 rectangle is (1, 7).

Step 40: There are 4 independent moves.

- \* The only spot for 2 in the 7th row is (12, 7).
- \* The only spot for 9 in the 9th row is (2, 9).
- \* The only spot for 2 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 9 in the 8th 4x3 rectangle is (8, 7).

Step 41: There are 6 independent moves.

- \* The only spot for 2 in the 2nd row is (8, 2).

- \* The only spot for 3 in the 9th row is (5, 9).
- \* The only spot for 6 in the 12th column is (12, 2).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (11, 3).
- \* The only spot for 3 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 6 in the 9th 4x3 rectangle is (10, 7).

Step 42: There are 4 independent moves.

- \* The only spot for 0 in the 2nd 4x3 rectangle is (8, 3).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (10, 2).
- \* The only spot for 0 in the 8th 4x3 rectangle is (5, 7).
- \* The only spot for 0 in the 9th 4x3 rectangle is (11, 9).

## Solution for Puzzle 6

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

<b>A</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>B</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>4</b>
<b>8</b>	<b>B</b>	<b>4</b>	<b>7</b>	<b>5</b>	<b>A</b>	<b>9</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>6</b>
<b>5</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>B</b>	<b>A</b>	<b>2</b>	<b>7</b>
<b>3</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>A</b>	<b>B</b>
<b>0</b>	<b>2</b>	<b>9</b>	<b>A</b>	<b>B</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>8</b>
<b>7</b>	<b>8</b>	<b>1</b>	<b>B</b>	<b>6</b>	<b>5</b>	<b>0</b>	<b>A</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>9</b>
<b>1</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>B</b>	<b>A</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>2</b>
<b>6</b>	<b>7</b>	<b>B</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>A</b>	<b>9</b>	<b>8</b>	<b>3</b>
<b>2</b>	<b>9</b>	<b>A</b>	<b>4</b>	<b>3</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>1</b>	<b>B</b>	<b>0</b>	<b>5</b>
<b>B</b>	<b>1</b>	<b>8</b>	<b>2</b>	<b>A</b>	<b>7</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>0</b>
<b>4</b>	<b>5</b>	<b>7</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>B</b>	<b>1</b>	<b>8</b>	<b>2</b>	<b>3</b>	<b>A</b>
<b>9</b>	<b>A</b>	<b>0</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>B</b>	<b>1</b>

TournamentPlus

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## Chapter 6

# Two Challenging Sudoku-12up Puzzles

There are two puzzles in this section ranging in difficulty from sixteen to nineteen. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 7** (90/144) DiffKey 16 / 9996.3259.8341.3542

**Puzzle 8** (88/144) DiffKey 19 / 934.5644.7898.2222.4432

## Sudoku-12up Puzzle 7, Challenging/16

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				7		3		8		1	6
1			2			A			8		
	5	6	1		9						B
7		A		5			1		4		
			3			1	4	7		9	
	7	1	9							5	
4	3							9	1		
		9	8				2		6	7	
	4				0	B	A				1
2	A		B		3						
				8	5	6				2	3
	6								0	8	

Challenging

Diff: 16 / 9996.3259.8341.3542

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 16 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 7

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		<sup>3</sup>		<b>7</b>	<sup>3</sup>	<b>3</b>		<b>8</b>		<b>1</b>	<b>6</b>
<b>1</b>		<sup>2</sup>	<b>2</b>			<b>A</b>			<b>8</b>	<sup>3</sup>	
<sup>1</sup>	<b>5</b>	<b>6</b>	<b>1</b>	<sup>2</sup>	<b>9</b>					<sup>2</sup>	<b>B</b>
<b>7</b>		<b>A</b>	<sup>3</sup>	<b>5</b>	<sup>1</sup>		<b>1</b>		<b>4</b>	<sup>1</sup>	
	<sup>2</sup>		<b>3</b>			<b>1</b>	<b>4</b>	<b>7</b>	<sup>3</sup>	<b>9</b>	
	<b>7</b>	<b>1</b>	<b>9</b>				<sup>3</sup>	<sup>2</sup>	<sup>1</sup>	<b>5</b>	
<b>4</b>	<b>3</b>		<sup>1</sup>	<sup>3</sup>	<sup>2</sup>		<sup>3</sup>	<b>9</b>	<b>1</b>	<sup>1</sup>	
		<b>9</b>	<b>8</b>			<sup>2</sup>	<b>2</b>	<sup>1</sup>	<b>6</b>	<b>7</b>	
<sup>3</sup>	<b>4</b>	<sup>2</sup>			<b>0</b>	<b>B</b>	<b>A</b>			<sup>2</sup>	<b>1</b>
<b>2</b>	<b>A</b>		<b>B</b>	<sup>2</sup>	<b>3</b>			<sup>3</sup>		<sup>1</sup>	
	<sup>1</sup>		<sup>2</sup>	<b>8</b>	<b>5</b>	<b>6</b>		<sup>3</sup>	<sup>1</sup>	<b>2</b>	<b>3</b>
	<b>6</b>						<sup>2</sup>		<b>0</b>	<b>8</b>	<sup>2</sup>

Challenging

Diff: 16 / 9996.3259.8341.3542

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There are 16 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.



## Deductive Steps to Solve Puzzle 7

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>7</sup>	6	3	<sup>4</sup>	<b>7</b>	<sup>3</sup>	<b>3</b>	<sup>8</sup>	<b>8</b>	<sup>9</sup>	<b>1</b>	<b>6</b>	<sup>1</sup>
<b>1</b>	<sup>7</sup>	2	<b>2</b>	<sup>14</sup>	<sup>15</sup>	<b>A</b>	<sup>9</sup>	4	<b>8</b>	<sup>3</sup>	8	
<sup>1</sup>	<b>5</b>	<b>6</b>	<b>1</b>	<sup>2</sup>	<b>9</b>	<sup>4</sup>	<sup>8</sup>	6	<sup>7</sup>	2	<b>B</b>	
<b>7</b>	<sup>5</sup>	<b>A</b>	<sup>3</sup>	<b>5</b>	<sup>1</sup>	<sup>7</sup>	<b>1</b>	<sup>5</sup>	<b>4</b>	<sup>1</sup>	8	
<sup>16</sup>	<sup>2</sup>	<sup>9</sup>	<b>3</b>	<sup>15</sup>	<sup>15</sup>	<b>1</b>	<b>4</b>	<b>7</b>	<sup>3</sup>	<b>9</b>	<sup>14</sup>	<sup>5</sup>
<sup>15</sup>	<b>7</b>	<b>1</b>	<b>9</b>	<sup>16</sup>	<sup>14</sup>	<sup>14</sup>	<sup>3</sup>	2	<sup>1</sup>	<b>5</b>	<sup>13</sup>	
<b>4</b>	<b>3</b>	<sup>10</sup>	<sup>1</sup>	<sup>3</sup>	2	<sup>13</sup>	<sup>3</sup>	<b>9</b>	<b>1</b>	<sup>1</sup>	<sup>14</sup>	
<sup>4</sup>	<sup>8</sup>	<b>9</b>	<b>8</b>	<sup>11</sup>	<sup>13</sup>	<sup>2</sup>	<b>2</b>	<sup>1</sup>	<b>6</b>	<b>7</b>	<sup>12</sup>	
<sup>3</sup>	<b>4</b>	2	<sup>5</sup>	<sup>11</sup>	<b>0</b>	<b>B</b>	<b>A</b>	<sup>10</sup>	<sup>9</sup>	2	<b>1</b>	<sup>9</sup>
<b>2</b>	<b>A</b>	8	<b>B</b>	2	<b>3</b>	<sup>9</sup>	4	3	<sup>8</sup>	<sup>1</sup>	<sup>9</sup>	
<sup>8</sup>	<sup>1</sup>	8	<sup>2</sup>	<b>8</b>	<b>5</b>	<b>6</b>	<sup>7</sup>	3	<sup>1</sup>	<b>2</b>	<b>3</b>	
<sup>9</sup>	<b>6</b>	8	<sup>4</sup>	<sup>10</sup>	<sup>11</sup>	<sup>9</sup>	2	<sup>11</sup>	<b>0</b>	<b>8</b>	<sup>2</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			

Challenging

Diff: 16 / 9996.3259.8341.3542

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There are 16 steps required to solve the puzzle above with a total of 90 empty locations that must be determined, out of a total puzzle size of 144.

All 16 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 10 independent moves.

- \* The only spot for 8 in the 3rd row is (1, 3).
- \* The only spot for 3 in the 4th row is (11, 4).
- \* The only spot for 3 in the 8th row is (9, 8).
- \* The only spot for 4 in the 11th column is (11, 10).
- \* The only spot for B in the 11th column is (11, 7).
- \* The only spot for 8 in the 2nd 3x4 rectangle is (6, 4).
- \* The only spot for 5 in the 6th 3x4 rectangle is (4, 7).
- \* The only spot for 3 in the 8th 3x4 rectangle is (10, 6).
- \* The only spot for 1 in the 9th 3x4 rectangle is (2, 11).
- \* The only spot for B in the 12th 3x4 rectangle is (10, 11).

Step 2: There are 13 independent moves.

- \* The only spot for 3 in the 3rd row is (5, 3).
- \* The only spot for 8 in the 9th row is (3, 9).
- \* The only spot for 6 in the 10th row is (5, 10).
- \* The only spot for A in the 11th row is (4, 11).
- \* The only spot for 8 in the 2nd column is (2, 5).
- \* The only spot for A in the 11th column is (11, 3).
- \* The only spot for 3 in the 1st 3x4 rectangle is (3, 2).
- \* The only spot for 7 in the 6th 3x4 rectangle is (6, 7).
- \* The only spot for 5 in the 7th 3x4 rectangle is (7, 8).
- \* The only spot for A in the 7th 3x4 rectangle is (9, 6).
- \* The only spot for 3 in the 11th 3x4 rectangle is (8, 12).
- \* The only spot for A in the 12th 3x4 rectangle is (12, 12).
- \* The only spot for 6 in the 12th 3x4 rectangle is (11, 9).

Step 3: There are 11 independent moves.

- \* The only spot for 6 in the 7th row is (8, 7).
- \* The only spot for A in the 7th row is (5, 7).
- \* The only spot for 1 in the 10th row is (9, 10).
- \* The only spot for 4 in the 11th row is (9, 11).
- \* The only spot for 6 in the 4th column is (4, 4).
- \* The only spot for 0 in the 11th column is (11, 2).
- \* The only spot for 4 in the 1st 3x4 rectangle is (3, 1).
- \* The only spot for A in the 2nd 3x4 rectangle is (6, 1).
- \* The only spot for B in the 7th 3x4 rectangle is (8, 6).
- \* The only spot for A in the 8th 3x4 rectangle is (10, 5).
- \* The only spot for 3 in the 9th 3x4 rectangle is (1, 9).

Step 4: There are 6 independent moves.

- \* The only spot for 4 in the 4th column is (4, 12).
- \* The only spot for 8 in the 8th column is (8, 10).
- \* The only spot for 0 in the 2nd 3x4 rectangle is (4, 1).
- \* The only spot for 4 in the 3rd 3x4 rectangle is (7, 3).
- \* The only spot for 6 in the 3rd 3x4 rectangle is (9, 2).
- \* The only spot for A in the 5th 3x4 rectangle is (1, 8).

Step 5: There are 3 independent moves.

- \* The only spot for 0 in the 1st 3x4 rectangle is (2, 4).
- \* The only spot for B in the 3rd 3x4 rectangle is (9, 4).
- \* The only spot for 7 in the 10th 3x4 rectangle is (4, 9).

Step 6: There are 2 independent moves.

- \* The only spot for 0 in the 9th column is (9, 3).
- \* The only spot for 2 in the 1st 3x4 rectangle is (2, 1).

Step 7: There are 5 independent moves.

- \* The only spot for B in the 1st row is (1, 1).
- \* The only spot for 9 in the 2nd column is (2, 2).
- \* The only spot for 0 in the 8th column is (8, 11).
- \* The only spot for 2 in the 10th column is (10, 3).
- \* The only spot for 2 in the 3rd 3x4 rectangle is (7, 4).

Step 8: There are 10 independent moves.

- \* The only spot for 7 in the 3rd row is (8, 3).
- \* The only spot for 9 in the 4th row is (12, 4).
- \* The only spot for 7 in the 11th row is (3, 11).
- \* The only spot for 9 in the 11th row is (1, 11).
- \* The only spot for B in the 2nd column is (2, 8).
- \* The only spot for 7 in the 10th column is (10, 10).
- \* The only spot for 9 in the 3rd 3x4 rectangle is (8, 1).
- \* The only spot for 7 in the 4th 3x4 rectangle is (12, 2).
- \* The only spot for B in the 9th 3x4 rectangle is (3, 12).
- \* The only spot for 0 in the 9th 3x4 rectangle is (3, 10).

Step 9: There are 8 independent moves.

- \* The only spot for 9 in the 10th row is (7, 10).
- \* The only spot for 5 in the 3rd column is (3, 5).
- \* The only spot for 5 in the 12th column is (12, 10).
- \* The only spot for 5 in the 3rd 3x4 rectangle is (8, 2).
- \* The only spot for 5 in the 4th 3x4 rectangle is (10, 1).
- \* The only spot for 5 in the 9th 3x4 rectangle is (1, 12).
- \* The only spot for 7 in the 11th 3x4 rectangle is (7, 12).
- \* The only spot for 9 in the 12th 3x4 rectangle is (10, 9).

Step 10: There are 3 independent moves.

- \* The only spot for 2 in the 5th 3x4 rectangle is (3, 7).
- \* The only spot for 9 in the 10th 3x4 rectangle is (5, 12).
- \* The only spot for 5 in the 11th 3x4 rectangle is (9, 9).

Step 11: There are 4 independent moves.

- \* The only spot for 2 in the 9th row is (5, 9).
- \* The only spot for 1 in the 5th column is (5, 8).
- \* The only spot for 1 in the 10th 3x4 rectangle is (6, 12).
- \* The only spot for 2 in the 11th 3x4 rectangle is (9, 12).

Step 12: There is 1 independent move.

- \* The only spot for 0 in the 8th row is (12, 8).

Step 13: There are 3 independent moves.

- \* The only spot for 0 in the 7th row is (7, 7).
- \* The only spot for 4 in the 8th row is (6, 8).
- \* The only spot for 4 in the 8th 3x4 rectangle is (12, 6).

Step 14: There are 5 independent moves.

- \* The only spot for 2 in the 6th row is (6, 6).
- \* The only spot for 4 in the 2nd 3x4 rectangle is (5, 2).
- \* The only spot for 8 in the 7th 3x4 rectangle is (7, 6).
- \* The only spot for 8 in the 8th 3x4 rectangle is (12, 7).
- \* The only spot for 2 in the 8th 3x4 rectangle is (12, 5).

Step 15: There are 4 independent moves.

- \* The only spot for 6 in the 6th row is (1, 6).
- \* The only spot for B in the 5th column is (5, 5).
- \* The only spot for B in the 2nd 3x4 rectangle is (6, 2).
- \* The only spot for 6 in the 6th 3x4 rectangle is (6, 5).

Step 16: There are 2 independent moves.

- \* The only spot for 0 in the 5th 3x4 rectangle is (1, 5).
- \* The only spot for 0 in the 6th 3x4 rectangle is (5, 6).

## Solution for Puzzle 7

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

<b>B</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>A</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>5</b>	<b>1</b>	<b>6</b>
<b>1</b>	<b>9</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>B</b>	<b>A</b>	<b>5</b>	<b>6</b>	<b>8</b>	<b>0</b>	<b>7</b>
<b>8</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>A</b>	<b>B</b>
<b>7</b>	<b>0</b>	<b>A</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>B</b>	<b>4</b>	<b>3</b>	<b>9</b>
<b>0</b>	<b>8</b>	<b>5</b>	<b>3</b>	<b>B</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>7</b>	<b>A</b>	<b>9</b>	<b>2</b>
<b>6</b>	<b>7</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>2</b>	<b>8</b>	<b>B</b>	<b>A</b>	<b>3</b>	<b>5</b>	<b>4</b>
<b>4</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>A</b>	<b>7</b>	<b>0</b>	<b>6</b>	<b>9</b>	<b>1</b>	<b>B</b>	<b>8</b>
<b>A</b>	<b>B</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>6</b>	<b>7</b>	<b>0</b>
<b>3</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>0</b>	<b>B</b>	<b>A</b>	<b>5</b>	<b>9</b>	<b>6</b>	<b>1</b>
<b>2</b>	<b>A</b>	<b>0</b>	<b>B</b>	<b>6</b>	<b>3</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>7</b>	<b>4</b>	<b>5</b>
<b>9</b>	<b>1</b>	<b>7</b>	<b>A</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>B</b>	<b>2</b>	<b>3</b>
<b>5</b>	<b>6</b>	<b>B</b>	<b>4</b>	<b>9</b>	<b>1</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>A</b>

Challenging

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## Sudoku-12up Puzzle 8, Challenging/19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				<b>B</b>	<b>1</b>	<b>8</b>		<b>3</b>	<b>A</b>	<b>7</b>	
	<b>8</b>			<b>4</b>					<b>B</b>		<b>5</b>
<b>6</b>			<b>2</b>	<b>7</b>			<b>4</b>	<b>A</b>		<b>3</b>	
		<b>1</b>				<b>6</b>		<b>B</b>			<b>4</b>
<b>7</b>	<b>A</b>			<b>1</b>	<b>6</b>	<b>2</b>	<b>5</b>				
				<b>2</b>	<b>A</b>	<b>7</b>		<b>0</b>			
		<b>2</b>	<b>7</b>				<b>8</b>			<b>4</b>	<b>A</b>
<b>1</b>		<b>4</b>						<b>9</b>			<b>7</b>
<b>5</b>	<b>6</b>							<b>1</b>	<b>9</b>	<b>B</b>	
<b>4</b>					<b>5</b>		<b>2</b>				
		<b>3</b>	<b>8</b>	<b>6</b>		<b>9</b>	<b>B</b>				
		<b>9</b>	<b>1</b>						<b>5</b>	<b>A</b>	

Challenging

Diff: 19 / 934.5644.7898.2222.4432

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 19 steps required to solve the puzzle above with a total of 88 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 8

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<sup>1</sup>	<sup>2</sup>		<b>B</b>	<b>1</b>	<b>8</b>		<b>3</b>	<b>A</b>	<b>7</b>	
	<b>8</b>	<sup>2</sup>		<b>4</b>			<sup>3</sup>	<sup>1</sup>	<b>B</b>		<b>5</b>
<b>6</b>			<b>2</b>	<b>7</b>		<sup>1</sup>	<b>4</b>	<b>A</b>		<b>3</b>	
	<sup>3</sup>	<b>1</b>				<b>6</b>		<b>B</b>			<b>4</b>
<b>7</b>	<b>A</b>			<b>1</b>	<b>6</b>	<b>2</b>	<b>5</b>	<sup>1</sup>			
		<sup>1</sup>	<sup>1</sup>	<b>2</b>	<b>A</b>	<b>7</b>		<b>0</b>			
		<b>2</b>	<b>7</b>				<b>8</b>			<b>4</b>	<b>A</b>
<b>1</b>		<b>4</b>						<b>9</b>			<b>7</b>
<b>5</b>	<b>6</b>	<sup>3</sup>						<b>1</b>	<b>9</b>	<b>B</b>	
<b>4</b>					<b>5</b>		<b>2</b>		<sup>2</sup>		
<sup>1</sup>		<b>3</b>	<b>8</b>	<b>6</b>		<b>9</b>	<b>B</b>	<sup>1</sup>	<sup>1</sup>		
		<b>9</b>	<b>1</b>					<sup>3</sup>	<b>5</b>	<b>A</b>	

Challenging

Diff: 19 / 934.5644.7898.2222.4432

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There are 19 steps required to solve the puzzle above with a total of 88 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 8

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8	1	2	14	<b>B</b>	<b>1</b>	<b>8</b>	13	<b>3</b>	<b>A</b>	<b>7</b>	10	<sup>1</sup>
15	<b>8</b>	2	11	<b>4</b>	16	4	3	1	<b>B</b>	11	<b>5</b>	
<b>6</b>	11	8	<b>2</b>	<b>7</b>	10	1	<b>4</b>	<b>A</b>	11	<b>3</b>	6	
16	3	<b>1</b>	17	16	13	<b>6</b>	14	<b>B</b>	7	9	<b>4</b>	
<b>7</b>	<b>A</b>	5	12	<b>1</b>	<b>6</b>	<b>2</b>	<b>5</b>	1	10	11	8	<sup>5</sup>
9	10	1	1	<b>2</b>	<b>A</b>	<b>7</b>	4	<b>0</b>	9	8	11	
12	19	<b>2</b>	<b>7</b>	17	18	17	<b>8</b>	5	5	<b>4</b>	<b>A</b>	
<b>1</b>	18	<b>4</b>	17	10	19	18	10	<b>9</b>	6	7	<b>7</b>	
<b>5</b>	<b>6</b>	3	16	15	5	6	11	<b>1</b>	<b>9</b>	<b>B</b>	4	<sup>9</sup>
<b>4</b>	9	9	7	8	<b>5</b>	9	<b>2</b>	4	2	10	9	
1	8	<b>3</b>	<b>8</b>	<b>6</b>	4	<b>9</b>	<b>B</b>	1	1	9	10	
5	7	<b>9</b>	<b>1</b>	11	6	10	5	3	<b>5</b>	<b>A</b>	8	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			

Challenging

Diff: 19 / 934.5644.7898.2222.4432

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 19 steps required to solve the puzzle above with a total of 88 empty locations that must be determined, out of a total puzzle size of 144.

All 19 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 9 independent moves.

- \* The only spot for 4 in the 6th row is (4, 6).
- \* The only spot for A in the 11th row is (1, 11).
- \* The only spot for 4 in the 1st 3x4 rectangle is (2, 1).
- \* The only spot for 5 in the 3rd 3x4 rectangle is (7, 3).
- \* The only spot for 2 in the 3rd 3x4 rectangle is (9, 2).
- \* The only spot for 6 in the 5th 3x4 rectangle is (3, 6).
- \* The only spot for 4 in the 7th 3x4 rectangle is (9, 5).
- \* The only spot for 5 in the 11th 3x4 rectangle is (9, 11).
- \* The only spot for 4 in the 12th 3x4 rectangle is (10, 11).

Step 2: There are 3 independent moves.

- \* The only spot for 5 in the 3rd column is (3, 1).
- \* The only spot for A in the 1st 3x4 rectangle is (3, 2).
- \* The only spot for 7 in the 12th 3x4 rectangle is (10, 10).

Step 3: There are 4 independent moves.

- \* The only spot for 7 in the 2nd row is (8, 2).
- \* The only spot for 7 in the 3rd column is (3, 9).
- \* The only spot for 7 in the 9th column is (9, 12).
- \* The only spot for 7 in the 1st 3x4 rectangle is (2, 4).

Step 4: There are 5 independent moves.

- \* The only spot for 8 in the 9th row is (12, 9).
- \* The only spot for 1 in the 8th column is (8, 6).
- \* The only spot for 1 in the 3rd 3x4 rectangle is (7, 2).
- \* The only spot for 7 in the 10th 3x4 rectangle is (6, 11).
- \* The only spot for 8 in the 11th 3x4 rectangle is (9, 10).

Step 5: There are 6 independent moves.

- \* The only spot for 2 in the 9th row is (6, 9).
- \* The only spot for 8 in the 3rd column is (3, 5).
- \* The only spot for 6 in the 9th column is (9, 7).
- \* The only spot for 1 in the 8th 3x4 rectangle is (10, 7).
- \* The only spot for 8 in the 9th 3x4 rectangle is (1, 12).
- \* The only spot for 6 in the 11th 3x4 rectangle is (8, 12).

Step 6: There are 4 independent moves.

- \* The only spot for 4 in the 9th row is (7, 9).
- \* The only spot for 6 in the 10th column is (10, 8).
- \* The only spot for 1 in the 4th 3x4 rectangle is (12, 3).
- \* The only spot for 4 in the 10th 3x4 rectangle is (6, 12).

Step 7: There are 4 independent moves.

- \* The only spot for B in the 12th row is (2, 12).
- \* The only spot for 2 in the 10th column is (10, 4).
- \* The only spot for 2 in the 8th 3x4 rectangle is (11, 8).
- \* The only spot for B in the 10th 3x4 rectangle is (4, 10).

Step 8: There are 7 independent moves.

- \* The only spot for B in the 5th row is (12, 5).

- \* The only spot for 2 in the 12th row is (12, 12).
- \* The only spot for B in the 1st 3x4 rectangle is (3, 3).
- \* The only spot for 2 in the 1st 3x4 rectangle is (1, 1).
- \* The only spot for 5 in the 8th 3x4 rectangle is (11, 6).
- \* The only spot for 2 in the 9th 3x4 rectangle is (2, 11).
- \* The only spot for 9 in the 10th 3x4 rectangle is (5, 10).

Step 9: There are 8 independent moves.

- \* The only spot for B in the 6th row is (1, 6).
- \* The only spot for A in the 10th row is (7, 10).
- \* The only spot for 1 in the 11th row is (11, 11).
- \* The only spot for 0 in the 3rd column is (3, 10).
- \* The only spot for 8 in the 11th column is (11, 4).
- \* The only spot for 8 in the 8th 3x4 rectangle is (10, 6).
- \* The only spot for 1 in the 9th 3x4 rectangle is (2, 10).
- \* The only spot for 3 in the 12th 3x4 rectangle is (12, 10).

Step 10: There are 9 independent moves.

- \* The only spot for 3 in the 6th row is (2, 6).
- \* The only spot for 8 in the 5th column is (5, 8).
- \* The only spot for 0 in the 7th column is (7, 12).
- \* The only spot for 6 in the 12th column is (12, 1).
- \* The only spot for 8 in the 2nd 3x4 rectangle is (6, 3).
- \* The only spot for A in the 7th 3x4 rectangle is (8, 8).
- \* The only spot for 3 in the 8th 3x4 rectangle is (10, 5).
- \* The only spot for 0 in the 12th 3x4 rectangle is (12, 11).
- \* The only spot for 6 in the 12th 3x4 rectangle is (11, 10).

Step 11: There are 8 independent moves.

- \* The only spot for 9 in the 3rd row is (2, 3).
- \* The only spot for 3 in the 12th row is (5, 12).
- \* The only spot for 0 in the 10th column is (10, 3).
- \* The only spot for 9 in the 12th column is (12, 6).
- \* The only spot for 6 in the 2nd 3x4 rectangle is (4, 2).
- \* The only spot for 9 in the 4th 3x4 rectangle is (11, 2).
- \* The only spot for 0 in the 8th 3x4 rectangle is (11, 5).
- \* The only spot for 3 in the 11th 3x4 rectangle is (8, 9).

Step 12: There are 2 independent moves.

- \* The only spot for 9 in the 5th row is (4, 5).
- \* The only spot for 9 in the 5th 3x4 rectangle is (1, 7).

Step 13: There are 2 independent moves.

- \* The only spot for 9 in the 1st row is (8, 1).
- \* The only spot for 9 in the 2nd 3x4 rectangle is (6, 4).

Step 14: There are 2 independent moves.

- \* The only spot for 0 in the 1st row is (4, 1).
- \* The only spot for 0 in the 3rd 3x4 rectangle is (8, 4).

Step 15: There are 2 independent moves.

- \* The only spot for 0 in the 1st 3x4 rectangle is (1, 2).
- \* The only spot for 0 in the 10th 3x4 rectangle is (5, 9).

Step 16: There are 4 independent moves.

- \* The only spot for 3 in the 2nd row is (6, 2).
- \* The only spot for A in the 5th column is (5, 4).
- \* The only spot for 3 in the 1st 3x4 rectangle is (1, 4).
- \* The only spot for A in the 10th 3x4 rectangle is (4, 9).

Step 17: There are 4 independent moves.

- \* The only spot for 3 in the 7th row is (7, 7).
- \* The only spot for 5 in the 5th column is (5, 7).
- \* The only spot for 5 in the 2nd 3x4 rectangle is (4, 4).
- \* The only spot for 3 in the 6th 3x4 rectangle is (4, 8).

Step 18: There are 3 independent moves.

- \* The only spot for B in the 7th row is (6, 7).
- \* The only spot for 5 in the 5th 3x4 rectangle is (2, 8).
- \* The only spot for B in the 7th 3x4 rectangle is (7, 8).

Step 19: There are 2 independent moves.

- \* The only spot for 0 in the 5th 3x4 rectangle is (2, 7).
- \* The only spot for 0 in the 6th 3x4 rectangle is (6, 8).

## Solution for Puzzle 8

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	4	5	0	B	1	8	9	3	A	7	6
0	8	A	6	4	3	1	7	2	B	9	5
6	9	B	2	7	8	5	4	A	0	3	1
3	7	1	5	A	9	6	0	B	2	8	4
7	A	8	9	1	6	2	5	4	3	0	B
B	3	6	4	2	A	7	1	0	8	5	9
9	0	2	7	5	B	3	8	6	1	4	A
1	5	4	3	8	0	B	A	9	6	2	7
5	6	7	A	0	2	4	3	1	9	B	8
4	1	0	B	9	5	A	2	8	7	6	3
A	2	3	8	6	7	9	B	5	4	1	0
8	B	9	1	3	4	0	6	7	5	A	2

Challenging

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## Chapter 7

# Two Tournament Sudoku-12up Puzzles

There are two puzzles in this section ranging in difficulty from twenty-one to twenty-six. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 9** (89/144) DiffKey 21 / 9.5111.1B13.5433.3798.5645

**Puzzle 10** (98/144) DiffKey 26 / 53.22A1.2348.6732.1225.1B58.7844

## Sudoku-12up Puzzle 9, Tournament/21

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	1		4			A		9			
					0		5		4	3	7
	6	3	5					2			
0			2	9	1				B		6
					4	2			5		8
	4	6	0		7					A	
	3	2	6				0	8			
5						B				6	0
	8					3	B	1	9		
A		4					9		1	7	
3				0	2		A			4	
6				1	A						

Tournament

Diff: 21 / 9.5111.1B13.5433.3798.5645

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 21 steps required to solve the puzzle above with a total of 89 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 9

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<b>1</b>		<b>4</b>			<b>A</b>	<sup>2</sup>	<b>9</b>			
			<sup>2</sup>	<sup>2</sup>	<b>0</b>	<sup>1</sup>	<b>5</b>	<sup>1</sup>	<b>4</b>	<b>3</b>	<b>7</b>
<sup>1</sup>	<b>6</b>	<b>3</b>	<b>5</b>			<sup>1</sup>		<b>2</b>	<sup>1</sup>		
<b>0</b>			<b>2</b>	<b>9</b>	<b>1</b>				<b>B</b>		<b>6</b>
					<b>4</b>	<b>2</b>		<sup>3</sup>	<b>5</b>		<b>8</b>
	<b>4</b>	<b>6</b>	<b>0</b>		<b>7</b>					<b>A</b>	
	<b>3</b>	<b>2</b>	<b>6</b>	<sup>1</sup>			<b>0</b>	<b>8</b>			<sup>1</sup>
<b>5</b>						<b>B</b>				<b>6</b>	<b>0</b>
	<b>8</b>			<sup>1</sup>	<sup>2</sup>	<b>3</b>	<b>B</b>	<b>1</b>	<b>9</b>		<sup>1</sup>
<b>A</b>		<b>4</b>				<sup>2</sup>	<b>9</b>		<b>1</b>	<b>7</b>	
<b>3</b>		<sup>1</sup>		<b>0</b>	<b>2</b>		<b>A</b>		<sup>1</sup>	<b>4</b>	
<b>6</b>				<b>1</b>	<b>A</b>		<sup>1</sup>				

Tournament

Diff: 21 / 9.5111.1B13.5433.3798.5645

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## Deductive Steps to Solve Puzzle 9

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>9</sup>	<b>1</b>	<sup>10</sup>	<b>4</b>	<sup>16</sup>	<sup>15</sup>	<b>A</b>	<sup>2</sup>	<b>9</b>	<sup>17</sup>	<sup>17</sup>	<sup>18</sup>	<sup>1</sup>
<sup>15</sup>	<sup>16</sup>	<sup>17</sup>	<sup>2</sup>	<sup>2</sup>	<b>0</b>	<sup>1</sup>	<b>5</b>	<sup>1</sup>	<b>4</b>	<b>3</b>	<b>7</b>	
<sup>1</sup>	<b>6</b>	<b>3</b>	<b>5</b>	<sup>9</sup>	<sup>10</sup>	<sup>1</sup>	<sup>11</sup>	<b>2</b>	<sup>1</sup>	<sup>11</sup>	<sup>10</sup>	
<b>0</b>	<sup>21</sup>	<sup>20</sup>	<b>2</b>	<b>9</b>	<b>1</b>	<sup>18</sup>	<sup>10</sup>	<sup>19</sup>	<b>B</b>	<sup>15</sup>	<b>6</b>	
<sup>16</sup>	<sup>21</sup>	<sup>21</sup>	<sup>16</sup>	<sup>15</sup>	<b>4</b>	<b>2</b>	<sup>8</sup>	<sup>3</sup>	<b>5</b>	<sup>17</sup>	<b>8</b>	<sup>5</sup>
<sup>15</sup>	<b>4</b>	<b>6</b>	<b>0</b>	<sup>14</sup>	<b>7</b>	<sup>13</sup>	<sup>9</sup>	<sup>10</sup>	<sup>12</sup>	<b>A</b>	<sup>11</sup>	
<sup>17</sup>	<b>3</b>	<b>2</b>	<b>6</b>	<sup>1</sup>	<sup>13</sup>	<sup>12</sup>	<b>0</b>	<b>8</b>	<sup>7</sup>	<sup>16</sup>	<sup>1</sup>	
<b>5</b>	<sup>15</sup>	<sup>14</sup>	<sup>6</sup>	<sup>12</sup>	<sup>13</sup>	<b>B</b>	<sup>5</sup>	<sup>4</sup>	<sup>11</sup>	<b>6</b>	<b>0</b>	
<sup>16</sup>	<b>8</b>	<sup>21</sup>	<sup>7</sup>	<sup>1</sup>	<sup>2</sup>	<b>3</b>	<b>B</b>	<b>1</b>	<b>9</b>	<sup>20</sup>	<sup>1</sup>	<sup>9</sup>
<b>A</b>	<sup>18</sup>	<b>4</b>	<sup>16</sup>	<sup>14</sup>	<sup>16</sup>	<sup>2</sup>	<b>9</b>	<sup>19</sup>	<b>1</b>	<b>7</b>	<sup>17</sup>	
<b>3</b>	<sup>19</sup>	<sup>1</sup>	<sup>20</sup>	<b>0</b>	<b>2</b>	<sup>17</sup>	<b>A</b>	<sup>18</sup>	<sup>1</sup>	<b>4</b>	<sup>18</sup>	
<b>6</b>	<sup>20</sup>	<sup>15</sup>	<sup>19</sup>	<b>1</b>	<b>A</b>	<sup>19</sup>	<sup>1</sup>	<sup>19</sup>	<sup>16</sup>	<sup>21</sup>	<sup>17</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			

Tournament

Diff: 21 / 9.5111.1B13.5433.3798.5645

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All 21 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 12 independent moves.

- \* The only spot for 1 in the 2nd row is (7, 2).
- \* The only spot for A in the 7th row is (5, 7).
- \* The only spot for A in the 10th column is (10, 3).
- \* The only spot for 4 in the 1st 3x4 rectangle is (1, 3).
- \* The only spot for 0 in the 3rd 3x4 rectangle is (7, 3).
- \* The only spot for B in the 3rd 3x4 rectangle is (9, 2).
- \* The only spot for 4 in the 8th 3x4 rectangle is (12, 7).
- \* The only spot for 1 in the 9th 3x4 rectangle is (3, 11).
- \* The only spot for 4 in the 10th 3x4 rectangle is (5, 9).
- \* The only spot for 2 in the 11th 3x4 rectangle is (8, 12).
- \* The only spot for 6 in the 12th 3x4 rectangle is (10, 11).
- \* The only spot for A in the 12th 3x4 rectangle is (12, 9).

Step 2: There are 5 independent moves.

- \* The only spot for 6 in the 2nd row is (5, 2).
- \* The only spot for 6 in the 9th row is (6, 9).
- \* The only spot for 6 in the 7th column is (7, 10).
- \* The only spot for A in the 2nd 3x4 rectangle is (4, 2).
- \* The only spot for 6 in the 3rd 3x4 rectangle is (8, 1).

Step 3: There is 1 independent move.

- \* The only spot for 6 in the 7th 3x4 rectangle is (9, 5).

Step 4: There is 1 independent move.

- \* The only spot for A in the 7th 3x4 rectangle is (9, 8).

Step 5: There is 1 independent move.

- \* The only spot for 4 in the 7th 3x4 rectangle is (8, 8).

Step 6: There is 1 independent move.

- \* The only spot for 1 in the 8th row is (4, 8).

Step 7: There are 2 independent moves.

- \* 7 must be placed at (4, 9) because it is the only value left that is not already in the 9th row, the 4th column or the 10th 3x4 rectangle.
- \* 7 must be placed at (10, 7) because it is the only value left that is not already in the 7th row, the 10th column or the 8th 3x4 rectangle.

Step 8: There is 1 independent move.

- \* The only spot for 7 in the 7th 3x4 rectangle is (8, 5).

Step 9: There are 3 independent moves.

- \* The only spot for 7 in the 3rd row is (5, 3).
- \* The only spot for 7 in the 1st column is (1, 1).
- \* The only spot for 1 in the 7th 3x4 rectangle is (8, 6).

Step 10: There are 5 independent moves.

- \* The only spot for B in the 3rd row is (6, 3).
- \* The only spot for 3 in the 8th column is (8, 4).
- \* The only spot for 1 in the 12th column is (12, 3).
- \* The only spot for B in the 1st 3x4 rectangle is (3, 1).
- \* The only spot for 3 in the 7th 3x4 rectangle is (9, 6).

Step 11: There are 4 independent moves.

- \* The only spot for 8 in the 8th column is (8, 3).
- \* The only spot for 9 in the 12th column is (12, 6).
- \* The only spot for 9 in the 4th 3x4 rectangle is (11, 3).
- \* The only spot for 3 in the 8th 3x4 rectangle is (10, 8).

Step 12: There are 3 independent moves.

- \* The only spot for 2 in the 8th row is (5, 8).
- \* The only spot for 9 in the 7th 3x4 rectangle is (7, 7).
- \* The only spot for 2 in the 8th 3x4 rectangle is (10, 6).

Step 13: There are 3 independent moves.

- \* The only spot for 5 in the 7th row is (6, 7).
- \* The only spot for 9 in the 6th column is (6, 8).
- \* The only spot for 5 in the 7th 3x4 rectangle is (7, 6).

Step 14: There are 3 independent moves.

- \* The only spot for 8 in the 8th row is (3, 8).
- \* The only spot for 8 in the 6th 3x4 rectangle is (5, 6).
- \* The only spot for 5 in the 10th 3x4 rectangle is (5, 10).

Step 15: There are 7 independent moves.

- \* The only spot for 8 in the 4th row is (11, 4).
- \* The only spot for B in the 6th row is (1, 6).
- \* The only spot for 7 in the 3rd column is (3, 12).
- \* The only spot for B in the 5th column is (5, 5).
- \* The only spot for 8 in the 1st 3x4 rectangle is (1, 2).
- \* The only spot for 8 in the 2nd 3x4 rectangle is (6, 1).
- \* The only spot for 7 in the 5th 3x4 rectangle is (2, 8).

Step 16: There are 9 independent moves.

- \* The only spot for 8 in the 10th row is (4, 10).
- \* The only spot for 2 in the 1st column is (1, 9).
- \* The only spot for 9 in the 1st column is (1, 5).
- \* The only spot for 3 in the 6th column is (6, 10).
- \* The only spot for 2 in the 1st 3x4 rectangle is (2, 2).
- \* The only spot for 3 in the 2nd 3x4 rectangle is (5, 1).
- \* The only spot for 3 in the 6th 3x4 rectangle is (4, 5).
- \* The only spot for B in the 8th 3x4 rectangle is (11, 7).
- \* The only spot for 8 in the 12th 3x4 rectangle is (10, 12).

Step 17: There are 8 independent moves.

- \* The only spot for 0 in the 10th column is (10, 1).
- \* The only spot for 2 in the 11th column is (11, 1).
- \* The only spot for 9 in the 1st 3x4 rectangle is (3, 2).
- \* The only spot for 1 in the 5th 3x4 rectangle is (1, 7).
- \* The only spot for 1 in the 8th 3x4 rectangle is (11, 5).
- \* The only spot for 8 in the 11th 3x4 rectangle is (7, 11).
- \* The only spot for 3 in the 12th 3x4 rectangle is (12, 12).
- \* The only spot for 2 in the 12th 3x4 rectangle is (12, 10).

Step 18: There are 5 independent moves.

- \* The only spot for B in the 10th row is (2, 10).
- \* The only spot for 7 in the 7th column is (7, 4).
- \* The only spot for 5 in the 4th 3x4 rectangle is (12, 1).
- \* The only spot for 7 in the 11th 3x4 rectangle is (9, 11).
- \* The only spot for B in the 12th 3x4 rectangle is (12, 11).

Step 19: There are 6 independent moves.

- \* The only spot for 0 in the 10th row is (9, 10).
- \* The only spot for 5 in the 11th row is (2, 11).
- \* The only spot for 4 in the 7th column is (7, 12).
- \* The only spot for 4 in the 3rd 3x4 rectangle is (9, 4).
- \* The only spot for B in the 10th 3x4 rectangle is (4, 12).
- \* The only spot for 5 in the 11th 3x4 rectangle is (9, 12).

Step 20: There are 4 independent moves.

- \* The only spot for 5 in the 1st 3x4 rectangle is (3, 4).
- \* The only spot for 9 in the 9th 3x4 rectangle is (2, 12).
- \* The only spot for 9 in the 10th 3x4 rectangle is (4, 11).
- \* The only spot for 5 in the 12th 3x4 rectangle is (11, 9).

Step 21: There are 5 independent moves.

- \* The only spot for 0 in the 2nd column is (2, 5).
- \* The only spot for A in the 3rd column is (3, 5).
- \* The only spot for A in the 1st 3x4 rectangle is (2, 4).
- \* The only spot for 0 in the 9th 3x4 rectangle is (3, 9).
- \* The only spot for 0 in the 12th 3x4 rectangle is (11, 12).

## Solution for Puzzle 9

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

7	1	B	4	3	8	A	6	9	0	2	5
8	2	9	A	6	0	1	5	B	4	3	7
4	6	3	5	7	B	0	8	2	A	9	1
0	A	5	2	9	1	7	3	4	B	8	6
9	0	A	3	B	4	2	7	6	5	1	8
B	4	6	0	8	7	5	1	3	2	A	9
1	3	2	6	A	5	9	0	8	7	B	4
5	7	8	1	2	9	B	4	A	3	6	0
2	8	0	7	4	6	3	B	1	9	5	A
A	B	4	8	5	3	6	9	0	1	7	2
3	5	1	9	0	2	8	A	7	6	4	B
6	9	7	B	1	A	4	2	5	8	0	3

Tournament

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## Sudoku-12up Puzzle 10, Tournament/26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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6	9									2	
	A	2			B	9	8				6
		3		A					1	7	
			4			3		7		8	
		B				7				3	
			3				4	6			1
	1	9						3	2		
		A	8	1		5					
			9			4		1	B		
	4		6				B	9	5		
					3		0				
0				B						A	

Tournament

Diff: 26 / 53.22A1.2348.6732.1225.1B58.7844

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 26 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 10

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>6</b>	<b>9</b>	<sup>1</sup>				<sup>1</sup>				<b>2</b>	
<sup>2</sup>	<b>A</b>	<b>2</b>	<sup>3</sup>		<b>B</b>	<b>9</b>	<b>8</b>				<b>6</b>
		<b>3</b>		<b>A</b>					<b>1</b>	<b>7</b>	
			<b>4</b>			<b>3</b>		<b>7</b>		<b>8</b>	
		<b>B</b>				<b>7</b>	<sup>1</sup>			<b>3</b>	
			<b>3</b>				<b>4</b>	<b>6</b>		<sup>3</sup>	<b>1</b>
	<b>1</b>	<b>9</b>	<sup>1</sup>					<b>3</b>	<b>2</b>		
		<b>A</b>	<b>8</b>	<b>1</b>		<b>5</b>	<sup>2</sup>				
			<b>9</b>			<b>4</b>		<b>1</b>	<b>B</b>		
	<b>4</b>		<b>6</b>				<b>B</b>	<b>9</b>	<b>5</b>		
<sup>1</sup>	<sup>2</sup>				<b>3</b>		<b>0</b>				
<b>0</b>				<b>B</b>						<b>A</b>	

Tournament

Diff: 26 / 53.22A1.2348.6732.1225.1B58.7844

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 26 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 10

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>6</b>	<b>9</b>		<sup>1</sup>	16	25	24		1	12	6	18	<b>2</b>	<sup>7</sup>	<sup>1</sup>
<sup>2</sup>	<b>A</b>	<b>2</b>		3	18	<b>B</b>	<b>9</b>	<b>8</b>		8	17	12	<b>6</b>	
17	18	<b>3</b>		11	<b>A</b>		9		9	10		<b>1</b>	<b>7</b>	8
8	10		9	<b>4</b>	26	26	<b>3</b>		11	<b>7</b>		12	<b>8</b>	13
12	22	<b>B</b>		20	10	14	<b>7</b>		1	15	22	<b>3</b>		19
13	22		10	<b>3</b>	26	25		4	<b>4</b>	<b>6</b>		21	3	<b>1</b>
18	<b>1</b>	<b>9</b>		1	25	26		16	5	<b>3</b>	<b>2</b>	11	20	
11	21	<b>A</b>		<b>8</b>	<b>1</b>	12	<b>5</b>		2	14		22	4	18
10	24	24		<b>9</b>	24	25	<b>4</b>		23	<b>1</b>	<b>B</b>	12	23	<sup>9</sup>
9	<b>4</b>	23		<b>6</b>	24	21	23	<b>B</b>	<b>9</b>	<b>5</b>	13	10		
1	2	22		23	11	<b>3</b>	21	<b>0</b>	23		21	10	22	
<b>0</b>	23	24		22	<b>B</b>	10	22	24	24		11	<b>A</b>	12	
<sup>1</sup>				<sup>4</sup>			<sup>7</sup>			<sup>10</sup>				

Tournament

Diff: 26 / 53.22A1.2348.6732.1225.1B58.7844

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 26 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

All 26 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 4 in the 3rd column is (3, 1).
- \* The only spot for 1 in the 7th column is (7, 1).
- \* The only spot for B in the 6th 3x4 rectangle is (4, 7).
- \* The only spot for 1 in the 7th 3x4 rectangle is (8, 5).
- \* The only spot for 9 in the 9th 3x4 rectangle is (1, 11).

Step 2: There are 3 independent moves.

- \* The only spot for 7 in the 1st 3x4 rectangle is (1, 2).
- \* The only spot for 9 in the 7th 3x4 rectangle is (8, 8).
- \* The only spot for B in the 9th 3x4 rectangle is (2, 11).

Step 3: There are 2 independent moves.

- \* The only spot for 1 in the 2nd row is (4, 2).
- \* The only spot for 9 in the 11th column is (11, 6).

Step 4: There are 2 independent moves.

- \* The only spot for B in the 6th row is (7, 6).
- \* The only spot for B in the 11th column is (11, 8).

Step 5: There is 1 independent move.

- \* A must be placed at (8, 7) because it is the only value left that is not already in the 7th row, the 8th column or the 7th 3x4 rectangle.

Step 6: There is 1 independent move.

- \* The only spot for A in the 3rd 3x4 rectangle is (9, 1).

Step 7: There are 2 independent moves.

- \* The only spot for B in the 1st row is (12, 1).
- \* The only spot for B in the 3rd 3x4 rectangle is (9, 3).

Step 8: There are 3 independent moves.

- \* The only spot for 4 in the 3rd row is (12, 3).
- \* The only spot for B in the 1st 3x4 rectangle is (1, 4).
- \* The only spot for 4 in the 3rd 3x4 rectangle is (9, 2).

Step 9: There are 4 independent moves.

- \* The only spot for 9 in the 3rd row is (6, 3).
- \* The only spot for 1 in the 1st column is (1, 10).
- \* The only spot for 1 in the 1st 3x4 rectangle is (3, 4).
- \* The only spot for 0 in the 3rd 3x4 rectangle is (7, 3).

Step 10: There are 8 independent moves.

- \* The only spot for 6 in the 3rd row is (8, 3).
- \* The only spot for 3 in the 10th row is (12, 10).
- \* The only spot for 0 in the 3rd column is (3, 6).
- \* The only spot for 0 in the 1st 3x4 rectangle is (2, 4).
- \* The only spot for 9 in the 6th 3x4 rectangle is (5, 5).
- \* The only spot for A in the 9th 3x4 rectangle is (1, 9).
- \* The only spot for 1 in the 10th 3x4 rectangle is (6, 12).
- \* The only spot for 1 in the 12th 3x4 rectangle is (11, 11).

Step 11: There are 6 independent moves.

- \* The only spot for 2 in the 3rd row is (4, 3).



- \* The only spot for 4 in the 12th row is (10, 12).
- \* The only spot for 3 in the 1st column is (1, 8).
- \* The only spot for 4 in the 11th column is (11, 7).
- \* The only spot for 2 in the 3rd 3x4 rectangle is (8, 4).
- \* The only spot for 4 in the 10th 3x4 rectangle is (5, 11).

Step 12: There are 7 independent moves.

- \* The only spot for 4 in the 8th row is (6, 8).
- \* The only spot for 9 in the 10th column is (10, 4).
- \* The only spot for 6 in the 11th column is (11, 9).
- \* The only spot for 5 in the 11th column is (11, 2).
- \* The only spot for 5 in the 3rd 3x4 rectangle is (8, 1).
- \* The only spot for 4 in the 5th 3x4 rectangle is (1, 5).
- \* The only spot for 9 in the 12th 3x4 rectangle is (12, 12).

Step 13: There are 3 independent moves.

- \* The only spot for 2 in the 1st column is (1, 6).
- \* The only spot for 0 in the 11th column is (11, 10).
- \* The only spot for A in the 4th 3x4 rectangle is (12, 4).

Step 14: There are 2 independent moves.

- \* The only spot for 2 in the 8th row is (9, 8).
- \* The only spot for 2 in the 6th 3x4 rectangle is (6, 5).

Step 15: There is 1 independent move.

- \* The only spot for 0 in the 7th 3x4 rectangle is (9, 5).

Step 16: There are 2 independent moves.

- \* The only spot for 0 in the 4th column is (4, 1).
- \* The only spot for 8 in the 7th 3x4 rectangle is (7, 7).

Step 17: There are 2 independent moves.

- \* The only spot for 8 in the 1st column is (1, 3).
- \* The only spot for 0 in the 4th 3x4 rectangle is (10, 2).

Step 18: There are 5 independent moves.

- \* The only spot for 3 in the 2nd row is (5, 2).
- \* The only spot for 0 in the 8th row is (12, 8).
- \* The only spot for 5 in the 1st column is (1, 7).
- \* The only spot for 5 in the 1st 3x4 rectangle is (2, 3).
- \* The only spot for 3 in the 4th 3x4 rectangle is (10, 1).

Step 19: There is 1 independent move.

- \* The only spot for 5 in the 8th 3x4 rectangle is (12, 5).

Step 20: There are 2 independent moves.

- \* 7 must be placed at (12, 7) because it is the only value left that is not already in the 7th row, the 12th column or the 8th 3x4 rectangle.
- \* A must be placed at (4, 5) because it is the only value left that is not already in the 5th row, the 4th column or the 6th 3x4 rectangle.

Step 21: There are 5 independent moves.

- \* The only spot for 7 in the 8th row is (2, 8).
- \* The only spot for A in the 11th row is (7, 11).

- \* The only spot for A in the 8th 3x4 rectangle is (10, 6).
- \* The only spot for A in the 10th 3x4 rectangle is (6, 10).
- \* The only spot for 7 in the 12th 3x4 rectangle is (10, 11).

Step 22: There are 8 independent moves.

- \* The only spot for 8 in the 6th row is (2, 6).
- \* The only spot for 6 in the 8th row is (10, 8).
- \* The only spot for 2 in the 11th row is (12, 11).
- \* The only spot for 6 in the 11th row is (3, 11).
- \* The only spot for 7 in the 4th column is (4, 12).
- \* The only spot for 6 in the 5th 3x4 rectangle is (2, 5).
- \* The only spot for 8 in the 8th 3x4 rectangle is (10, 5).
- \* The only spot for 6 in the 11th 3x4 rectangle is (7, 12).

Step 23: There are 7 independent moves.

- \* The only spot for 7 in the 10th row is (3, 10).
- \* The only spot for 8 in the 11th row is (9, 11).
- \* The only spot for 2 in the 12th row is (2, 12).
- \* The only spot for 5 in the 4th column is (4, 11).
- \* The only spot for 2 in the 11th 3x4 rectangle is (7, 10).
- \* The only spot for 7 in the 11th 3x4 rectangle is (8, 9).
- \* The only spot for 8 in the 12th 3x4 rectangle is (12, 9).

Step 24: There are 8 independent moves.

- \* The only spot for 5 in the 9th row is (3, 9).
- \* The only spot for 8 in the 6th column is (6, 1).
- \* The only spot for 8 in the 9th 3x4 rectangle is (3, 12).
- \* The only spot for 3 in the 9th 3x4 rectangle is (2, 9).
- \* The only spot for 8 in the 10th 3x4 rectangle is (5, 10).
- \* The only spot for 2 in the 10th 3x4 rectangle is (5, 9).
- \* The only spot for 5 in the 11th 3x4 rectangle is (9, 12).
- \* The only spot for 3 in the 11th 3x4 rectangle is (8, 12).

Step 25: There are 4 independent moves.

- \* The only spot for 0 in the 5th column is (5, 7).
- \* The only spot for 7 in the 6th column is (6, 6).
- \* The only spot for 7 in the 2nd 3x4 rectangle is (5, 1).
- \* The only spot for 0 in the 10th 3x4 rectangle is (6, 9).

Step 26: There are 4 independent moves.

- \* The only spot for 6 in the 5th column is (5, 4).
- \* The only spot for 5 in the 6th column is (6, 4).
- \* The only spot for 6 in the 6th 3x4 rectangle is (6, 7).
- \* The only spot for 5 in the 6th 3x4 rectangle is (5, 6).

## Solution for Puzzle 10

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

6	9	4	0	7	8	1	5	A	3	2	B
7	A	2	1	3	B	9	8	4	0	5	6
8	5	3	2	A	9	0	6	B	1	7	4
B	0	1	4	6	5	3	2	7	9	8	A
4	6	B	A	9	2	7	1	0	8	3	5
2	8	0	3	5	7	B	4	6	A	9	1
5	1	9	B	0	6	8	A	3	2	4	7
3	7	A	8	1	4	5	9	2	6	B	0
A	3	5	9	2	0	4	7	1	B	6	8
1	4	7	6	8	A	2	B	9	5	0	3
9	B	6	5	4	3	A	0	8	7	1	2
0	2	8	7	B	1	6	3	5	4	A	9

Tournament

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## Chapter 8

# Two TournamentPlus Sudoku-12up Puzzles

There are two puzzles in this section ranging in difficulty from thirty-five to thirty-nine. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 11** (96/144) DiffKey 35 / 833.11AA.1AA2.2111.2111.B1B3.1B34.4975.6742

**Puzzle 12** (96/144) DiffKey 39 / 722.4111.2333.4311.1AAA.1111.1223.3352.2424.7541

## Sudoku-12up Puzzle 11, TournamentPlus/35

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<b>A</b>				<b>0</b>	<b>4</b>			<b>8</b>	<b>7</b>	
		<b>7</b>			<b>9</b>		<b>2</b>		<b>3</b>	<b>5</b>	
			<b>1</b>				<b>0</b>	<b>3</b>	<b>A</b>		
<b>4</b>		<b>0</b>					<b>7</b>				
<b>6</b>	<b>5</b>	<b>4</b>								<b>9</b>	
				<b>2</b>		<b>3</b>		<b>8</b>	<b>0</b>		
										<b>8</b>	
		<b>3</b>	<b>A</b>		<b>B</b>			<b>0</b>			<b>5</b>
	<b>2</b>	<b>A</b>		<b>8</b>			<b>9</b>				
<b>1</b>						<b>5</b>				<b>2</b>	<b>4</b>
			<b>5</b>			<b>2</b>		<b>6</b>	<b>B</b>		<b>8</b>
	<b>6</b>		<b>4</b>				<b>B</b>				<b>A</b>

TournamentPlus

Diff: 35 / 833.11AA.1AA2.2111.2111.B1B3.1B34.4975.6742

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 35 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 11

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<b>A</b>				<b>0</b>	<b>4</b>			<b>8</b>	<b>7</b>	
		<b>7</b>		<sup>1</sup>	<b>9</b>		<b>2</b>		<b>3</b>	<b>5</b>	<sup>1</sup>
			<b>1</b>				<b>0</b>	<b>3</b>	<b>A</b>	<sup>1</sup>	
<b>4</b>		<b>0</b>					<b>7</b>			<sup>2</sup>	
<b>6</b>	<b>5</b>	<b>4</b>					<sup>3</sup>			<b>9</b>	
				<b>2</b>		<b>3</b>		<b>8</b>	<b>0</b>	<sup>1</sup>	
<sup>2</sup>	<sup>3</sup>									<b>8</b>	
		<b>3</b>	<b>A</b>		<b>B</b>			<b>0</b>			<b>5</b>
	<b>2</b>	<b>A</b>		<b>8</b>			<b>9</b>	<sup>1</sup>			
<b>1</b>						<b>5</b>	<sup>1</sup>	<sup>3</sup>		<b>2</b>	<b>4</b>
	<sup>1</sup>		<b>5</b>			<b>2</b>	<sup>2</sup>	<b>6</b>	<b>B</b>		<b>8</b>
	<b>6</b>		<b>4</b>		<sup>1</sup>		<b>B</b>				<b>A</b>

TournamentPlus

Diff: 35 / 833.11AA.1AA2.2111.2111.B1B3.1B34.4975.6742

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 35 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 11

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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23	<b>A</b>	28	25	27	<b>0</b>	<b>4</b>	29	26	<b>8</b>	<b>7</b>	27	<sup>1</sup>
28	27	<b>7</b>	5	1	<b>9</b>	4	<b>2</b>	29	<b>3</b>	<b>5</b>	1	
24	29	29	<b>1</b>	33	32	29	<b>0</b>	<b>3</b>	<b>A</b>	1	25	
<b>4</b>	26	<b>0</b>	33	34	35	28	<b>7</b>	27	16	2	26	
<b>6</b>	<b>5</b>	<b>4</b>	32	34	33	32	3	11	20	<b>9</b>	33	<sup>5</sup>
29	30	9	30	<b>2</b>	13	<b>3</b>	14	<b>8</b>	<b>0</b>	1	15	
2	3	10	34	33	33	31	28	30	12	<b>8</b>	32	
30	29	<b>3</b>	<b>A</b>	31	<b>B</b>	32	12	<b>0</b>	11	19	<b>5</b>	
30	<b>2</b>	<b>A</b>	8	<b>8</b>	23	31	<b>9</b>	1	29	16	21	<sup>9</sup>
<b>1</b>	22	7	31	32	33	<b>5</b>	1	3	22	<b>2</b>	<b>4</b>	
20	1	6	<b>5</b>	35	34	<b>2</b>	2	<b>6</b>	<b>B</b>	18	<b>8</b>	
31	<b>6</b>	29	<b>4</b>	23	1	30	<b>B</b>	29	30	17	<b>A</b>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			

TournamentPlus

Diff: 35 / 833.11AA.1AA2.2111.2111.B1B3.1B34.4975.6742

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There are 35 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

All 35 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 8 independent moves.

- \* The only spot for 4 in the 2nd row is (5, 2).
- \* The only spot for 4 in the 9th row is (9, 9).
- \* The only spot for 8 in the 8th column is (8, 10).
- \* The only spot for 4 in the 4th 3x4 rectangle is (11, 3).
- \* The only spot for 0 in the 4th 3x4 rectangle is (12, 2).
- \* The only spot for A in the 8th 3x4 rectangle is (11, 6).
- \* The only spot for 4 in the 9th 3x4 rectangle is (2, 11).
- \* The only spot for 2 in the 10th 3x4 rectangle is (6, 12).

Step 2: There are 3 independent moves.

- \* The only spot for B in the 11th column is (11, 4).
- \* The only spot for A in the 5th 3x4 rectangle is (1, 7).
- \* The only spot for 3 in the 11th 3x4 rectangle is (8, 11).

Step 3: There are 3 independent moves.

- \* The only spot for A in the 8th column is (8, 5).
- \* The only spot for 0 in the 5th 3x4 rectangle is (2, 7).
- \* The only spot for A in the 11th 3x4 rectangle is (9, 10).

Step 4: There is 1 independent move.

- \* The only spot for A in the 2nd row is (7, 2).

Step 5: There is 1 independent move.

- \* The only spot for 6 in the 2nd row is (4, 2).

Step 6: There is 1 independent move.

- \* 9 must be placed at (3, 11) because it is the only value left that is not already in the 11th row, the 3rd column or the 9th 3x4 rectangle.

Step 7: There is 1 independent move.

- \* B must be placed at (3, 10) because it is the only value left that is not already in the 10th row, the 3rd column or the 9th 3x4 rectangle.

Step 8: There is 1 independent move.

- \* The only spot for B in the 10th 3x4 rectangle is (4, 9).

Step 9: There is 1 independent move.

- \* 1 must be placed at (3, 6) because it is the only value left that is not already in the 6th row, the 3rd column or the 5th 3x4 rectangle.

Step 10: There is 1 independent move.

- \* 2 must be placed at (3, 7) because it is the only value left that is not already in the 7th row, the 3rd column or the 5th 3x4 rectangle.

Step 11: There are 2 independent moves.

- \* The only spot for 2 in the 8th row is (10, 8).
- \* The only spot for 2 in the 7th 3x4 rectangle is (9, 5).

Step 12: There are 2 independent moves.

- \* The only spot for 4 in the 8th row is (8, 8).
- \* The only spot for 4 in the 8th 3x4 rectangle is (10, 7).

Step 13: There is 1 independent move.

- \* The only spot for 4 in the 6th 3x4 rectangle is (6, 6).

Step 14: There is 1 independent move.



- \* The only spot for 5 in the 6th row is (8, 6).
- Step 15: There is 1 independent move.
- \* The only spot for 6 in the 6th row is (12, 6).
- Step 16: There are 2 independent moves.
- \* The only spot for 6 in the 11th column is (11, 9).
  - \* The only spot for 6 in the 4th 3x4 rectangle is (10, 4).
- Step 17: There is 1 independent move.
- \* The only spot for 3 in the 11th column is (11, 12).
- Step 18: There is 1 independent move.
- \* The only spot for 0 in the 12th 3x4 rectangle is (11, 11).
- Step 19: There is 1 independent move.
- \* The only spot for 1 in the 11th column is (11, 8).
- Step 20: There are 2 independent moves.
- \* 7 must be placed at (1, 11) because it is the only value left that is not already in the 11th row, the 1st column or the 9th 3x4 rectangle.
  - \* 7 must be placed at (10, 5) because it is the only value left that is not already in the 5th row, the 10th column or the 8th 3x4 rectangle.
- Step 21: There is 1 independent move.
- \* The only spot for 7 in the 12th 3x4 rectangle is (12, 9).
- Step 22: There are 2 independent moves.
- \* 9 must be placed at (10, 10) because it is the only value left that is not already in the 10th row, the 10th column or the 12th 3x4 rectangle.
  - \* 3 must be placed at (2, 10) because it is the only value left that is not already in the 10th row, the 2nd column or the 9th 3x4 rectangle.
- Step 23: There are 3 independent moves.
- \* The only spot for 3 in the 1st 3x4 rectangle is (1, 1).
  - \* The only spot for 9 in the 10th 3x4 rectangle is (5, 12).
  - \* The only spot for 3 in the 10th 3x4 rectangle is (6, 9).
- Step 24: There is 1 independent move.
- \* The only spot for 2 in the 1st 3x4 rectangle is (1, 3).
- Step 25: There are 2 independent moves.
- \* 9 must be placed at (12, 3) because it is the only value left that is not already in the 3rd row, the 12th column or the 4th 3x4 rectangle.
  - \* 2 must be placed at (4, 1) because it is the only value left that is not already in the 1st row, the 4th column or the 2nd 3x4 rectangle.
- Step 26: There are 3 independent moves.
- \* The only spot for 9 in the 1st row is (9, 1).
  - \* The only spot for 9 in the 1st 3x4 rectangle is (2, 4).
  - \* The only spot for 2 in the 4th 3x4 rectangle is (12, 4).
- Step 27: There are 4 independent moves.
- \* The only spot for B in the 1st row is (5, 1).
  - \* The only spot for 1 in the 1st 3x4 rectangle is (2, 2).
  - \* The only spot for 5 in the 3rd 3x4 rectangle is (9, 4).
  - \* The only spot for 1 in the 4th 3x4 rectangle is (12, 1).

Step 28: There are 4 independent moves.

- \* The only spot for 5 in the 1st row is (3, 1).
- \* The only spot for 8 in the 2nd row is (1, 2).
- \* The only spot for 1 in the 8th column is (8, 7).
- \* The only spot for 1 in the 3rd 3x4 rectangle is (7, 4).

Step 29: There are 10 independent moves.

- \* The only spot for B in the 2nd row is (9, 2).
- \* The only spot for 1 in the 9th row is (10, 9).
- \* The only spot for B in the 1st column is (1, 6).
- \* The only spot for 6 in the 8th column is (8, 1).
- \* The only spot for 6 in the 1st 3x4 rectangle is (3, 3).
- \* The only spot for B in the 1st 3x4 rectangle is (2, 3).
- \* The only spot for 8 in the 3rd 3x4 rectangle is (7, 3).
- \* The only spot for 8 in the 5th 3x4 rectangle is (2, 8).
- \* The only spot for 8 in the 9th 3x4 rectangle is (3, 12).
- \* The only spot for 1 in the 11th 3x4 rectangle is (9, 12).

Step 30: There are 7 independent moves.

- \* The only spot for 9 in the 6th row is (4, 6).
- \* The only spot for 5 in the 9th row is (1, 9).
- \* The only spot for 7 in the 9th column is (9, 7).
- \* The only spot for 9 in the 5th 3x4 rectangle is (1, 8).
- \* The only spot for 7 in the 5th 3x4 rectangle is (2, 6).
- \* The only spot for 7 in the 11th 3x4 rectangle is (7, 12).
- \* The only spot for 5 in the 12th 3x4 rectangle is (10, 12).

Step 31: There are 5 independent moves.

- \* The only spot for 7 in the 4th column is (4, 10).
- \* The only spot for 7 in the 6th 3x4 rectangle is (5, 8).
- \* The only spot for 9 in the 7th 3x4 rectangle is (7, 7).
- \* The only spot for 0 in the 9th 3x4 rectangle is (1, 12).
- \* The only spot for 0 in the 11th 3x4 rectangle is (7, 9).

Step 32: There are 6 independent moves.

- \* The only spot for B in the 7th row is (12, 7).
- \* The only spot for 0 in the 4th column is (4, 5).
- \* The only spot for 7 in the 2nd 3x4 rectangle is (6, 3).
- \* The only spot for 6 in the 7th 3x4 rectangle is (7, 8).
- \* The only spot for B in the 7th 3x4 rectangle is (7, 5).
- \* The only spot for 0 in the 10th 3x4 rectangle is (5, 10).

Step 33: There are 7 independent moves.

- \* The only spot for 8 in the 4th column is (4, 4).
- \* The only spot for 6 in the 5th column is (5, 7).
- \* The only spot for 5 in the 6th column is (6, 7).
- \* The only spot for 5 in the 2nd 3x4 rectangle is (5, 3).
- \* The only spot for 8 in the 6th 3x4 rectangle is (6, 5).
- \* The only spot for 3 in the 8th 3x4 rectangle is (12, 5).

- \* The only spot for 6 in the 10th 3x4 rectangle is (6, 10).

Step 34: There are 4 independent moves.

- \* The only spot for 1 in the 6th column is (6, 11).
- \* The only spot for 3 in the 2nd 3x4 rectangle is (5, 4).
- \* The only spot for 3 in the 6th 3x4 rectangle is (4, 7).
- \* The only spot for 1 in the 6th 3x4 rectangle is (5, 5).

Step 35: There are 2 independent moves.

- \* The only spot for A in the 2nd 3x4 rectangle is (6, 4).
- \* The only spot for A in the 10th 3x4 rectangle is (5, 11).

## Solution for Puzzle 11

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

3	A	5	2	B	0	4	6	9	8	7	1
8	1	7	6	4	9	A	2	B	3	5	0
2	B	6	1	5	7	8	0	3	A	4	9
4	9	0	8	3	A	1	7	5	6	B	2
6	5	4	0	1	8	B	A	2	7	9	3
B	7	1	9	2	4	3	5	8	0	A	6
A	0	2	3	6	5	9	1	7	4	8	B
9	8	3	A	7	B	6	4	0	2	1	5
5	2	A	B	8	3	0	9	4	1	6	7
1	3	B	7	0	6	5	8	A	9	2	4
7	4	9	5	A	1	2	3	6	B	0	8
0	6	8	4	9	2	7	B	1	5	3	A

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## Sudoku-12up Puzzle 12, TournamentPlus/39

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<b>2</b>					<b>0</b>				<b>4</b>		
	<b>A</b>			<b>6</b>		<b>8</b>	<b>B</b>				
				<b>A</b>		<b>4</b>					<b>2</b>
	<b>5</b>	<b>B</b>				<b>1</b>	<b>0</b>		<b>3</b>	<b>A</b>	
	<b>0</b>	<b>A</b>		<b>B</b>		<b>2</b>					<b>7</b>
					<b>A</b>			<b>0</b>		<b>8</b>	
<b>6</b>							<b>A</b>		<b>0</b>		<b>9</b>
<b>4</b>		<b>8</b>				<b>6</b>		<b>5</b>			<b>B</b>
	<b>8</b>	<b>6</b>	<b>9</b>				<b>4</b>			<b>1</b>	
	<b>2</b>										
<b>7</b>			<b>6</b>		<b>4</b>			<b>3</b>			
			<b>1</b>		<b>B</b>			<b>8</b>	<b>7</b>	<b>2</b>	

TournamentPlus

Diff: 39 / 722.4111.2333.4311.1AAA.1111.1223.3352.2424+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, and each 3x4 rectangle.

There are 39 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 12

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>2</b>					<b>0</b>				<b>4</b>		
	<b>A</b>	<sup>1</sup>		<b>6</b>		<b>8</b>	<b>B</b>				
				<b>A</b>		<b>4</b>					<b>2</b>
	<b>5</b>	<b>B</b>				<b>1</b>	<b>0</b>		<b>3</b>	<b>A</b>	
	<b>0</b>	<b>A</b>		<b>B</b>	<sup>1</sup>	<b>2</b>	<sup>1</sup>				<b>7</b>
					<b>A</b>			<b>0</b>	<sup>2</sup>	<b>8</b>	<sup>3</sup>
<b>6</b>		<sup>3</sup>					<b>A</b>		<b>0</b>		<b>9</b>
<b>4</b>		<b>8</b>	<sup>2</sup>			<b>6</b>		<b>5</b>	<sup>1</sup>		<b>B</b>
	<b>8</b>	<b>6</b>	<b>9</b>				<b>4</b>			<b>1</b>	
	<b>2</b>		<sup>1</sup>								
<b>7</b>			<b>6</b>		<b>4</b>		<sup>1</sup>	<b>3</b>			
	<sup>1</sup>		<b>1</b>		<b>B</b>			<b>8</b>	<b>7</b>	<b>2</b>	

TournamentPlus

Diff: 39 / 722.4111.2333.4311.1AAA.1111.1223.3352.2424+

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There are 39 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 12

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<b>2</b>	<sup>13</sup>	<sup>16</sup>	<sup>11</sup>	<sup>35</sup>	<b>0</b>	<sup>36</sup>	<sup>30</sup>	<sup>14</sup>	<b>4</b>	<sup>12</sup>	<sup>30</sup>	<sup>1</sup>
<sup>23</sup>	<b>A</b>	<sup>1</sup>	<sup>32</sup>	<b>6</b>	<sup>31</sup>	<b>8</b>	<b>B</b>	<sup>5</sup>	<sup>18</sup>	<sup>9</sup>	<sup>31</sup>	
<sup>10</sup>	<sup>29</sup>	<sup>30</sup>	<sup>12</sup>	<b>A</b>	<sup>36</sup>	<b>4</b>	<sup>35</sup>	<sup>15</sup>	<sup>19</sup>	<sup>22</sup>	<b>2</b>	
<sup>9</sup>	<b>5</b>	<b>B</b>	<sup>6</sup>	<sup>7</sup>	<sup>8</sup>	<b>1</b>	<b>0</b>	<sup>4</sup>	<b>3</b>	<b>A</b>	<sup>10</sup>	
<sup>33</sup>	<b>0</b>	<b>A</b>	<sup>32</sup>	<b>B</b>	<sup>1</sup>	<b>2</b>	<sup>1</sup>	<sup>10</sup>	<sup>4</sup>	<sup>11</sup>	<b>7</b>	<sup>5</sup>
<sup>24</sup>	<sup>27</sup>	<sup>33</sup>	<sup>8</sup>	<sup>33</sup>	<b>A</b>	<sup>28</sup>	<sup>29</sup>	<b>0</b>	<sup>2</sup>	<b>8</b>	<sup>3</sup>	
<b>6</b>	<sup>28</sup>	<sup>3</sup>	<sup>9</sup>	<sup>29</sup>	<sup>28</sup>	<sup>30</sup>	<b>A</b>	<sup>11</sup>	<b>0</b>	<sup>12</sup>	<b>9</b>	
<b>4</b>	<sup>26</sup>	<b>8</b>	<sup>2</sup>	<sup>36</sup>	<sup>37</sup>	<b>6</b>	<sup>25</sup>	<b>5</b>	<sup>1</sup>	<sup>13</sup>	<b>B</b>	
<sup>34</sup>	<b>8</b>	<b>6</b>	<b>9</b>	<sup>37</sup>	<sup>37</sup>	<sup>38</sup>	<b>4</b>	<sup>13</sup>	<sup>17</sup>	<b>1</b>	<sup>38</sup>	<sup>9</sup>
<sup>25</sup>	<b>2</b>	<sup>37</sup>	<sup>1</sup>	<sup>38</sup>	<sup>36</sup>	<sup>39</sup>	<sup>36</sup>	<sup>12</sup>	<sup>27</sup>	<sup>20</sup>	<sup>4</sup>	
<b>7</b>	<sup>30</sup>	<sup>36</sup>	<b>6</b>	<sup>27</sup>	<b>4</b>	<sup>34</sup>	<sup>1</sup>	<b>3</b>	<sup>26</sup>	<sup>21</sup>	<sup>35</sup>	
<sup>33</sup>	<sup>1</sup>	<sup>36</sup>	<b>1</b>	<sup>38</sup>	<b>B</b>	<sup>35</sup>	<sup>4</sup>	<b>8</b>	<b>7</b>	<b>2</b>	<sup>37</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			

TournamentPlus

Diff: 39 / 722.4111.2333.4311.1AAA.1111.1223.3352.2424+

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There are 39 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

All 39 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 7 independent moves.

- \* The only spot for 4 in the 2nd column is (2, 12).
- \* The only spot for 2 in the 8th column is (8, 11).
- \* The only spot for 4 in the 1st 3x4 rectangle is (3, 2).
- \* The only spot for 6 in the 6th 3x4 rectangle is (6, 5).
- \* The only spot for 8 in the 7th 3x4 rectangle is (8, 5).
- \* The only spot for A in the 8th 3x4 rectangle is (10, 8).
- \* The only spot for A in the 10th 3x4 rectangle is (4, 10).

Step 2: There are 2 independent moves.

- \* The only spot for 0 in the 4th column is (4, 8).
- \* The only spot for 2 in the 8th 3x4 rectangle is (10, 6).

Step 3: There are 2 independent moves.

- \* The only spot for 2 in the 5th 3x4 rectangle is (3, 7).
- \* The only spot for 6 in the 8th 3x4 rectangle is (12, 6).

Step 4: There are 4 independent moves.

- \* The only spot for 6 in the 4th row is (9, 4).
- \* The only spot for 6 in the 12th row is (8, 12).
- \* The only spot for 4 in the 12th column is (12, 10).
- \* The only spot for 1 in the 8th 3x4 rectangle is (10, 5).

Step 5: There is 1 independent move.

- \* The only spot for 2 in the 3rd 3x4 rectangle is (9, 2).

Step 6: There is 1 independent move.

- \* The only spot for 2 in the 4th column is (4, 4).

Step 7: There is 1 independent move.

- \* The only spot for 4 in the 2nd 3x4 rectangle is (5, 4).

Step 8: There are 2 independent moves.

- \* The only spot for 7 in the 4th row is (6, 4).
- \* The only spot for 4 in the 6th row is (4, 6).

Step 9: There are 3 independent moves.

- \* The only spot for 7 in the 2nd row is (11, 2).
- \* The only spot for 9 in the 4th row is (1, 4).
- \* The only spot for 7 in the 4th column is (4, 7).

Step 10: There are 3 independent moves.

- \* The only spot for 8 in the 4th row is (12, 4).
- \* The only spot for 9 in the 5th row is (9, 5).
- \* The only spot for 8 in the 1st 3x4 rectangle is (1, 3).

Step 11: There are 3 independent moves.

- \* The only spot for 4 in the 5th row is (11, 5).
- \* The only spot for 8 in the 4th column is (4, 1).
- \* The only spot for 4 in the 7th 3x4 rectangle is (9, 7).

Step 12: There are 4 independent moves.

- \* The only spot for B in the 1st row is (11, 1).
- \* The only spot for 1 in the 9th column is (9, 10).
- \* The only spot for B in the 2nd 3x4 rectangle is (4, 3).



- \* The only spot for 5 in the 8th 3x4 rectangle is (11, 7).
- Step 13: There are 3 independent moves.
- \* The only spot for 6 in the 1st row is (2, 1).
  - \* The only spot for B in the 9th column is (9, 9).
  - \* The only spot for 3 in the 8th 3x4 rectangle is (11, 8).
- Step 14: There is 1 independent move.
- \* The only spot for A in the 9th column is (9, 1).
- Step 15: There is 1 independent move.
- \* The only spot for 7 in the 9th column is (9, 3).
- Step 16: There is 1 independent move.
- \* The only spot for 7 in the 1st 3x4 rectangle is (3, 1).
- Step 17: There is 1 independent move.
- \* 5 must be placed at (10, 9) because it is the only value left that is not already in the 9th row, the 10th column or the 12th 3x4 rectangle.
- Step 18: There is 1 independent move.
- \* 9 must be placed at (10, 2) because it is the only value left that is not already in the 2nd row, the 10th column or the 4th 3x4 rectangle.
- Step 19: There is 1 independent move.
- \* 6 must be placed at (10, 3) because it is the only value left that is not already in the 3rd row, the 10th column or the 4th 3x4 rectangle.
- Step 20: There is 1 independent move.
- \* The only spot for 6 in the 12th 3x4 rectangle is (11, 10).
- Step 21: There is 1 independent move.
- \* The only spot for 9 in the 12th 3x4 rectangle is (11, 11).
- Step 22: There is 1 independent move.
- \* The only spot for 0 in the 11th column is (11, 3).
- Step 23: There is 1 independent move.
- \* The only spot for 0 in the 1st 3x4 rectangle is (1, 2).
- Step 24: There is 1 independent move.
- \* The only spot for 1 in the 1st column is (1, 6).
- Step 25: There are 2 independent moves.
- \* The only spot for B in the 1st column is (1, 10).
  - \* The only spot for 1 in the 7th 3x4 rectangle is (8, 8).
- Step 26: There are 2 independent moves.
- \* The only spot for 7 in the 8th row is (2, 8).
  - \* The only spot for B in the 12th 3x4 rectangle is (10, 11).
- Step 27: There are 3 independent moves.
- \* The only spot for 8 in the 11th row is (5, 11).
  - \* The only spot for 9 in the 2nd column is (2, 6).
  - \* The only spot for 8 in the 12th 3x4 rectangle is (10, 10).
- Step 28: There are 3 independent moves.
- \* The only spot for B in the 6th row is (7, 6).
  - \* The only spot for B in the 5th 3x4 rectangle is (2, 7).
  - \* The only spot for 8 in the 6th 3x4 rectangle is (6, 7).

Step 29: There are 3 independent moves.

- \* The only spot for 3 in the 2nd column is (2, 3).
- \* The only spot for 1 in the 6th 3x4 rectangle is (5, 7).
- \* The only spot for 7 in the 7th 3x4 rectangle is (8, 6).

Step 30: There are 5 independent moves.

- \* The only spot for 1 in the 1st row is (12, 1).
- \* The only spot for 1 in the 2nd column is (2, 11).
- \* The only spot for 3 in the 8th column is (8, 1).
- \* The only spot for 1 in the 1st 3x4 rectangle is (3, 3).
- \* The only spot for 3 in the 7th 3x4 rectangle is (7, 7).

Step 31: There are 2 independent moves.

- \* The only spot for 1 in the 2nd 3x4 rectangle is (6, 2).
- \* The only spot for 5 in the 4th 3x4 rectangle is (12, 2).

Step 32: There are 2 independent moves.

- \* The only spot for 5 in the 4th column is (4, 5).
- \* The only spot for 3 in the 2nd 3x4 rectangle is (4, 2).

Step 33: There are 4 independent moves.

- \* The only spot for 3 in the 5th row is (1, 5).
- \* The only spot for 5 in the 1st column is (1, 12).
- \* The only spot for 5 in the 5th 3x4 rectangle is (3, 6).
- \* The only spot for 3 in the 6th 3x4 rectangle is (5, 6).

Step 34: There are 2 independent moves.

- \* The only spot for 5 in the 11th row is (7, 11).
- \* The only spot for A in the 9th 3x4 rectangle is (1, 9).

Step 35: There are 4 independent moves.

- \* The only spot for 5 in the 1st row is (5, 1).
- \* The only spot for A in the 11th row is (12, 11).
- \* The only spot for 5 in the 3rd 3x4 rectangle is (8, 3).
- \* The only spot for A in the 11th 3x4 rectangle is (7, 12).

Step 36: There are 7 independent moves.

- \* The only spot for 0 in the 11th row is (3, 11).
- \* The only spot for 9 in the 12th row is (3, 12).
- \* The only spot for 9 in the 5th column is (5, 8).
- \* The only spot for 9 in the 8th column is (8, 10).
- \* The only spot for 9 in the 2nd 3x4 rectangle is (6, 3).
- \* The only spot for 9 in the 3rd 3x4 rectangle is (7, 1).
- \* The only spot for 5 in the 10th 3x4 rectangle is (6, 10).

Step 37: There are 5 independent moves.

- \* The only spot for 3 in the 12th row is (12, 12).
- \* The only spot for 2 in the 5th column is (5, 9).
- \* The only spot for 2 in the 6th 3x4 rectangle is (6, 8).
- \* The only spot for 3 in the 9th 3x4 rectangle is (3, 10).
- \* The only spot for 3 in the 10th 3x4 rectangle is (6, 9).

Step 38: There are 4 independent moves.

- \* The only spot for 7 in the 9th row is (7, 9).
- \* The only spot for 0 in the 12th row is (5, 12).
- \* The only spot for 7 in the 10th 3x4 rectangle is (5, 10).
- \* The only spot for 0 in the 12th 3x4 rectangle is (12, 9).

Step 39: There is 1 independent move.

- \* The only spot for 0 in the 11th 3x4 rectangle is (7, 10).

## Solution for Puzzle 12

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	6	7	8	5	0	9	3	A	4	B	1
0	A	4	3	6	1	8	B	2	9	7	5
8	3	1	B	A	9	4	5	7	6	0	2
9	5	B	2	4	7	1	0	6	3	A	8
3	0	A	5	B	6	2	8	9	1	4	7
1	9	5	4	3	A	B	7	0	2	8	6
6	B	2	7	1	8	3	A	4	0	5	9
4	7	8	0	9	2	6	1	5	A	3	B
A	8	6	9	2	3	7	4	B	5	1	0
B	2	3	A	7	5	0	9	1	8	6	4
7	1	0	6	8	4	5	2	3	B	9	A
5	4	9	1	0	B	A	6	8	7	2	3

TournamentPlus

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## Chapter 9

# Two Challenging HyperSudoku-12 Puzzles

There are two puzzles in this section ranging in difficulty from fifteen to eighteen. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 13** (92/144) DiffKey 15 / 979.8411.4359.9873

**Puzzle 14** (98/144) DiffKey 18 / 99.3232.4675.2365.8972

## HyperSudoku-12 Puzzle 13, Challenging/15

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

92/144

	4	2				3					5
8				7			9		3	B	
7	9						6				
	2					B					
		4	9		5	7			B		
	B		7		8	2					9
2	A		3					5			1
			0	3	1			A		7	
		B	4	A						0	
		9	2	5			B		8		
B							7		5		2
		A		2	3			B	6		

Challenging

Diff: 15 / 979.8411.4359.9873

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 15 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 13

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

92/144

	4	2				3					5
8				7			9		3	B	
7	9	<sup>1</sup>					6				
<sup>3</sup>	2				<sup>1</sup>	B				<sup>1</sup>	
		4	9		5	7	<sup>1</sup>		B		
	B	<sup>3</sup>	7		8	2	<sup>1</sup>			<sup>3</sup>	9
2	A	<sup>1</sup>	3	<sup>1</sup>	<sup>2</sup>	<sup>3</sup>		5	<sup>3</sup>	<sup>2</sup>	1
<sup>3</sup>			0	3	1	<sup>3</sup>	<sup>1</sup>	A	<sup>2</sup>	7	<sup>1</sup>
<sup>2</sup>	<sup>3</sup>	B	4	A	<sup>1</sup>		<sup>2</sup>	<sup>1</sup>	<sup>3</sup>	0	<sup>2</sup>
	<sup>2</sup>	9	2	5			B		8		
B	<sup>3</sup>						7		5		2
		A		2	3			B	6		<sup>3</sup>

Challenging

Diff: 15 / 979.8411.4359.9873

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There are 15 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 13

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

92/144

8	4	2	13	11	12	3	12	4	5	10	5	1
8	13	14	12	7	8	13	9	7	3	B	9	
7	9	1	11	10	11	12	6	6	11	8	12	
3	2	14	14	14	1	B	9	5	12	1	15	4
9	13	4	9	15	5	7	1	8	B	12	14	
4	B	3	7	11	8	2	1	10	5	3	9	
2	A	1	3	1	2	3	4	5	3	2	1	7
3	14	15	0	3	1	3	1	A	2	7	1	
2	3	B	4	A	1	4	2	1	3	0	2	
11	2	9	2	5	5	11	B	4	8	11	4	10
B	3	13	13	12	10	4	7	11	5	11	2	
10	14	A	13	2	3	12	13	B	6	4	3	

1  
Challenging

5

9

Diff: 15 / 979.8411.4359.9873

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 15 steps required to solve the puzzle above with a total of 92 empty locations that must be determined, out of a total puzzle size of 144.

All 15 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 11 independent moves.

- \* The only spot for 7 in the 3rd column is (3, 7).
- \* The only spot for 9 in the 5th column is (5, 7).
- \* The only spot for 5 in the 8th column is (8, 8).
- \* The only spot for 3 in the 1st 4x3 rectangle is (3, 3).
- \* The only spot for 3 in the 5th 4x3 rectangle is (8, 5).
- \* The only spot for 9 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 7 in the 8th 4x3 rectangle is (6, 9).
- \* The only spot for B in the 9th 4x3 rectangle is (12, 8).
- \* The only spot for 5 in the 2nd 4x3 inner rectangle is (11, 4).
- \* The only spot for 6 in the 4th 4x3 inner rectangle is (9, 9).
- \* The only spot for A in the 6x2 center elements is (8, 6).

Step 2: There are 7 independent moves.

- \* The only spot for 8 in the 7th row is (11, 7).
- \* The only spot for 2 in the 8th row is (10, 8).
- \* The only spot for 5 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 2 in the 8th 4x3 rectangle is (8, 9).
- \* The only spot for 3 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 7 in the 3rd 4x3 inner rectangle is (2, 10).
- \* The only spot for B in the 6x2 center elements is (6, 7).

Step 3: There are 11 independent moves.

- \* The only spot for 3 in the 4th row is (1, 4).
- \* The only spot for 6 in the 7th row is (7, 7).
- \* The only spot for 4 in the 8th row is (7, 8).
- \* The only spot for 5 in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 3 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 1 in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for 9 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 9 in the 9th 4x3 rectangle is (10, 9).
- \* The only spot for 4 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 7 in the 12th 4x3 rectangle is (12, 12).
- \* The only spot for 3 in the 3rd 4x3 inner rectangle is (2, 11).

Step 4: There are 8 independent moves.

- \* The only spot for 6 in the 6th row is (1, 6).
- \* The only spot for 9 in the 11th row is (7, 11).
- \* The only spot for 9 in the 9th column is (9, 1).
- \* The only spot for 8 in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for 0 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 9 in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 10).
- \* The only spot for 3 in the 4th 4x3 inner rectangle is (9, 10).

Step 5: There are 4 independent moves.

- \* The only spot for 0 in the 6th row is (10, 6).
- \* The only spot for 6 in the 10th row is (6, 10).
- \* The only spot for 7 in the 9th column is (9, 4).

- \* The only spot for 7 in the 3rd 4x3 rectangle is (10, 1).

Step 6: There is 1 independent move.

- \* The only spot for 8 in the 2nd 4x3 inner rectangle is (9, 3).

Step 7: There is 1 independent move.

- \* The only spot for 0 in the 2nd 4x3 inner rectangle is (9, 2).

Step 8: There are 4 independent moves.

- \* The only spot for 2 in the 2nd row is (6, 2).
- \* The only spot for 2 in the 9th column is (9, 5).
- \* The only spot for 0 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for 2 in the 2nd 4x3 inner rectangle is (11, 3).

Step 9: There are 3 independent moves.

- \* The only spot for 4 in the 2nd row is (12, 2).
- \* The only spot for A in the 1st column is (1, 5).
- \* The only spot for 4 in the 2nd 4x3 inner rectangle is (8, 4).

Step 10: There are 5 independent moves.

- \* The only spot for 4 in the 12th row is (1, 12).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 4 in the 11th 4x3 rectangle is (6, 11).
- \* The only spot for 4 in the 1st 4x3 inner rectangle is (5, 3).
- \* The only spot for 4 in the 6x2 center elements is (9, 6).

Step 11: There are 10 independent moves.

- \* The only spot for A in the 11th row is (11, 11).
- \* The only spot for 1 in the 1st column is (1, 10).
- \* The only spot for 0 in the 6th column is (6, 3).
- \* The only spot for 1 in the 9th column is (9, 11).
- \* The only spot for B in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (10, 3).
- \* The only spot for A in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for B in the 1st 4x3 inner rectangle is (4, 3).
- \* The only spot for 4 in the 4th 4x3 inner rectangle is (11, 10).
- \* The only spot for 1 in the 6x2 center elements is (5, 6).

Step 12: There are 9 independent moves.

- \* The only spot for 5 in the 3rd row is (7, 3).
- \* The only spot for 8 in the 5th column is (5, 11).
- \* The only spot for 0 in the 7th column is (7, 12).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for A in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for A in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 1 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for A in the 1st 4x3 inner rectangle is (4, 2).
- \* The only spot for A in the 2nd 4x3 inner rectangle is (10, 4).

Step 13: There are 8 independent moves.

- \* The only spot for 1 in the 1st row is (4, 1).
- \* The only spot for 0 in the 2nd column is (2, 5).

- \* The only spot for 5 in the 4th column is (4, 12).
- \* The only spot for 6 in the 4th column is (4, 11).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 1 in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 5 in the 1st 4x3 inner rectangle is (2, 2).
- \* The only spot for 0 in the 3rd 4x3 inner rectangle is (3, 11).

Step 14: There are 7 independent moves.

- \* The only spot for 8 in the 5th row is (12, 5).
- \* The only spot for 6 in the 2nd column is (2, 8).
- \* The only spot for 8 in the 4th column is (4, 4).
- \* The only spot for 6 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for 8 in the 10th 4x3 rectangle is (2, 12).
- \* The only spot for 0 in the 1st 4x3 inner rectangle is (5, 4).
- \* The only spot for 1 in the 1st 4x3 inner rectangle is (3, 4).

Step 15: There are 3 independent moves.

- \* The only spot for 6 in the 5th 4x3 rectangle is (5, 5).
- \* The only spot for 6 in the 6th 4x3 rectangle is (12, 4).
- \* The only spot for 8 in the 7th 4x3 rectangle is (3, 8).

## Solution for Puzzle 13

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

0	4	2	1	B	A	3	8	9	7	6	5
8	5	6	A	7	2	1	9	0	3	B	4
7	9	3	B	4	0	5	6	8	1	2	A
3	2	1	8	0	9	B	4	7	A	5	6
A	0	4	9	6	5	7	3	2	B	1	8
6	B	5	7	1	8	2	A	4	0	3	9
2	A	7	3	9	B	6	0	5	4	8	1
9	6	8	0	3	1	4	5	A	2	7	B
5	1	B	4	A	7	8	2	6	9	0	3
1	7	9	2	5	6	A	B	3	8	4	0
B	3	0	6	8	4	9	7	1	5	A	2
4	8	A	5	2	3	0	1	B	6	9	7

Challenging

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## HyperSudoku-12 Puzzle 14, Challenging/18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

98/144

7		3		4					0		
				6	7				5		
	1					0		3			9
			B					0	A	9	
2		1			9	8		4			
9					0		3				6
			A	9			8			5	
		6				7				4	
			0		3			6	B		
			3							A	5
				A	6				3		8
	8			3			0				4

Challenging

Diff: 18 / 99.3232.4675.2365.8972

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 18 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 14

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

98/144

7		3		4					0	<sup>3</sup>	
		<sup>1</sup>		6	7	<sup>1</sup>		<sup>2</sup>	5		
<sup>3</sup>	1					0		3	<sup>1</sup>	<sup>2</sup>	9
	<sup>1</sup>		B				<sup>2</sup>	0	A	9	
2	<sup>1</sup>	1	<sup>2</sup>	<sup>3</sup>	9	8	<sup>1</sup>	4		<sup>1</sup>	
9					0		3	<sup>1</sup>	<sup>2</sup>		6
<sup>2</sup>			A	9		<sup>1</sup>	8			5	<sup>1</sup>
		6		<sup>1</sup>		7				4	<sup>2</sup>
			0		3			6	B	<sup>1</sup>	
<sup>1</sup>	<sup>1</sup>		3	<sup>2</sup>						A	5
				A	6				3	<sup>1</sup>	8
	8			3			0		<sup>2</sup>		4

Challenging

Diff: 18 / 99.3232.4675.2365.8972

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 18 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 14

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

98/144

<b>7</b>	<sup>14</sup>	<b>3</b>	<sup>13</sup>	<b>4</b>	<sup>12</sup>	<sup>15</sup>	<sup>16</sup>	<sup>8</sup>	<b>0</b>	<sup>3</sup>	<sup>9</sup>	<sup>1</sup>
<sup>9</sup>	<sup>18</sup>	<sup>1</sup>	<sup>17</sup>	<b>6</b>	<b>7</b>	<sup>1</sup>	<sup>8</sup>	<sup>2</sup>	<b>5</b>	<sup>7</sup>	<sup>10</sup>	
<sup>3</sup>	<b>1</b>	<sup>11</sup>	<sup>13</sup>	<sup>6</sup>	<sup>13</sup>	<b>0</b>	<sup>9</sup>	<b>3</b>	<sup>1</sup>	<sup>2</sup>	<b>9</b>	
<sup>13</sup>	<sup>1</sup>	<sup>12</sup>	<b>B</b>	<sup>5</sup>	<sup>11</sup>	<sup>10</sup>	<sup>2</sup>	<b>0</b>	<b>A</b>	<b>9</b>	<sup>8</sup>	<sup>4</sup>
<b>2</b>	<sup>1</sup>	<b>1</b>	<sup>2</sup>	<sup>3</sup>	<b>9</b>	<b>8</b>	<sup>1</sup>	<b>4</b>	<sup>5</sup>	<sup>1</sup>	<sup>4</sup>	
<b>9</b>	<sup>12</sup>	<sup>13</sup>	<sup>7</sup>	<sup>4</sup>	<b>0</b>	<sup>8</sup>	<b>3</b>	<sup>1</sup>	<sup>2</sup>	<sup>9</sup>	<b>6</b>	
<sup>2</sup>	<sup>16</sup>	<sup>17</sup>	<b>A</b>	<b>9</b>	<sup>9</sup>	<sup>1</sup>	<b>8</b>	<sup>9</sup>	<sup>9</sup>	<b>5</b>	<sup>1</sup>	<sup>7</sup>
<sup>13</sup>	<sup>16</sup>	<b>6</b>	<sup>14</sup>	<sup>1</sup>	<sup>10</sup>	<b>7</b>	<sup>15</sup>	<sup>7</sup>	<sup>8</sup>	<b>4</b>	<sup>2</sup>	
<sup>15</sup>	<sup>16</sup>	<sup>15</sup>	<b>0</b>	<sup>5</sup>	<b>3</b>	<sup>7</sup>	<sup>15</sup>	<b>6</b>	<b>B</b>	<sup>1</sup>	<sup>6</sup>	
<sup>1</sup>	<sup>1</sup>	<sup>16</sup>	<b>3</b>	<sup>2</sup>	<sup>15</sup>	<sup>17</sup>	<sup>14</sup>	<sup>17</sup>	<sup>10</sup>	<b>A</b>	<b>5</b>	<sup>10</sup>
<sup>14</sup>	<sup>17</sup>	<sup>16</sup>	<sup>18</sup>	<b>A</b>	<b>6</b>	<sup>17</sup>	<sup>15</sup>	<sup>16</sup>	<b>3</b>	<sup>1</sup>	<b>8</b>	
<sup>10</sup>	<b>8</b>	<sup>17</sup>	<sup>16</sup>	<b>3</b>	<sup>14</sup>	<sup>15</sup>	<b>0</b>	<sup>16</sup>	<sup>2</sup>	<sup>8</sup>	<b>4</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Challenging

Diff: 18 / 99.3232.4675.2365.8972

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 18 steps required to solve the puzzle above with a total of 98 empty locations that must be determined, out of a total puzzle size of 144.

All 18 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 15 independent moves.

- \* The only spot for 0 in the 7th row is (12, 7).
- \* The only spot for 0 in the 10th row is (1, 10).
- \* The only spot for 0 in the 3rd column is (3, 2).
- \* The only spot for 3 in the 11th column is (11, 5).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (10, 3).
- \* The only spot for 0 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for A in the 5th 4x3 rectangle is (8, 5).
- \* The only spot for 5 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 0 in the 8th 4x3 rectangle is (5, 8).
- \* The only spot for 3 in the 1st 4x3 inner rectangle is (2, 4).
- \* The only spot for 6 in the 3rd 4x3 inner rectangle is (2, 10).
- \* The only spot for 0 in the 4th 4x3 inner rectangle is (11, 11).
- \* The only spot for 8 in the 4th 4x3 inner rectangle is (11, 9).
- \* The only spot for 6 in the 6x2 center elements is (7, 7).

Step 2: There are 9 independent moves.

- \* The only spot for 6 in the 5th row is (4, 5).
- \* The only spot for 3 in the 7th row is (1, 7).
- \* The only spot for 6 in the 10th column is (10, 12).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (11, 3).
- \* The only spot for 6 in the 5th 4x3 rectangle is (8, 4).
- \* The only spot for 8 in the 6th 4x3 rectangle is (10, 6).
- \* The only spot for 3 in the 9th 4x3 rectangle is (12, 8).
- \* The only spot for 8 in the 2nd 4x3 inner rectangle is (9, 2).
- \* The only spot for 8 in the 3rd 4x3 inner rectangle is (5, 10).

Step 3: There are 3 independent moves.

- \* The only spot for 5 in the 5th row is (5, 5).
- \* The only spot for 6 in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (11, 1).

Step 4: There are 2 independent moves.

- \* The only spot for B in the 5th row is (12, 5).
- \* The only spot for B in the 5th column is (5, 6).

Step 5: There are 3 independent moves.

- \* The only spot for 7 in the 5th row is (10, 5).
- \* The only spot for 1 in the 5th column is (5, 9).
- \* The only spot for 7 in the 5th 4x3 rectangle is (5, 4).

Step 6: There are 2 independent moves.

- \* The only spot for 2 in the 5th column is (5, 3).
- \* The only spot for 7 in the 12th column is (12, 9).

Step 7: There are 4 independent moves.

- \* The only spot for A in the 9th row is (7, 9).
- \* The only spot for A in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for 2 in the 2nd 4x3 inner rectangle is (11, 2).



- \* The only spot for 7 in the 6x2 center elements is (4, 6).

Step 8: There are 6 independent moves.

- \* The only spot for 2 in the 6th row is (7, 6).
- \* The only spot for B in the 11th column is (11, 12).
- \* The only spot for B in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for 2 in the 6th 4x3 rectangle is (12, 4).
- \* The only spot for 9 in the 9th 4x3 rectangle is (10, 8).
- \* The only spot for 1 in the 2nd 4x3 inner rectangle is (8, 2).

Step 9: There are 7 independent moves.

- \* The only spot for B in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 1 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 2 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for B in the 2nd 4x3 inner rectangle is (8, 3).
- \* The only spot for 1 in the 6x2 center elements is (9, 7).
- \* The only spot for 4 in the 6x2 center elements is (6, 7).

Step 10: There are 5 independent moves.

- \* The only spot for A in the 1st column is (1, 12).
- \* The only spot for A in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 4 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for B in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 1 in the 4th 4x3 inner rectangle is (10, 10).

Step 11: There are 2 independent moves.

- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for A in the 1st 4x3 inner rectangle is (3, 3).

Step 12: There are 3 independent moves.

- \* The only spot for 8 in the 3rd column is (3, 4).
- \* The only spot for A in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for A in the 4th 4x3 rectangle is (2, 6).

Step 13: There are 6 independent moves.

- \* The only spot for 8 in the 1st column is (1, 8).
- \* The only spot for 8 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 4 in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 5 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 5 in the 1st 4x3 inner rectangle is (4, 3).

Step 14: There are 5 independent moves.

- \* The only spot for 4 in the 10th row is (8, 10).
- \* The only spot for 1 in the 1st column is (1, 11).
- \* The only spot for 5 in the 6th column is (6, 12).
- \* The only spot for 2 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 1 in the 7th 4x3 rectangle is (4, 8).

Step 15: There are 8 independent moves.

- \* The only spot for 2 in the 8th row is (8, 8).

- \* The only spot for 4 in the 1st column is (1, 9).
- \* The only spot for 2 in the 6th column is (6, 10).
- \* The only spot for 5 in the 7th column is (7, 1).
- \* The only spot for 2 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 1 in the 11th 4x3 rectangle is (7, 12).
- \* The only spot for 7 in the 11th 4x3 rectangle is (8, 11).
- \* The only spot for 5 in the 4th 4x3 inner rectangle is (8, 9).

Step 16: There are 9 independent moves.

- \* The only spot for 7 in the 2nd column is (2, 7).
- \* The only spot for 5 in the 3rd column is (3, 11).
- \* The only spot for 9 in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 9 in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for 5 in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 2 in the 10th 4x3 rectangle is (4, 12).
- \* The only spot for 7 in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for 7 in the 3rd 4x3 inner rectangle is (3, 10).
- \* The only spot for 2 in the 4th 4x3 inner rectangle is (9, 11).

Step 17: There are 7 independent moves.

- \* The only spot for B in the 10th row is (7, 10).
- \* The only spot for 9 in the 11th row is (7, 11).
- \* The only spot for B in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 9 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 9 in the 1st 4x3 inner rectangle is (4, 2).
- \* The only spot for B in the 3rd 4x3 inner rectangle is (2, 11).
- \* The only spot for 9 in the 4th 4x3 inner rectangle is (9, 10).

Step 18: There are 2 independent moves.

- \* The only spot for 4 in the 1st 4x3 inner rectangle is (2, 2).
- \* The only spot for 4 in the 3rd 4x3 inner rectangle is (4, 11).

## Solution for Puzzle 14

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

7	2	3	8	4	A	5	9	B	0	6	1
B	4	0	9	6	7	3	1	8	5	2	A
6	1	A	5	2	8	0	B	3	4	7	9
5	3	8	B	7	1	4	6	0	A	9	2
2	0	1	6	5	9	8	A	4	7	3	B
9	A	4	7	B	0	2	3	5	8	1	6
3	7	B	A	9	4	6	8	1	2	5	0
8	5	6	1	0	B	7	2	A	9	4	3
4	9	2	0	1	3	A	5	6	B	8	7
0	6	7	3	8	2	B	4	9	1	A	5
1	B	5	4	A	6	9	7	2	3	0	8
A	8	9	2	3	5	1	0	7	6	B	4

Challenging

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## Chapter 10

# Two Tournament HyperSudoku-12 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-two to twenty-four. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 15** (97/144) DiffKey 22 / 98.8341.1AA2.3643.2213.6993

**Puzzle 16** (99/144) DiffKey 24 / 5114.11C3.AA12.4666.8745.9954

## HyperSudoku-12 Puzzle 15, Tournament/22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

97/144

						8		9			3
			0	4	A		9				
		2				3		B		A	
2				A	4			5		8	
			8	1				4			9
	0	1			9						7
			7			6	A		8		
	6						7		9	5	
0	8	A					4	3			
		3	B		7						
1						5	8				4
		5		0					3		

Tournament

Diff: 22 / 98.8341.1AA2.3643.2213.6993

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 22 steps required to solve the puzzle above with a total of 97 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 15

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

97/144

						8		9			3
	<sup>2</sup>	<sup>1</sup>	0	4	A		9	<sup>3</sup>			<sup>3</sup>
	<sup>3</sup>	2				3		B	<sup>1</sup>	A	<sup>2</sup>
2				A	4		<sup>1</sup>	5		8	
			8	1				4			9
	0	1	<sup>1</sup>	<sup>1</sup>	9		<sup>3</sup>				7
	<sup>3</sup>		7	<sup>2</sup>		6	A		8	<sup>1</sup>	
	6		<sup>2</sup>		<sup>1</sup>		7		9	5	
0	8	A	<sup>1</sup>	<sup>2</sup>		<sup>3</sup>	4	3			
<sup>2</sup>	<sup>1</sup>	3	B		7	<sup>3</sup>			<sup>1</sup>		
1	<sup>2</sup>	<sup>1</sup>			<sup>1</sup>	5	8				4
		5		0		<sup>2</sup>		<sup>1</sup>	3	<sup>3</sup>	

Tournament

Diff: 22 / 98.8341.1AA2.3643.2213.6993

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 22 steps required to solve the puzzle above with a total of 97 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 15

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

97/144

13	13	12	14	12	5	8	20	9	19	20	3	<sup>1</sup>
10	2	1	0	4	A	20	9	3	20	21	3	
5	3	2	4	6	21	3	20	B	1	A	2	
2	11	13	12	A	4	7	1	5	20	8	19	<sup>4</sup>
21	5	13	8	1	21	21	21	4	22	20	9	
22	0	1	1	1	9	9	3	8	22	21	7	
4	3	5	7	2	20	6	A	21	8	1	10	<sup>7</sup>
12	6	11	2	16	1	21	7	21	9	5	15	
0	8	A	1	2	11	3	4	3	4	19	18	
2	1	3	B	19	7	3	19	17	1	18	20	<sup>10</sup>
1	2	1	15	18	1	5	8	16	20	19	4	
14	12	5	14	0	20	2	12	1	3	3	20	

<sup>1</sup>  
Tournament

<sup>5</sup>

<sup>9</sup>

Diff: 22 / 98.8341.1AA2.3643.2213.6993

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There are 22 steps required to solve the puzzle above with a total of 97 empty locations that must be determined, out of a total puzzle size of 144.

All 22 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 8 in the 6th column is (6, 8).
- \* The only spot for 8 in the 9th column is (9, 12).
- \* The only spot for 4 in the 9th 4x3 rectangle is (11, 7).
- \* The only spot for 3 in the 11th 4x3 rectangle is (6, 11).
- \* The only spot for 8 in the 1st 4x3 inner rectangle is (3, 2).
- \* The only spot for 3 in the 2nd 4x3 inner rectangle is (8, 4).
- \* The only spot for 4 in the 2nd 4x3 inner rectangle is (10, 3).
- \* The only spot for 0 in the 3rd 4x3 inner rectangle is (3, 11).
- \* The only spot for 4 in the 3rd 4x3 inner rectangle is (2, 10).
- \* The only spot for 1 in the 3rd 4x3 inner rectangle is (4, 9).
- \* The only spot for 5 in the 4th 4x3 inner rectangle is (10, 10).
- \* The only spot for 8 in the 6x2 center elements is (5, 6).
- \* The only spot for 4 in the 6x2 center elements is (4, 6).

Step 2: There are 8 independent moves.

- \* The only spot for 3 in the 4th column is (4, 8).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 8 in the 10th 4x3 rectangle is (1, 10).
- \* The only spot for 4 in the 11th 4x3 rectangle is (7, 12).
- \* The only spot for 3 in the 1st 4x3 inner rectangle is (2, 2).
- \* The only spot for 7 in the 3rd 4x3 inner rectangle is (2, 11).
- \* The only spot for 5 in the 3rd 4x3 inner rectangle is (5, 9).
- \* The only spot for 3 in the 6x2 center elements is (5, 7).

Step 3: There are 8 independent moves.

- \* The only spot for 7 in the 9th column is (9, 2).
- \* The only spot for 5 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 2 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 9 in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for A in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 7 in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for 1 in the 1st 4x3 inner rectangle is (2, 3).
- \* The only spot for 5 in the 6x2 center elements is (8, 6).

Step 4: There are 3 independent moves.

- \* The only spot for 5 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 5 in the 1st 4x3 inner rectangle is (4, 3).
- \* The only spot for 7 in the 4th 4x3 inner rectangle is (10, 9).

Step 5: There are 4 independent moves.

- \* The only spot for 9 in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 5 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 5 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for 9 in the 7th 4x3 rectangle is (3, 7).

Step 6: There is 1 independent move.

- \* The only spot for 7 in the 3rd row is (5, 3).

Step 7: There is 1 independent move.



- \* The only spot for 7 in the 4th row is (7, 4).

Step 8: There is 1 independent move.

- \* 2 must be placed at (9, 6) because it is the only value left that is not already in the 6th row, the 9th column, the 6th 4x3 rectangle or the 6x2 center elements.

Step 9: There is 1 independent move.

- \* B must be placed at (7, 6) because it is the only value left that is not already in the 6th row, the 7th column, the 5th 4x3 rectangle or the 6x2 center elements.

Step 10: There are 2 independent moves.

- \* The only spot for B in the 2nd row is (1, 2).
- \* The only spot for B in the 7th row is (12, 7).

Step 11: There are 3 independent moves.

- \* The only spot for B in the 9th row is (6, 9).
- \* The only spot for B in the 2nd column is (2, 4).
- \* The only spot for B in the 7th 4x3 rectangle is (3, 8).

Step 12: There are 6 independent moves.

- \* The only spot for 9 in the 2nd column is (2, 12).
- \* The only spot for 4 in the 3rd column is (3, 1).
- \* The only spot for B in the 5th column is (5, 1).
- \* The only spot for 4 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for B in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 9 in the 1st 4x3 inner rectangle is (4, 4).

Step 13: There are 4 independent moves.

- \* The only spot for A in the 2nd column is (2, 1).
- \* The only spot for 7 in the 3rd column is (3, 5).
- \* The only spot for 7 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for 6 in the 1st 4x3 inner rectangle is (3, 4).

Step 14: There are 3 independent moves.

- \* The only spot for 6 in the 1st column is (1, 12).
- \* The only spot for A in the 4th column is (4, 12).
- \* The only spot for 6 in the 1st 4x3 rectangle is (4, 1).

Step 15: There are 2 independent moves.

- \* The only spot for A in the 12th column is (12, 8).
- \* The only spot for 2 in the 10th 4x3 rectangle is (4, 11).

Step 16: There are 2 independent moves.

- \* The only spot for 2 in the 5th column is (5, 8).
- \* The only spot for A in the 9th column is (9, 11).

Step 17: There is 1 independent move.

- \* The only spot for 6 in the 9th column is (9, 10).

Step 18: There are 3 independent moves.

- \* The only spot for 6 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 6 in the 3rd 4x3 inner rectangle is (5, 11).
- \* The only spot for 0 in the 4th 4x3 inner rectangle is (11, 10).

Step 19: There are 6 independent moves.

- \* The only spot for 0 in the 12th column is (12, 4).

- \* The only spot for 0 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 2 in the 9th 4x3 rectangle is (11, 9).
- \* The only spot for 9 in the 3rd 4x3 inner rectangle is (5, 10).
- \* The only spot for 9 in the 4th 4x3 inner rectangle is (11, 11).
- \* The only spot for 1 in the 4th 4x3 inner rectangle is (8, 10).

Step 20: There are 12 independent moves.

- \* The only spot for 1 in the 1st row is (11, 1).
- \* The only spot for 2 in the 1st row is (8, 1).
- \* The only spot for 2 in the 10th row is (12, 10).
- \* The only spot for 1 in the 6th column is (6, 7).
- \* The only spot for B in the 11th column is (11, 5).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 1 in the 6th 4x3 rectangle is (10, 4).
- \* The only spot for 2 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 1 in the 12th 4x3 rectangle is (12, 12).
- \* The only spot for 0 in the 2nd 4x3 inner rectangle is (8, 3).
- \* The only spot for 2 in the 2nd 4x3 inner rectangle is (10, 2).
- \* The only spot for B in the 4th 4x3 inner rectangle is (10, 11).

Step 21: There are 10 independent moves.

- \* The only spot for 3 in the 5th row is (1, 5).
- \* The only spot for 0 in the 6th column is (6, 5).
- \* The only spot for 6 in the 8th column is (8, 5).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 2 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 3 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 0 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 1 in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for 6 in the 2nd 4x3 inner rectangle is (11, 2).
- \* The only spot for 0 in the 6x2 center elements is (9, 7).

Step 22: There are 3 independent moves.

- \* The only spot for A in the 5th row is (10, 5).
- \* The only spot for A in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 6 in the 6th 4x3 rectangle is (10, 6).

## Solution for Puzzle 15

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

7	A	4	6	B	5	8	2	9	0	1	3
B	3	8	0	4	A	1	9	7	2	6	5
9	1	2	5	7	6	3	0	B	4	A	8
2	B	6	9	A	4	7	3	5	1	8	0
3	5	7	8	1	0	2	6	4	A	B	9
A	0	1	4	8	9	B	5	2	6	3	7
5	2	9	7	3	1	6	A	0	8	4	B
4	6	B	3	2	8	0	7	1	9	5	A
0	8	A	1	5	B	9	4	3	7	2	6
8	4	3	B	9	7	A	1	6	5	0	2
1	7	0	2	6	3	5	8	A	B	9	4
6	9	5	A	0	2	4	B	8	3	7	1

Tournament

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [All steps](#).

## HyperSudoku-12 Puzzle 16, Tournament/24

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

99/144

9			3			5		8			1
A	7	0				2					
				3					4		
					3		6				8
			5	4					2		7
					5		2				
		A		8		3				4	
	B	6	9				5		1		
			1	0	7				B		
		2					7	6			4
5				6			4			1	
	1		0					B			2

Tournament

Diff: 24 / 5114.11C3.AA12.4666.8745.9954

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 24 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 16

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

99/144

9			3			5		8			1
A	7	0				2					
				3					4		
					3		6				8
			5	4					2		7
					5		2	<sup>1</sup>			
		A		8		3				4	
	B	6	9	<sup>1</sup>			5		1		
	<sup>3</sup>		1	0	7				B		
		2					7	6			4
5				6	<sup>1</sup>		4			1	
<sup>1</sup>	1	<sup>2</sup>	0				<sup>1</sup>	B			2

Tournament

Diff: 24 / 5114.11C3.AA12.4666.8745.9954

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 24 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 16

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

99/144

<b>9</b>	15	7	<b>3</b>	6	4	<b>5</b>	18	<b>8</b>	13	19	<b>1</b>	<sup>1</sup>
<b>A</b>	<b>7</b>	<b>0</b>	<sup>4</sup>	15	13	<b>2</b>	14	22	21	18	17	
14	12	13	14	<b>3</b>	23	24	18	17	<b>4</b>	17	18	
4	17	18	15	16	<b>3</b>	5	<b>6</b>	15	16	17	<b>8</b>	<sup>4</sup>
16	22	22	<b>5</b>	<b>4</b>	24	23	20	22	<b>2</b>	12	<b>7</b>	
8	22	21	11	21	<b>5</b>	21	<b>2</b>	1	22	19	19	
14	13	<b>A</b>	<sup>7</sup>	<b>8</b>	20	<b>3</b>	19	20	21	<b>4</b>	14	<sup>7</sup>
15	<b>B</b>	<b>6</b>	<b>9</b>	1	7	4	<b>5</b>	17	<b>1</b>	16	18	
21	3	22	<b>1</b>	<b>0</b>	<b>7</b>	10	9	16	<b>B</b>	17	18	
22	17	<b>2</b>	23	14	22	21	<b>7</b>	<b>6</b>	24	20	<b>4</b>	<sup>10</sup>
<b>5</b>	21	8	24	<b>6</b>	1	23	<b>4</b>	21	23	<b>1</b>	16	
1	<b>1</b>	2	<b>0</b>	20	22	21	1	<b>B</b>	8	15	<b>2</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Tournament

Diff: 24 / 5114.11C3.AA12.4666.8745.9954

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There are 24 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

All 24 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 2 in the 5th column is (5, 8).
- \* The only spot for 4 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 6 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 3 in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 2 in the 11th 4x3 rectangle is (6, 11).

Step 2: There is 1 independent move.

- \* The only spot for 4 in the 10th 4x3 rectangle is (3, 12).

Step 3: There is 1 independent move.

- \* The only spot for 4 in the 3rd 4x3 inner rectangle is (2, 9).

Step 4: There are 4 independent moves.

- \* The only spot for 4 in the 1st row is (6, 1).
- \* The only spot for 4 in the 1st column is (1, 4).
- \* The only spot for 4 in the 7th column is (7, 8).
- \* The only spot for 4 in the 1st 4x3 rectangle is (4, 2).

Step 5: There is 1 independent move.

- \* The only spot for 7 in the 4th row is (7, 4).

Step 6: There is 1 independent move.

- \* The only spot for 7 in the 2nd 4x3 rectangle is (5, 1).

Step 7: There are 3 independent moves.

- \* A must be placed at (6, 8) because it is the only value left that is not already in the 8th row, the 6th column or the 8th 4x3 rectangle.
- \* 7 must be placed at (4, 7) because it is the only value left that is not already in the 7th row, the 4th column, the 7th 4x3 rectangle or the 6x2 center elements.
- \* B must be placed at (3, 1) because it is the only value left that is not already in the 1st row, the 3rd column or the 1st 4x3 rectangle.

Step 8: There are 3 independent moves.

- \* The only spot for 7 in the 1st column is (1, 6).
- \* The only spot for 7 in the 10th column is (10, 12).
- \* The only spot for 7 in the 3rd 4x3 inner rectangle is (3, 11).

Step 9: There is 1 independent move.

- \* 9 must be placed at (8, 9) because it is the only value left that is not already in the 9th row, the 8th column, the 8th 4x3 rectangle or the 4th 4x3 inner rectangle.

Step 10: There is 1 independent move.

- \* 6 must be placed at (7, 9) because it is the only value left that is not already in the 9th row, the 7th column or the 8th 4x3 rectangle.

Step 11: There is 1 independent move.

- \* The only spot for 6 in the 6x2 center elements is (4, 6).

Step 12: There are 2 independent moves.

- \* The only spot for 6 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for 6 in the 1st 4x3 inner rectangle is (2, 3).

Step 13: There are 4 independent moves.

- \* The only spot for 6 in the 1st row is (10, 1).
- \* The only spot for 5 in the 2nd column is (2, 7).

- \* The only spot for 6 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 5 in the 1st 4x3 inner rectangle is (3, 3).

Step 14: There are 6 independent moves.

- \* The only spot for 8 in the 2nd row is (8, 2).
- \* The only spot for 2 in the 7th row is (1, 7).
- \* The only spot for 1 in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 6 in the 9th 4x3 rectangle is (12, 7).
- \* The only spot for 8 in the 1st 4x3 inner rectangle is (4, 3).
- \* The only spot for 5 in the 3rd 4x3 inner rectangle is (5, 10).

Step 15: There are 6 independent moves.

- \* The only spot for 2 in the 4th column is (4, 4).
- \* The only spot for 2 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (5, 2).
- \* The only spot for 0 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 5 in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for 1 in the 2nd 4x3 inner rectangle is (9, 4).

Step 16: There are 6 independent moves.

- \* The only spot for 8 in the 8th row is (11, 8).
- \* The only spot for B in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for 5 in the 6th 4x3 rectangle is (10, 4).
- \* The only spot for 9 in the 12th 4x3 rectangle is (12, 11).
- \* The only spot for B in the 1st 4x3 inner rectangle is (5, 4).
- \* The only spot for 5 in the 4th 4x3 inner rectangle is (9, 9).

Step 17: There are 8 independent moves.

- \* The only spot for 0 in the 4th row is (11, 4).
- \* The only spot for 2 in the 9th column is (9, 3).
- \* The only spot for 7 in the 11th column is (11, 3).
- \* The only spot for 5 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 7 in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for A in the 1st 4x3 inner rectangle is (2, 4).
- \* The only spot for 9 in the 3rd 4x3 inner rectangle is (2, 10).
- \* The only spot for 2 in the 4th 4x3 inner rectangle is (11, 9).

Step 18: There are 7 independent moves.

- \* The only spot for 0 in the 1st row is (8, 1).
- \* The only spot for B in the 2nd row is (11, 2).
- \* The only spot for 3 in the 8th row is (12, 8).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for A in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 9 in the 1st 4x3 inner rectangle is (3, 4).
- \* The only spot for A in the 2nd 4x3 inner rectangle is (8, 3).

Step 19: There are 4 independent moves.

- \* The only spot for B in the 8th column is (8, 7).
- \* The only spot for 9 in the 11th column is (11, 6).
- \* The only spot for A in the 3rd 4x3 rectangle is (11, 1).



- \* The only spot for B in the 6th 4x3 rectangle is (12, 6).

Step 20: There are 5 independent moves.

- \* The only spot for 9 in the 5th column is (5, 12).
- \* The only spot for 1 in the 8th column is (8, 5).
- \* The only spot for 3 in the 11th column is (11, 10).
- \* The only spot for 1 in the 8th 4x3 rectangle is (6, 7).
- \* The only spot for 9 in the 6x2 center elements is (9, 7).

Step 21: There are 10 independent moves.

- \* The only spot for A in the 12th row is (7, 12).
- \* The only spot for 3 in the 1st column is (1, 9).
- \* The only spot for A in the 5th column is (5, 6).
- \* The only spot for 0 in the 9th column is (9, 11).
- \* The only spot for 1 in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 0 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 3 in the 10th 4x3 rectangle is (2, 11).
- \* The only spot for 1 in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 9 in the 2nd 4x3 inner rectangle is (10, 2).
- \* The only spot for 0 in the 6x2 center elements is (7, 6).

Step 22: There are 10 independent moves.

- \* The only spot for 8 in the 6th row is (2, 6).
- \* The only spot for 8 in the 12th row is (6, 12).
- \* The only spot for 3 in the 10th column is (10, 6).
- \* The only spot for 3 in the 4th 4x3 rectangle is (3, 5).
- \* The only spot for 0 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for A in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 8 in the 10th 4x3 rectangle is (1, 10).
- \* The only spot for 0 in the 11th 4x3 rectangle is (6, 10).
- \* The only spot for 3 in the 2nd 4x3 inner rectangle is (9, 2).
- \* The only spot for 8 in the 3rd 4x3 inner rectangle is (3, 9).

Step 23: There are 5 independent moves.

- \* The only spot for B in the 10th row is (4, 10).
- \* The only spot for B in the 6th column is (6, 3).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for B in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 8 in the 4th 4x3 inner rectangle is (10, 11).

Step 24: There are 4 independent moves.

- \* The only spot for 9 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 9 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for A in the 3rd 4x3 inner rectangle is (4, 11).
- \* The only spot for A in the 4th 4x3 inner rectangle is (10, 10).

## Solution for Puzzle 16

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

9	2	B	3	7	4	5	0	8	6	A	1
A	7	0	4	1	6	2	8	3	9	B	5
1	6	5	8	3	B	9	A	2	4	7	0
4	A	9	2	B	3	7	6	1	5	0	8
B	0	3	5	4	9	8	1	A	2	6	7
7	8	1	6	A	5	0	2	4	3	9	B
2	5	A	7	8	1	3	B	9	0	4	6
0	B	6	9	2	A	4	5	7	1	8	3
3	4	8	1	0	7	6	9	5	B	2	A
8	9	2	B	5	0	1	7	6	A	3	4
5	3	7	A	6	2	B	4	0	8	1	9
6	1	4	0	9	8	A	3	B	7	5	2

Tournament

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## Chapter 11

# Two TournamentPlus HyperSudoku-12 Puzzles

There are two puzzles in this section ranging in difficulty from thirty-one to forty-one. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 17** (103/144) DiffKey 31 / 546.1223.3234.3122.1132.A113.7952.5972

**Puzzle 18** (101/144) DiffKey 41 / 2.B121.1A21.1255.1112.1321.2265.4A21.1345.3121+

## HyperSudoku-12 Puzzle 17, TournamentPlus/31

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	6							4			
1								8		7	
					0	9	1	5			2
A				2					B		
9		3					5	7			
		0		B	1				6	2	
							0				7
	9		0	1	2						
			2			8				A	4
				9			8			3	0
6	8				7				4		
						4					

TournamentPlus

Diff: 31 / 546.1223.3234.3122.1132.A113.7952.5972

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 31 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 17

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>3</sup>	<b>6</b>							<b>4</b>			
<b>1</b>	<sup>1</sup>						<sup>1</sup>	<b>8</b>		<b>7</b>	
					<b>0</b>	<b>9</b>	<b>1</b>	<b>5</b>			<b>2</b>
<b>A</b>				<b>2</b>					<b>B</b>		
<b>9</b>	<sup>1</sup>	<b>3</b>	<sup>2</sup>				<b>5</b>	<b>7</b>			
		<b>0</b>		<b>B</b>	<b>1</b>				<b>6</b>	<b>2</b>	
							<b>0</b>	<sup>1</sup>			<b>7</b>
	<b>9</b>		<b>0</b>	<b>1</b>	<b>2</b>						
			<b>2</b>			<b>8</b>	<sup>3</sup>			<b>A</b>	<b>4</b>
				<b>9</b>		<sup>3</sup>	<b>8</b>		<sup>2</sup>	<b>3</b>	<b>0</b>
<b>6</b>	<b>8</b>		<sup>3</sup>	<sup>1</sup>	<b>7</b>	<sup>2</sup>			<b>4</b>		
<sup>2</sup>		<sup>3</sup>				<b>4</b>			<sup>3</sup>		

TournamentPlus

Diff: 31 / 546.1223.3234.3122.1132.A113.7952.5972

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 31 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 17

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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3	<b>6</b>	12	25	10	25	24	19	<b>4</b>	30	31	30	<sup>1</sup>
<b>1</b>	<sup>1</sup>	5	24	25	14	15	1	<b>8</b>	17	<b>7</b>	16	
10	11	12	13	12	<b>0</b>	<b>9</b>	<b>1</b>	<b>5</b>	14	7	<b>2</b>	
<b>A</b>	<sup>9</sup>	6	5	<b>2</b>	11	18	24	30	<b>B</b>	30	10	<sup>4</sup>
<b>9</b>	1	<b>3</b>	2	23	15	19	<b>5</b>	<b>7</b>	29	24	30	
26	25	<b>0</b>	7	<b>B</b>	<b>1</b>	8	23	22	<b>6</b>	<b>2</b>	18	
25	29	29	6	24	25	26	<b>0</b>	1	27	26	<b>7</b>	<sup>7</sup>
24	<b>9</b>	11	<b>0</b>	<b>1</b>	<b>2</b>	25	23	18	28	29	9	
25	26	27	<b>2</b>	7	24	<b>8</b>	3	29	30	<b>A</b>	<b>4</b>	
26	29	25	11	<b>9</b>	28	3	<b>8</b>	8	2	<b>3</b>	<b>0</b>	<sup>10</sup>
<b>6</b>	<b>8</b>	28	3	1	<b>7</b>	2	20	29	<b>4</b>	28	29	
2	28	3	4	25	29	<b>4</b>	8	21	3	31	30	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

TournamentPlus

Diff: 31 / 546.1223.3234.3122.1132.A113.7952.5972

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 31 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

All 31 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 2 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for 0 in the 1st 4x3 inner rectangle is (2, 2).
- \* The only spot for 2 in the 2nd 4x3 inner rectangle is (8, 2).
- \* The only spot for 0 in the 3rd 4x3 inner rectangle is (5, 11).
- \* The only spot for 2 in the 6x2 center elements is (9, 7).

Step 2: There are 4 independent moves.

- \* The only spot for 2 in the 11th row is (7, 11).
- \* The only spot for B in the 4th 4x3 rectangle is (4, 5).
- \* The only spot for 0 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 2 in the 4th 4x3 inner rectangle is (10, 10).

Step 3: There are 6 independent moves.

- \* The only spot for 3 in the 11th row is (4, 11).
- \* The only spot for 2 in the 1st column is (1, 1).
- \* The only spot for 2 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 1 in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 7 in the 12th 4x3 rectangle is (10, 12).
- \* The only spot for 7 in the 4th 4x3 inner rectangle is (8, 9).

Step 4: There is 1 independent move.

- \* The only spot for 9 in the 10th 4x3 rectangle is (4, 12).

Step 5: There are 2 independent moves.

- \* The only spot for 1 in the 4th column is (4, 4).
- \* The only spot for 9 in the 1st 4x3 inner rectangle is (3, 2).

Step 6: There are 2 independent moves.

- \* The only spot for 6 in the 4th column is (4, 7).
- \* The only spot for 6 in the 4th 4x3 rectangle is (3, 4).

Step 7: There are 3 independent moves.

- \* The only spot for 6 in the 2nd 4x3 inner rectangle is (11, 3).
- \* The only spot for 6 in the 3rd 4x3 inner rectangle is (5, 9).
- \* The only spot for 8 in the 6x2 center elements is (4, 6).

Step 8: There are 3 independent moves.

- \* The only spot for 6 in the 8th column is (8, 12).
- \* The only spot for 6 in the 4th 4x3 inner rectangle is (9, 10).
- \* The only spot for 7 in the 6x2 center elements is (7, 6).

Step 9: There are 2 independent moves.

- \* The only spot for 7 in the 4th 4x3 rectangle is (2, 4).
- \* The only spot for 6 in the 9th 4x3 rectangle is (12, 8).

Step 10: There are 3 independent moves.

- \* The only spot for 7 in the 3rd row is (1, 3).
- \* The only spot for 5 in the 4th row is (12, 4).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (5, 1).

Step 11: There are 4 independent moves.

- \* The only spot for 8 in the 4th row is (6, 4).
- \* The only spot for 7 in the 4th column is (4, 10).

- \* The only spot for 3 in the 1st 4x3 rectangle is (2, 3).
  - \* The only spot for 7 in the 7th 4x3 rectangle is (3, 8).
- Step 12: There are 3 independent moves.
- \* The only spot for 8 in the 1st row is (3, 1).
  - \* The only spot for 8 in the 2nd 4x3 rectangle is (5, 3).
  - \* The only spot for B in the 1st 4x3 inner rectangle is (3, 3).
- Step 13: There is 1 independent move.
- \* The only spot for 4 in the 3rd row is (4, 3).
- Step 14: There are 2 independent moves.
- \* The only spot for A in the 3rd row is (10, 3).
  - \* The only spot for 4 in the 2nd 4x3 rectangle is (6, 2).
- Step 15: There are 2 independent moves.
- \* The only spot for 6 in the 6th column is (6, 5).
  - \* The only spot for 6 in the 2nd 4x3 rectangle is (7, 2).
- Step 16: There is 1 independent move.
- \* The only spot for B in the 2nd row is (12, 2).
- Step 17: There is 1 independent move.
- \* The only spot for 3 in the 2nd row is (10, 2).
- Step 18: There are 3 independent moves.
- \* The only spot for 3 in the 4th row is (7, 4).
  - \* The only spot for 3 in the 12th column is (12, 6).
  - \* The only spot for 3 in the 9th 4x3 rectangle is (9, 8).
- Step 19: There are 2 independent moves.
- \* The only spot for 3 in the 8th column is (8, 1).
  - \* The only spot for 0 in the 5th 4x3 rectangle is (7, 5).
- Step 20: There is 1 independent move.
- \* B must be placed at (8, 11) because it is the only value left that is not already in the 11th row, the 8th column, the 11th 4x3 rectangle or the 4th 4x3 inner rectangle.
- Step 21: There is 1 independent move.
- \* The only spot for B in the 9th column is (9, 12).
- Step 22: There is 1 independent move.
- \* The only spot for A in the 9th column is (9, 6).
- Step 23: There are 3 independent moves.
- \* The only spot for 9 in the 6th row is (8, 6).
  - \* The only spot for A in the 8th column is (8, 8).
  - \* The only spot for A in the 5th 4x3 rectangle is (5, 5).
- Step 24: There are 7 independent moves.
- \* The only spot for 4 in the 5th row is (11, 5).
  - \* The only spot for 4 in the 8th row is (1, 8).
  - \* The only spot for A in the 7th column is (7, 1).
  - \* The only spot for 4 in the 5th 4x3 rectangle is (8, 4).
  - \* The only spot for 9 in the 8th 4x3 rectangle is (6, 9).
  - \* The only spot for A in the 1st 4x3 inner rectangle is (4, 2).
  - \* The only spot for 4 in the 6x2 center elements is (5, 7).



Step 25: There are 10 independent moves.

- \* The only spot for 3 in the 9th row is (1, 9).
- \* The only spot for 4 in the 3rd column is (3, 10).
- \* The only spot for 3 in the 5th column is (5, 12).
- \* The only spot for 5 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for B in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 4 in the 4th 4x3 rectangle is (2, 6).
- \* The only spot for 8 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for B in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 5 in the 1st 4x3 inner rectangle is (5, 2).
- \* The only spot for 3 in the 6x2 center elements is (6, 7).

Step 26: There are 5 independent moves.

- \* The only spot for B in the 9th row is (2, 9).
- \* The only spot for B in the 1st column is (1, 10).
- \* The only spot for 5 in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for B in the 9th 4x3 rectangle is (11, 7).
- \* The only spot for 5 in the 6x2 center elements is (7, 7).

Step 27: There are 2 independent moves.

- \* The only spot for 5 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 9 in the 9th 4x3 rectangle is (10, 7).

Step 28: There are 5 independent moves.

- \* The only spot for 5 in the 10th row is (6, 10).
- \* The only spot for 5 in the 10th column is (10, 8).
- \* The only spot for 5 in the 10th 4x3 rectangle is (2, 12).
- \* The only spot for 1 in the 3rd 4x3 inner rectangle is (3, 11).
- \* The only spot for 5 in the 4th 4x3 inner rectangle is (11, 11).

Step 29: There are 9 independent moves.

- \* The only spot for A in the 11th row is (12, 11).
- \* The only spot for A in the 3rd column is (3, 7).
- \* The only spot for 1 in the 9th column is (9, 9).
- \* The only spot for 8 in the 10th column is (10, 5).
- \* The only spot for 1 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 8 in the 9th 4x3 rectangle is (11, 8).
- \* The only spot for A in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for A in the 3rd 4x3 inner rectangle is (2, 10).
- \* The only spot for 9 in the 4th 4x3 inner rectangle is (9, 11).

Step 30: There are 7 independent moves.

- \* The only spot for 0 in the 9th column is (9, 4).
- \* The only spot for 1 in the 10th column is (10, 1).
- \* The only spot for 9 in the 12th column is (12, 1).
- \* The only spot for 1 in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for 8 in the 12th 4x3 rectangle is (12, 12).
- \* The only spot for 9 in the 2nd 4x3 inner rectangle is (11, 4).
- \* The only spot for 0 in the 4th 4x3 inner rectangle is (10, 9).

Step 31: There are 2 independent moves.

- \* The only spot for 0 in the 3rd  $4 \times 3$  rectangle is (11, 1).
- \* The only spot for 1 in the 12th  $4 \times 3$  rectangle is (11, 12).

## Solution for Puzzle 17

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	6	8	5	7	B	A	3	4	1	0	9
1	0	9	A	5	4	6	2	8	3	7	B
7	3	B	4	8	0	9	1	5	A	6	2
A	7	6	1	2	8	3	4	0	B	9	5
9	2	3	B	A	6	0	5	7	8	4	1
5	4	0	8	B	1	7	9	A	6	2	3
8	1	A	6	4	3	5	0	2	9	B	7
4	9	7	0	1	2	B	A	3	5	8	6
3	B	5	2	6	9	8	7	1	0	A	4
B	A	4	7	9	5	1	8	6	2	3	0
6	8	1	3	0	7	2	B	9	4	5	A
0	5	2	9	3	A	4	6	B	7	1	8

TournamentPlus

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## HyperSudoku-12 Puzzle 18, TournamentPlus/41

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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			7	B			3	6		1	
			B						8		5
		1	A			6				3	
0				2		A					
	7			4	5						A
1		A			7	0			9		
6	2			9				4			
					8				2		
7	B			5	6						
		7			9		0				
						5			4		
								8	0	A	9

TournamentPlus

Diff: 41 / 2.B121.1A21.1255.1112.1321.2265.4A21.1345+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each 4x3 inner rectangle, and the 6x2 center elements.

There are 41 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

101/144

			7	B			3	6	<sup>2</sup> 1		
			B	<sup>2</sup>			<sup>3</sup>		8		5
		1	A			6	<sup>1</sup>			3	
0				2		A					
	7			4	5						A
1		A			7	0			9		
6	2			9				4			
				<sup>1</sup>	8				2		
7	B			5	6						
		7			9		0				
						5			4		
								8	0	A	9

TournamentPlus

Diff: 41 / 2.B121.1A21.1255.1112.1321.2265.4A21.1345+

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There are 41 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

101/144

33	12	34	<b>7</b>	<b>B</b>	19	26	<b>3</b>	<b>6</b>	2	<b>1</b>	25	<sup>1</sup>
17	16	15	<b>B</b>	2	20	19	3	18	<b>8</b>	12	<b>5</b>	
26	17	<b>1</b>	<b>A</b>	7	25	<b>6</b>	1	19	24	<b>3</b>	24	
<b>0</b>	35	37	36	<b>2</b>	24	<b>A</b>	21	23	22	13	8	<sup>4</sup>
27	<b>7</b>	41	41	<b>4</b>	<b>5</b>	8	20	40	39	13	<b>A</b>	
<b>1</b>	14	<b>A</b>	10	23	<b>7</b>	<b>0</b>	24	11	<b>9</b>	12	25	
<b>6</b>	<b>2</b>	39	12	<b>9</b>	4	22	25	<b>4</b>	24	9	38	<sup>7</sup>
31	32	34	33	1	<b>8</b>	32	33	13	<b>2</b>	26	26	
<b>7</b>	<b>B</b>	11	38	<b>5</b>	<b>6</b>	31	13	4	40	5	39	
12	40	<b>7</b>	30	33	<b>9</b>	29	<b>0</b>	39	13	25	31	<sup>10</sup>
32	36	40	39	41	39	<b>5</b>	6	28	<b>4</b>	24	40	
34	39	28	41	40	40	33	32	<b>8</b>	<b>0</b>	<b>A</b>	<b>9</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

TournamentPlus

Diff: 41 / 2.B121.1A21.1255.1112.1321.2265.4A21.1345+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 41 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

All 41 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 2 independent moves.

- \* The only spot for 5 in the 2nd 4x3 rectangle is (8, 3).
- \* The only spot for 0 in the 8th 4x3 rectangle is (5, 8).

Step 2: There are 2 independent moves.

- \* 7 must be placed at (5, 2) because it is the only value left that is not already in the 2nd row, the 5th column, the 2nd 4x3 rectangle or the 1st 4x3 inner rectangle.
- \* A must be placed at (10, 1) because it is the only value left that is not already in the 1st row, the 10th column or the 3rd 4x3 rectangle.

Step 3: There is 1 independent move.

- \* The only spot for A in the 2nd 4x3 inner rectangle is (8, 2).

Step 4: There are 2 independent moves.

- \* The only spot for A in the 4th 4x3 inner rectangle is (9, 9).
- \* The only spot for A in the 6x2 center elements is (6, 7).

Step 5: There is 1 independent move.

- \* The only spot for 9 in the 4th 4x3 inner rectangle is (11, 9).

Step 6: There is 1 independent move.

- \* The only spot for 8 in the 4th 4x3 inner rectangle is (8, 11).

Step 7: There is 1 independent move.

- \* 8 must be placed at (5, 3) because it is the only value left that is not already in the 3rd row, the 5th column, the 2nd 4x3 rectangle or the 1st 4x3 inner rectangle.

Step 8: There are 2 independent moves.

- \* The only spot for 8 in the 4th row is (12, 4).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 5).

Step 9: There is 1 independent move.

- \* The only spot for 8 in the 9th 4x3 rectangle is (11, 7).

Step 10: There is 1 independent move.

- \* The only spot for 8 in the 6x2 center elements is (4, 6).

Step 11: There are 2 independent moves.

- \* The only spot for 8 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 2 in the 6x2 center elements is (9, 6).

Step 12: There are 5 independent moves.

- \* The only spot for 8 in the 2nd column is (2, 1).
- \* The only spot for 5 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 8 in the 10th 4x3 rectangle is (1, 10).
- \* The only spot for 2 in the 2nd 4x3 inner rectangle is (11, 2).
- \* The only spot for 5 in the 6x2 center elements is (4, 7).

Step 13: There are 5 independent moves.

- \* The only spot for 5 in the 10th column is (10, 10).
- \* The only spot for 0 in the 11th column is (11, 5).
- \* The only spot for 5 in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for 4 in the 2nd 4x3 inner rectangle is (11, 4).
- \* The only spot for 2 in the 4th 4x3 inner rectangle is (8, 9).

Step 14: There is 1 independent move.

- \* The only spot for 4 in the 4th 4x3 rectangle is (2, 6).

Step 15: There is 1 independent move.

- \* The only spot for 4 in the 1st 4x3 inner rectangle is (3, 2).

Step 16: There is 1 independent move.

- \* The only spot for 6 in the 1st 4x3 rectangle is (2, 2).

Step 17: There are 2 independent moves.

- \* The only spot for 3 in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for 0 in the 1st 4x3 inner rectangle is (2, 3).

Step 18: There is 1 independent move.

- \* The only spot for 0 in the 2nd 4x3 inner rectangle is (9, 2).

Step 19: There are 3 independent moves.

- \* The only spot for 9 in the 2nd row is (7, 2).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (9, 3).

Step 20: There are 2 independent moves.

- \* The only spot for 1 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 9 in the 5th 4x3 rectangle is (8, 5).

Step 21: There is 1 independent move.

- \* The only spot for 1 in the 5th 4x3 rectangle is (8, 4).

Step 22: There are 2 independent moves.

- \* The only spot for 6 in the 2nd 4x3 inner rectangle is (10, 4).
- \* The only spot for 1 in the 6x2 center elements is (7, 7).

Step 23: There are 2 independent moves.

- \* The only spot for 7 in the 6th 4x3 rectangle is (9, 4).
- \* The only spot for 3 in the 6x2 center elements is (5, 6).

Step 24: There are 6 independent moves.

- \* The only spot for B in the 4th row is (6, 4).
- \* The only spot for 7 in the 10th column is (10, 7).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for B in the 2nd 4x3 inner rectangle is (10, 3).
- \* The only spot for 7 in the 4th 4x3 inner rectangle is (11, 11).
- \* The only spot for 6 in the 6x2 center elements is (8, 6).

Step 25: There are 5 independent moves.

- \* The only spot for 4 in the 3rd row is (6, 3).
- \* The only spot for B in the 6th row is (12, 6).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 6 in the 4th 4x3 inner rectangle is (11, 10).
- \* The only spot for B in the 6x2 center elements is (8, 7).

Step 26: There are 4 independent moves.

- \* The only spot for 2 in the 3rd row is (1, 3).
- \* The only spot for 2 in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for 6 in the 9th 4x3 rectangle is (12, 8).
- \* The only spot for B in the 9th 4x3 rectangle is (11, 8).

Step 27: There is 1 independent move.



- \* B must be placed at (1, 5) because it is the only value left that is not already in the 5th row, the 1st column or the 4th 4x3 rectangle.

Step 28: There are 2 independent moves.

- \* The only spot for B in the 11th row is (9, 11).
- \* The only spot for B in the 10th 4x3 rectangle is (3, 12).

Step 29: There is 1 independent move.

- \* The only spot for B in the 11th 4x3 rectangle is (7, 10).

Step 30: There is 1 independent move.

- \* The only spot for 4 in the 10th row is (4, 10).

Step 31: There are 3 independent moves.

- \* The only spot for 4 in the 9th row is (7, 9).
- \* The only spot for 2 in the 10th row is (12, 10).
- \* The only spot for 4 in the 7th 4x3 rectangle is (1, 8).

Step 32: There are 4 independent moves.

- \* The only spot for A in the 1st column is (1, 11).
- \* The only spot for A in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 3 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 4 in the 11th 4x3 rectangle is (8, 12).

Step 33: There are 5 independent moves.

- \* The only spot for 1 in the 8th row is (4, 8).
- \* The only spot for 9 in the 1st column is (1, 1).
- \* The only spot for 7 in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for 7 in the 11th 4x3 rectangle is (7, 12).
- \* The only spot for A in the 3rd 4x3 inner rectangle is (5, 10).

Step 34: There are 3 independent moves.

- \* The only spot for 5 in the 1st column is (1, 12).
- \* The only spot for 5 in the 1st 4x3 rectangle is (3, 1).
- \* The only spot for 9 in the 7th 4x3 rectangle is (3, 8).

Step 35: There is 1 independent move.

- \* The only spot for 5 in the 1st 4x3 inner rectangle is (2, 4).

Step 36: There are 2 independent moves.

- \* The only spot for 9 in the 2nd column is (2, 11).
- \* The only spot for 9 in the 1st 4x3 inner rectangle is (4, 4).

Step 37: There is 1 independent move.

- \* The only spot for 3 in the 1st 4x3 inner rectangle is (3, 4).

Step 38: There are 2 independent moves.

- \* The only spot for 3 in the 7th row is (12, 7).
- \* The only spot for 3 in the 7th 4x3 rectangle is (4, 9).

Step 39: There are 7 independent moves.

- \* The only spot for 3 in the 11th row is (6, 11).
- \* The only spot for 0 in the 4th column is (4, 11).
- \* The only spot for 3 in the 10th column is (10, 5).
- \* The only spot for 0 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 0 in the 9th 4x3 rectangle is (12, 9).

- \* The only spot for 3 in the 10th 4x3 rectangle is (2, 12).
- \* The only spot for 3 in the 4th 4x3 inner rectangle is (9, 10).

Step 40: There are 7 independent moves.

- \* The only spot for 1 in the 12th row is (5, 12).
- \* The only spot for 1 in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 1 in the 10th 4x3 rectangle is (2, 10).
- \* The only spot for 2 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 1 in the 12th 4x3 rectangle is (12, 11).
- \* The only spot for 2 in the 3rd 4x3 inner rectangle is (3, 11).
- \* The only spot for 1 in the 4th 4x3 inner rectangle is (10, 9).

Step 41: There are 4 independent moves.

- \* The only spot for 6 in the 3rd column is (3, 5).
- \* The only spot for 2 in the 4th 4x3 rectangle is (4, 5).
- \* The only spot for 6 in the 10th 4x3 rectangle is (4, 12).
- \* The only spot for 6 in the 3rd 4x3 inner rectangle is (5, 11).

## Solution for Puzzle 18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

9	8	5	7	B	0	2	3	6	A	1	4
3	6	4	B	7	1	9	A	0	8	2	5
2	0	1	A	8	4	6	5	9	B	3	7
0	5	3	9	2	B	A	1	7	6	4	8
B	7	6	2	4	5	8	9	1	3	0	A
1	4	A	8	3	7	0	6	2	9	5	B
6	2	0	5	9	A	1	B	4	7	8	3
4	A	9	1	0	8	3	7	5	2	B	6
7	B	8	3	5	6	4	2	A	1	9	0
8	1	7	4	A	9	B	0	3	5	6	2
A	9	2	0	6	3	5	8	B	4	7	1
5	3	B	6	1	2	7	4	8	0	A	9

TournamentPlus

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## Chapter 12

# Two Challenging tpsmith Puzzles

There are two puzzles in this section ranging in difficulty from fifteen to twenty. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 19** (89/144) DiffKey 15 / 994.5823.2464.7991

**Puzzle 20** (99/144) DiffKey 20 / 5535.33A1.4552.3477.7997

## tpsmith Puzzle 19, Challenging/15

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

89/144

<b>B</b>			<b>7</b>			<b>A</b>					<b>6</b>
	<b>1</b>	<b>6</b>			<b>8</b>			<b>B</b>		<b>4</b>	
			<b>A</b>		<b>B</b>	<b>6</b>		<b>7</b>	<b>1</b>		
<b>A</b>				<b>B</b>					<b>9</b>		<b>7</b>
<b>8</b>	<b>7</b>	<b>9</b>							<b>3</b>	<b>2</b>	
	<b>3</b>			<b>9</b>			<b>7</b>				<b>A</b>
	<b>6</b>		<b>B</b>				<b>A</b>			<b>1</b>	<b>8</b>
	<b>2</b>		<b>0</b>	<b>8</b>	<b>7</b>		<b>3</b>				
		<b>1</b>	<b>8</b>	<b>0</b>	<b>2</b>			<b>4</b>			
<b>6</b>							<b>1</b>		<b>2</b>		<b>4</b>
<b>2</b>	<b>4</b>	<b>7</b>			<b>5</b>			<b>0</b>			
				<b>A</b>				<b>5</b>		<b>7</b>	<b>3</b>

Challenging

Diff: 15 / 994.5823.2464.7991

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 15 steps required to solve the puzzle above with a total of 89 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

89/144

<b>B</b>			<b>7</b>			<b>A</b>		<sup>2</sup>			<b>6</b>
	<b>1</b>	<b>6</b>			<b>8</b>			<b>B</b>	<sup>1</sup>	<b>4</b>	
			<b>A</b>		<b>B</b>	<b>6</b>		<b>7</b>	<b>1</b>		
<b>A</b>				<b>B</b>					<b>9</b>		<b>7</b>
<b>8</b>	<b>7</b>	<b>9</b>			<sup>1</sup>			<sup>2</sup>	<b>3</b>	<b>2</b>	<sup>1</sup>
	<b>3</b>	<sup>1</sup>		<b>9</b>			<b>7</b>		<sup>1</sup>		<b>A</b>
<sup>2</sup>	<b>6</b>	<sup>3</sup>	<b>B</b>				<b>A</b>	<sup>1</sup>	<sup>1</sup>	<b>1</b>	<b>8</b>
	<b>2</b>		<b>0</b>	<b>8</b>	<b>7</b>	<sup>1</sup>	<b>3</b>	<sup>1</sup>		<sup>3</sup>	
	<sup>2</sup>	<b>1</b>	<b>8</b>	<b>0</b>	<b>2</b>	<sup>2</sup>	<sup>1</sup>	<b>4</b>	<sup>1</sup>	<sup>2</sup>	
<b>6</b>		<sup>2</sup>	<sup>2</sup>				<b>1</b>	<sup>3</sup>	<b>2</b>		<b>4</b>
<b>2</b>	<b>4</b>	<b>7</b>	<sup>3</sup>	<sup>1</sup>	<b>5</b>			<b>0</b>		<sup>2</sup>	<sup>1</sup>
				<b>A</b>				<b>5</b>	<sup>2</sup>	<b>7</b>	<b>3</b>

Challenging

Diff: 15 / 994.5823.2464.7991

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There are 15 steps required to solve the puzzle above with a total of 89 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

89/144

<b>B</b>	<sup>5</sup>	<sup>12</sup>	<b>7</b>	<sup>10</sup>	<sup>11</sup>	<b>A</b>	<sup>12</sup>	<sup>2</sup>	<sup>5</sup>	<sup>7</sup>	<b>6</b>	<sup>1</sup>
<sup>5</sup>	<b>1</b>	<b>6</b>	<sup>9</sup>	<sup>13</sup>	<b>8</b>	<sup>14</sup>	<sup>7</sup>	<b>B</b>	<sup>1</sup>	<b>4</b>	<sup>10</sup>	
<sup>15</sup>	<sup>14</sup>	<sup>8</sup>	<b>A</b>	<sup>4</sup>	<b>B</b>	<b>6</b>	<sup>13</sup>	<b>7</b>	<b>1</b>	<sup>6</sup>	<sup>9</sup>	
<b>A</b>	<sup>14</sup>	<sup>10</sup>	<sup>13</sup>	<b>B</b>	<sup>14</sup>	<sup>13</sup>	<sup>8</sup>	<sup>10</sup>	<b>9</b>	<sup>13</sup>	<b>7</b>	<sup>4</sup>
<b>8</b>	<b>7</b>	<b>9</b>	<sup>12</sup>	<sup>11</sup>	<sup>1</sup>	<sup>13</sup>	<sup>14</sup>	<sup>2</sup>	<b>3</b>	<b>2</b>	<sup>1</sup>	
<sup>14</sup>	<b>3</b>	<sup>1</sup>	<sup>12</sup>	<b>9</b>	<sup>13</sup>	<sup>10</sup>	<b>7</b>	<sup>9</sup>	<sup>1</sup>	<sup>14</sup>	<b>A</b>	
<sup>2</sup>	<b>6</b>	<sup>3</sup>	<b>B</b>	<sup>12</sup>	<sup>5</sup>	<sup>13</sup>	<b>A</b>	<sup>1</sup>	<sup>1</sup>	<b>1</b>	<b>8</b>	<sup>7</sup>
<sup>12</sup>	<b>2</b>	<sup>11</sup>	<b>0</b>	<b>8</b>	<b>7</b>	<sup>1</sup>	<b>3</b>	<sup>1</sup>	<sup>4</sup>	<sup>3</sup>	<sup>13</sup>	
<sup>13</sup>	<sup>2</sup>	<b>1</b>	<b>8</b>	<b>0</b>	<b>2</b>	<sup>2</sup>	<sup>1</sup>	<b>4</b>	<sup>1</sup>	<sup>2</sup>	<sup>12</sup>	
<b>6</b>	<sup>7</sup>	<sup>2</sup>	<sup>2</sup>	<sup>14</sup>	<sup>14</sup>	<sup>14</sup>	<b>1</b>	<sup>3</sup>	<b>2</b>	<sup>4</sup>	<b>4</b>	<sup>10</sup>
<b>2</b>	<b>4</b>	<b>7</b>	<sup>3</sup>	<sup>1</sup>	<b>5</b>	<sup>4</sup>	<sup>5</sup>	<b>0</b>	<sup>5</sup>	<sup>2</sup>	<sup>1</sup>	
<sup>5</sup>	<sup>5</sup>	<sup>6</sup>	<sup>4</sup>	<b>A</b>	<sup>11</sup>	<sup>9</sup>	<sup>10</sup>	<b>5</b>	<sup>2</sup>	<b>7</b>	<b>3</b>	

<sup>1</sup>  
Challenging

<sup>5</sup>

<sup>9</sup>  
Diff: 15 / 994.5823.2464.7991

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There are 15 steps required to solve the puzzle above with a total of 89 empty locations that must be determined, out of a total puzzle size of 144.

All 15 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for B in the 5th row is (12, 5).
- \* The only spot for 6 in the 5th column is (5, 11).
- \* The only spot for A in the 9th column is (9, 8).
- \* The only spot for B in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for A in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 4 in the 6th 4x3 rectangle is (10, 6).
- \* The only spot for 6 in the 8th 4x3 rectangle is (8, 9).
- \* The only spot for 1 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 0 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 2 in the 9th 4x3 rectangle is (9, 7).
- \* The only spot for 1 in the 12th 4x3 rectangle is (12, 11).
- \* The only spot for A in the 2nd eye is (10, 2).
- \* The only spot for 7 in the elements that make up the smile is (10, 9).

Step 2: There are 10 independent moves.

- \* The only spot for 6 in the 5th row is (9, 5).
- \* The only spot for A in the 11th row is (11, 11).
- \* The only spot for A in the 3rd column is (3, 10).
- \* The only spot for 3 in the 9th column is (9, 1).
- \* The only spot for A in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for 7 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for B in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for 3 in the 9th 4x3 rectangle is (11, 9).
- \* The only spot for 6 in the 12th 4x3 rectangle is (10, 12).
- \* The only spot for 5 in the elements that make up the smile is (4, 10).

Step 3: There are 4 independent moves.

- \* The only spot for 9 in the 9th column is (9, 10).
- \* The only spot for 3 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 6 in the 9th 4x3 rectangle is (11, 8).
- \* The only spot for 3 in the elements that make up the smile is (4, 11).

Step 4: There are 5 independent moves.

- \* The only spot for 9 in the 4th column is (4, 12).
- \* The only spot for B in the 11th column is (11, 10).
- \* The only spot for B in the 9th 4x3 rectangle is (10, 8).
- \* The only spot for 9 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 3 in the 1st eye is (5, 3).

Step 5: There are 8 independent moves.

- \* The only spot for B in the 11th row is (8, 11).
- \* The only spot for 9 in the 2nd column is (2, 1).
- \* The only spot for 5 in the 10th column is (10, 1).
- \* The only spot for 3 in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for 9 in the 8th 4x3 rectangle is (6, 7).
- \* The only spot for B in the 10th 4x3 rectangle is (2, 12).
- \* The only spot for 1 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 8 in the 12th 4x3 rectangle is (10, 11).



Step 6: There are 2 independent moves.

- \* The only spot for 0 in the 12th row is (3, 12).
- \* The only spot for 9 in the 11th column is (11, 3).

Step 7: There are 3 independent moves.

- \* The only spot for 9 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 8 in the 10th 4x3 rectangle is (2, 10).

Step 8: There are 2 independent moves.

- \* The only spot for 8 in the 1st eye is (3, 3).
- \* The only spot for 8 in the 2nd eye is (8, 4).

Step 9: There are 4 independent moves.

- \* The only spot for 2 in the 3rd row is (12, 3).
- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 2 in the 1st eye is (4, 2).
- \* The only spot for 8 in the elements that make up the smile is (7, 12).

Step 10: There are 6 independent moves.

- \* The only spot for 2 in the 6th row is (7, 6).
- \* The only spot for 2 in the 5th column is (5, 1).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 2 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 1 in the 6th 4x3 rectangle is (9, 4).
- \* The only spot for 2 in the elements that make up the smile is (8, 12).

Step 11: There are 4 independent moves.

- \* The only spot for 5 in the 3rd column is (3, 8).
- \* The only spot for 1 in the 5th column is (5, 5).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 4 in the elements that make up the smile is (6, 12).

Step 12: There are 7 independent moves.

- \* The only spot for 0 in the 1st row is (8, 1).
- \* The only spot for 4 in the 3rd column is (3, 1).
- \* The only spot for 4 in the 5th column is (5, 7).
- \* The only spot for 1 in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 4 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 5 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 4 in the 1st eye is (4, 5).

Step 13: There are 10 independent moves.

- \* The only spot for 0 in the 5th row is (7, 5).
- \* The only spot for 6 in the 6th row is (6, 6).
- \* The only spot for 5 in the 5th column is (5, 2).
- \* The only spot for 6 in the 4th 4x3 rectangle is (4, 4).
- \* The only spot for 4 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 9 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 5 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 9 in the 9th 4x3 rectangle is (12, 8).

- \* The only spot for 0 in the 2nd eye is (11, 4).
- \* The only spot for 4 in the 2nd eye is (8, 3).

Step 14: There are 10 independent moves.

- \* The only spot for 5 in the 4th row is (2, 4).
- \* The only spot for 7 in the 5th column is (5, 10).
- \* The only spot for 3 in the 7th column is (7, 10).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 0 in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 3 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 5 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 0 in the 11th 4x3 rectangle is (6, 10).
- \* The only spot for 0 in the 1st eye is (2, 3).
- \* The only spot for 5 in the 2nd eye is (8, 5).

Step 15: There is 1 independent move.

- \* The only spot for 5 in the 1st 4x3 rectangle is (1, 3).

## Solution for Puzzle 19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

<b>B</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>A</b>	<b>0</b>	<b>3</b>	<b>5</b>	<b>8</b>	<b>6</b>
<b>3</b>	<b>1</b>	<b>6</b>	<b>2</b>	<b>5</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>B</b>	<b>A</b>	<b>4</b>	<b>0</b>
<b>5</b>	<b>0</b>	<b>8</b>	<b>A</b>	<b>3</b>	<b>B</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>1</b>	<b>9</b>	<b>2</b>
<b>A</b>	<b>5</b>	<b>2</b>	<b>6</b>	<b>B</b>	<b>3</b>	<b>4</b>	<b>8</b>	<b>1</b>	<b>9</b>	<b>0</b>	<b>7</b>
<b>8</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>1</b>	<b>A</b>	<b>0</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>B</b>
<b>0</b>	<b>3</b>	<b>B</b>	<b>1</b>	<b>9</b>	<b>6</b>	<b>2</b>	<b>7</b>	<b>8</b>	<b>4</b>	<b>5</b>	<b>A</b>
<b>7</b>	<b>6</b>	<b>3</b>	<b>B</b>	<b>4</b>	<b>9</b>	<b>5</b>	<b>A</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>8</b>
<b>4</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>A</b>	<b>B</b>	<b>6</b>	<b>9</b>
<b>9</b>	<b>A</b>	<b>1</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>B</b>	<b>6</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>5</b>
<b>6</b>	<b>8</b>	<b>A</b>	<b>5</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>9</b>	<b>2</b>	<b>B</b>	<b>4</b>
<b>2</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>B</b>	<b>0</b>	<b>8</b>	<b>A</b>	<b>1</b>
<b>1</b>	<b>B</b>	<b>0</b>	<b>9</b>	<b>A</b>	<b>4</b>	<b>8</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>3</b>

Challenging

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## tpsmith Puzzle 20, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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					2		9	8		0	
	6		7			5					4
			9			7	0			A	
4				3	1	A				8	
9			1					4		7	
B	2			7							A
			2	0	A					3	
	3	1									
	B			4			3	7			
5	0			1							
		9	4			2					1
					0		8				5

Challenging

Diff: 20 / 5535.33A1.4552.3477.7997

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 20 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<sup>3</sup>				2		9	8		0	
	6		7			5					4
	<sup>3</sup>		9			7	0			A	
4			<sup>1</sup>		3	1	A			8	
9			1					4		7	
B	2				7						A
<sup>2</sup>	<sup>1</sup>	<sup>2</sup>	2		0	A				3	
	3	1				<sup>2</sup>					
	B				4			3	7	<sup>1</sup>	
5	0				1				<sup>2</sup>		
		9	4			2	<sup>1</sup>		<sup>1</sup>		1
<sup>3</sup>	<sup>2</sup>				0		8				5

Challenging

Diff: 20 / 5535.33A1.4552.3477.7997

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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18	3	11	14	16	2	4	9	8	18	0	17	<sup>1</sup>
20	6	20	7	15	19	5	4	10	9	15	4	
10	3	16	9	17	18	7	0	4	8	A	18	
4	7	1	16	3	1	A	15	14	11	8	10	<sup>4</sup>
9	15	20	1	5	9	20	16	4	11	7	15	
B	2	18	19	7	19	20	6	9	16	5	A	
2	1	2	2	0	A	4	9	15	16	3	17	<sup>7</sup>
18	3	1	20	18	2	17	6	13	12	11	19	
19	B	14	11	4	18	19	3	7	1	10	20	
5	0	17	18	1	6	19	5	2	17	13	18	<sup>10</sup>
15	16	9	4	10	17	2	1	18	1	14	1	
3	2	4	19	19	0	18	8	18	13	12	5	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Challenging

Diff: 20 / 5535.33A1.4552.3477.7997

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 99 empty locations that must be determined, out of a total puzzle size of 144.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 7 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 9 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 0 in the 12th 4x3 rectangle is (10, 11).
- \* The only spot for 7 in the elements that make up the smile is (8, 11).
- \* The only spot for 1 in the elements that make up the smile is (10, 9).

Step 2: There are 5 independent moves.

- \* The only spot for 7 in the 7th row is (1, 7).
- \* The only spot for 7 in the 2nd column is (2, 12).
- \* The only spot for 4 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 7 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 2 in the elements that make up the smile is (9, 10).

Step 3: There are 3 independent moves.

- \* The only spot for 1 in the 2nd column is (2, 1).
- \* The only spot for 1 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 4 in the 1st eye is (2, 3).

Step 4: There are 5 independent moves.

- \* The only spot for 1 in the 3rd row is (9, 3).
- \* The only spot for 1 in the 7th column is (7, 7).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 4 in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for 2 in the 10th 4x3 rectangle is (3, 12).

Step 5: There are 3 independent moves.

- \* The only spot for A in the 8th column is (8, 10).
- \* The only spot for 1 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 2 in the 1st eye is (5, 5).

Step 6: There are 3 independent moves.

- \* The only spot for 4 in the 8th column is (8, 6).
- \* The only spot for 2 in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for 4 in the 11th 4x3 rectangle is (6, 10).

Step 7: There is 1 independent move.

- \* 5 must be placed at (2, 4) because it is the only value left that is not already in the 4th row, the 2nd column, the 4th 4x3 rectangle or the 1st eye.

Step 8: There is 1 independent move.

- \* The only spot for 5 in the 3rd row is (10, 3).

Step 9: There are 4 independent moves.

- \* The only spot for 5 in the 5th row is (6, 5).
- \* The only spot for 5 in the 8th column is (8, 7).
- \* The only spot for 5 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 2 in the 2nd eye is (10, 2).

Step 10: There are 5 independent moves.

- \* The only spot for 2 in the 11th column is (11, 9).
- \* The only spot for 2 in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 2 in the 6th 4x3 rectangle is (12, 4).

- \* The only spot for 5 in the 11th 4x3 rectangle is (5, 11).
- \* The only spot for 9 in the 2nd eye is (9, 2).

Step 11: There are 5 independent moves.

- \* The only spot for 9 in the 4th row is (10, 4).
- \* The only spot for 5 in the 9th row is (4, 9).
- \* The only spot for 5 in the 3rd column is (3, 1).
- \* The only spot for 5 in the 9th 4x3 rectangle is (11, 8).
- \* The only spot for 3 in the 2nd eye is (10, 5).

Step 12: There are 2 independent moves.

- \* The only spot for 4 in the 11th column is (11, 12).
- \* The only spot for 4 in the 9th 4x3 rectangle is (10, 8).

Step 13: There are 3 independent moves.

- \* The only spot for A in the 10th column is (10, 12).
- \* The only spot for 9 in the 11th column is (11, 10).
- \* The only spot for A in the 9th 4x3 rectangle is (9, 8).

Step 14: There are 4 independent moves.

- \* The only spot for A in the 4th column is (4, 1).
- \* The only spot for 0 in the 9th column is (9, 4).
- \* The only spot for 6 in the 11th column is (11, 11).
- \* The only spot for A in the elements that make up the smile is (3, 9).

Step 15: There are 7 independent moves.

- \* The only spot for B in the 4th row is (8, 4).
- \* The only spot for A in the 1st column is (1, 11).
- \* The only spot for 6 in the 9th column is (9, 7).
- \* The only spot for B in the 11th column is (11, 2).
- \* The only spot for A in the 2nd 4x3 rectangle is (5, 2).
- \* The only spot for B in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for A in the 1st eye is (2, 5).

Step 16: There are 7 independent moves.

- \* The only spot for B in the 1st row is (5, 1).
- \* The only spot for 6 in the 4th row is (4, 4).
- \* The only spot for 8 in the 2nd column is (2, 11).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 3).
- \* The only spot for 6 in the 6th 4x3 rectangle is (10, 6).
- \* The only spot for B in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 6 in the 2nd eye is (8, 5).

Step 17: There are 7 independent moves.

- \* The only spot for 6 in the 1st row is (12, 1).
- \* The only spot for 8 in the 7th row is (12, 7).
- \* The only spot for B in the 6th column is (6, 11).
- \* The only spot for 8 in the 10th column is (10, 10).
- \* The only spot for B in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 6 in the 10th 4x3 rectangle is (3, 10).
- \* The only spot for 6 in the 1st eye is (5, 3).



Step 18: There are 13 independent moves.

- \* The only spot for 3 in the 1st row is (1, 1).
- \* The only spot for 8 in the 3rd row is (6, 3).
- \* The only spot for 6 in the 8th row is (1, 8).
- \* The only spot for 3 in the 11th row is (9, 11).
- \* The only spot for 3 in the 3rd column is (3, 6).
- \* The only spot for 8 in the 5th column is (5, 8).
- \* The only spot for 6 in the 6th column is (6, 9).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for B in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for 7 in the 12th 4x3 rectangle is (12, 10).
- \* The only spot for 6 in the elements that make up the smile is (7, 12).
- \* The only spot for B in the elements that make up the smile is (4, 10).

Step 19: There are 9 independent moves.

- \* The only spot for 9 in the 8th row is (12, 8).
- \* The only spot for 8 in the 4th column is (4, 6).
- \* The only spot for 9 in the 6th column is (6, 6).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 8 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 9 in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for 3 in the 10th 4x3 rectangle is (4, 12).
- \* The only spot for 3 in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 9 in the elements that make up the smile is (5, 12).

Step 20: There are 7 independent moves.

- \* The only spot for 0 in the 6th row is (7, 6).
- \* The only spot for 0 in the 1st column is (1, 2).
- \* The only spot for 0 in the 4th 4x3 rectangle is (3, 5).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 0 in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for 0 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 8 in the 1st eye is (3, 2).

## Solution for Puzzle 20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

3	1	5	A	B	2	4	9	8	7	0	6
0	6	8	7	A	3	5	1	9	2	B	4
2	4	B	9	6	8	7	0	1	5	A	3
4	5	7	6	3	1	A	B	0	9	8	2
9	A	0	1	2	5	8	6	4	3	7	B
B	2	3	8	7	9	0	4	5	6	1	A
7	9	4	2	0	A	1	5	6	B	3	8
6	3	1	0	8	7	B	2	A	4	5	9
8	B	A	5	4	6	9	3	7	1	2	0
5	0	6	B	1	4	3	A	2	8	9	7
A	8	9	4	5	B	2	7	3	0	6	1
1	7	2	3	9	0	6	8	B	A	4	5

Challenging

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [All steps](#).

## Chapter 13

# Two Tournament tpsmith Puzzles

There are two puzzles in this section ranging in difficulty from twenty-one to twenty-two. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 21** (96/144) DiffKey 21 / 9.4266.6432.2A12.5467.9951

**Puzzle 22** (104/144) DiffKey 22 / 49.4213.2442.4825.8676.7475

## tpsmith Puzzle 21, Tournament/21

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

96/144

4	7		A					9			6
			6		2		A				0
B					9			7			
		1				5					
		9		A		3		8			2
	A	2		6					7	B	
9	8									7	
		7		B			1	2			9
1						0	4		A		
			9		4	A	B		8		
8						9		3			
	0	A			5				9		

Tournament

Diff: 21 / 9.4266.6432.2A12.5467.9951

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 21 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 21

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

96/144

4	7		A					9			6
	<sup>1</sup>		6		2		A				0
B					9			7		<sup>2</sup>	
		1		<sup>3</sup>		5		<sup>1</sup>		<sup>1</sup>	
		9		A		3		8			2
	A	2		6			<sup>1</sup>		7	B	
9	8	<sup>2</sup>			<sup>1</sup>					7	
<sup>1</sup>		7		B			1	2			9
1		<sup>2</sup>		<sup>1</sup>	<sup>2</sup>	0	4		A		
			9	<sup>1</sup>	4	A	B		8		
8			<sup>1</sup>			9		3			<sup>3</sup>
	0	A			5				9		

Tournament

Diff: 21 / 9.4266.6432.2A12.5467.9951

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 21 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 21

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>4</b>	<b>7</b>	<sup>17</sup>	<b>A</b>	<sup>15</sup>	<sup>18</sup>	<sup>5</sup>	<sup>17</sup>	<b>9</b>	<sup>19</sup>	<sup>20</sup>	<b>6</b>	<sup>1</sup>
<sup>7</sup>	<sup>1</sup>	<sup>18</sup>	<b>6</b>	<sup>14</sup>	<b>2</b>	<sup>4</sup>	<b>A</b>	<sup>19</sup>	<sup>20</sup>	<sup>18</sup>	<b>0</b>	
<b>B</b>	<sup>6</sup>	<sup>17</sup>	<sup>5</sup>	<sup>16</sup>	<b>9</b>	<sup>10</sup>	<sup>18</sup>	<b>7</b>	<sup>19</sup>	<sup>2</sup>	<sup>16</sup>	
<sup>5</sup>	<sup>13</sup>	<b>1</b>	<sup>8</sup>	<sup>3</sup>	<sup>7</sup>	<b>5</b>	<sup>4</sup>	<sup>1</sup>	<sup>8</sup>	<sup>1</sup>	<sup>14</sup>	<sup>4</sup>
<sup>4</sup>	<sup>12</sup>	<b>9</b>	<sup>6</sup>	<b>A</b>	<sup>9</sup>	<b>3</b>	<sup>10</sup>	<b>8</b>	<sup>17</sup>	<sup>16</sup>	<b>2</b>	
<sup>6</sup>	<b>A</b>	<b>2</b>	<sup>14</sup>	<b>6</b>	<sup>8</sup>	<sup>4</sup>	<sup>1</sup>	<sup>19</sup>	<b>7</b>	<b>B</b>	<sup>18</sup>	
<b>9</b>	<b>8</b>	<sup>2</sup>	<sup>14</sup>	<sup>11</sup>	<sup>1</sup>	<sup>7</sup>	<sup>18</sup>	<sup>18</sup>	<sup>19</sup>	<b>7</b>	<sup>19</sup>	<sup>7</sup>
<sup>1</sup>	<sup>18</sup>	<b>7</b>	<sup>13</sup>	<b>B</b>	<sup>17</sup>	<sup>9</sup>	<b>1</b>	<b>2</b>	<sup>15</sup>	<sup>14</sup>	<b>9</b>	
<b>1</b>	<sup>18</sup>	<sup>2</sup>	<sup>7</sup>	<sup>1</sup>	<sup>2</sup>	<b>0</b>	<b>4</b>	<sup>19</sup>	<b>A</b>	<sup>19</sup>	<sup>17</sup>	
<sup>6</sup>	<sup>6</sup>	<sup>21</sup>	<b>9</b>	<sup>1</sup>	<b>4</b>	<b>A</b>	<b>B</b>	<sup>15</sup>	<b>8</b>	<sup>20</sup>	<sup>5</sup>	<sup>10</sup>
<b>8</b>	<sup>5</sup>	<sup>20</sup>	<sup>1</sup>	<sup>18</sup>	<sup>16</sup>	<b>9</b>	<sup>4</sup>	<b>3</b>	<sup>20</sup>	<sup>19</sup>	<sup>3</sup>	
<sup>5</sup>	<b>0</b>	<b>A</b>	<sup>4</sup>	<sup>17</sup>	<b>5</b>	<sup>6</sup>	<sup>16</sup>	<sup>15</sup>	<b>9</b>	<sup>18</sup>	<sup>16</sup>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Tournament

Diff: 21 / 9.4266.6432.2A12.5467.9951

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There are 21 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

All 21 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 9 independent moves.

- \* The only spot for 9 in the 6th row is (8, 6).
- \* The only spot for A in the 7th row is (6, 7).
- \* The only spot for A in the 9th column is (9, 4).
- \* The only spot for 9 in the 1st 4x3 rectangle is (2, 2).
- \* The only spot for 9 in the 6th 4x3 rectangle is (11, 4).
- \* The only spot for A in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 9 in the 8th 4x3 rectangle is (5, 9).
- \* The only spot for 3 in the 11th 4x3 rectangle is (5, 10).
- \* The only spot for 4 in the elements that make up the smile is (4, 11).

Step 2: There are 4 independent moves.

- \* The only spot for 4 in the 3rd column is (3, 7).
- \* The only spot for 7 in the 8th 4x3 rectangle is (6, 9).
- \* The only spot for A in the 2nd eye is (11, 3).
- \* The only spot for B in the elements that make up the smile is (3, 9).

Step 3: There are 2 independent moves.

- \* The only spot for 7 in the 5th 4x3 rectangle is (5, 4).
- \* The only spot for A in the 12th 4x3 rectangle is (12, 11).

Step 4: There are 6 independent moves.

- \* The only spot for 7 in the 11th row is (8, 11).
- \* The only spot for 7 in the 4th column is (4, 12).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 7 in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for 4 in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 2 in the 5th 4x3 rectangle is (8, 4).

Step 5: There are 6 independent moves.

- \* The only spot for 1 in the 4th column is (4, 3).
- \* The only spot for B in the 7th column is (7, 1).
- \* The only spot for 6 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 3 in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for B in the 10th 4x3 rectangle is (2, 11).
- \* The only spot for 7 in the 12th 4x3 rectangle is (12, 10).

Step 6: There are 6 independent moves.

- \* The only spot for 2 in the 1st column is (1, 10).
- \* The only spot for 0 in the 1st column is (1, 6).
- \* The only spot for 1 in the 7th column is (7, 12).
- \* The only spot for 1 in the 10th 4x3 rectangle is (2, 10).
- \* The only spot for B in the 1st eye is (4, 5).
- \* The only spot for 2 in the 1st eye is (2, 3).

Step 7: There are 4 independent moves.

- \* The only spot for 2 in the 9th row is (4, 9).
- \* The only spot for 5 in the 1st column is (1, 2).
- \* The only spot for 2 in the 7th column is (7, 7).
- \* The only spot for B in the 5th 4x3 rectangle is (6, 4).

Step 8: There are 3 independent moves.

- \* The only spot for 0 in the 4th row is (10, 4).
- \* The only spot for 8 in the 4th row is (4, 4).
- \* The only spot for 8 in the 5th 4x3 rectangle is (6, 6).

Step 9: There are 2 independent moves.

- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 8 in the 8th 4x3 rectangle is (7, 8).

Step 10: There are 2 independent moves.

- \* The only spot for 6 in the 7th column is (7, 3).
- \* The only spot for 0 in the 5th 4x3 rectangle is (8, 5).

Step 11: There is 1 independent move.

- \* 5 must be placed at (5, 7) because it is the only value left that is not already in the 7th row, the 5th column or the 8th 4x3 rectangle.

Step 12: There is 1 independent move.

- \* The only spot for 5 in the 1st eye is (2, 5).

Step 13: There are 2 independent moves.

- \* The only spot for 4 in the 4th 4x3 rectangle is (2, 4).
- \* The only spot for 5 in the 7th 4x3 rectangle is (4, 8).

Step 14: There are 5 independent moves.

- \* The only spot for 3 in the 4th row is (12, 4).
- \* The only spot for 0 in the 8th row is (11, 8).
- \* The only spot for 4 in the 2nd 4x3 rectangle is (5, 2).
- \* The only spot for 3 in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 0 in the 7th 4x3 rectangle is (4, 7).

Step 15: There are 4 independent moves.

- \* The only spot for 4 in the 9th column is (9, 12).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 4 in the 9th 4x3 rectangle is (10, 8).
- \* The only spot for 0 in the 12th 4x3 rectangle is (9, 10).

Step 16: There are 6 independent moves.

- \* The only spot for 0 in the 5th column is (5, 3).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 0 in the 11th 4x3 rectangle is (6, 11).
- \* The only spot for B in the 12th 4x3 rectangle is (12, 12).
- \* The only spot for 4 in the 2nd eye is (11, 5).
- \* The only spot for 6 in the elements that make up the smile is (8, 12).

Step 17: There are 7 independent moves.

- \* The only spot for 8 in the 3rd row is (3, 3).
- \* The only spot for 8 in the 12th column is (12, 9).
- \* The only spot for 0 in the 1st 4x3 rectangle is (3, 1).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 6 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 6 in the 2nd eye is (10, 5).
- \* The only spot for 8 in the elements that make up the smile is (5, 12).



Step 18: There are 11 independent moves.

- \* The only spot for 6 in the 7th row is (9, 7).
- \* The only spot for 3 in the 8th row is (2, 8).
- \* The only spot for 2 in the 12th row is (11, 12).
- \* The only spot for 3 in the 6th column is (6, 1).
- \* The only spot for 5 in the 12th column is (12, 6).
- \* The only spot for 5 in the 2nd 4x3 rectangle is (8, 3).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (11, 2).
- \* The only spot for 6 in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for 3 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 3 in the 1st eye is (3, 2).
- \* The only spot for 2 in the elements that make up the smile is (5, 11).

Step 19: There are 9 independent moves.

- \* The only spot for 5 in the 9th column is (9, 9).
- \* The only spot for B in the 9th column is (9, 2).
- \* The only spot for 1 in the 11th column is (11, 11).
- \* The only spot for 1 in the 12th column is (12, 7).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 1 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 3 in the 9th 4x3 rectangle is (11, 9).
- \* The only spot for B in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 3 in the 2nd eye is (10, 3).

Step 20: There are 5 independent moves.

- \* The only spot for 6 in the 11th row is (3, 11).
- \* The only spot for 5 in the 10th column is (10, 11).
- \* The only spot for 5 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 6 in the 12th 4x3 rectangle is (11, 10).
- \* The only spot for 1 in the 2nd eye is (10, 2).

Step 21: There is 1 independent move.

- \* The only spot for 5 in the 10th 4x3 rectangle is (3, 10).

## Solution for Puzzle 21

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

4	7	0	A	1	3	B	8	9	2	5	6
5	9	3	6	4	2	7	A	B	1	8	0
B	2	8	1	0	9	6	5	7	3	A	4
6	4	1	8	7	B	5	2	A	0	9	3
7	5	9	B	A	1	3	0	8	6	4	2
0	A	2	3	6	8	4	9	1	7	B	5
9	8	4	0	5	A	2	3	6	B	7	1
A	3	7	5	B	6	8	1	2	4	0	9
1	6	B	2	9	7	0	4	5	A	3	8
2	1	5	9	3	4	A	B	0	8	6	7
8	B	6	4	2	0	9	7	3	5	1	A
3	0	A	7	8	5	1	6	4	9	2	B

Tournament

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## tpsmith Puzzle 22, Tournament/22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				6				3	4		
	8						9		A		2
	2	3				5					
			0				4		B		
		4				A	8	1			
		8	1		B						
	B				9					8	
		1						5	0	A	
	3			7							
9							0	7		6	
	0		8		7						5
			6		A		B				

Tournament

Diff: 22 / 49.4213.2442.4825.8676.7475

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 22 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				6			<sup>2</sup>	3	4		<sup>2</sup>
	8						9		A		2
	2	3		<sup>1</sup>		5					
			0	<sup>2</sup>			4	<sup>3</sup>	B		
		4		<sup>2</sup>		A	8	1			
		8	1		B						
	B			<sup>2</sup>	9	<sup>3</sup>				8	
		1						5	0	A	
	3	<sup>1</sup>		7							
9	<sup>3</sup>	<sup>2</sup>	<sup>1</sup>				0	7		6	<sup>1</sup>
	0		8		7	<sup>2</sup>	<sup>3</sup>			<sup>2</sup>	5
			6	<sup>2</sup>	A		B				

Tournament

Diff: 22 / 49.4213.2442.4825.8676.7475

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 22 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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8	9	19	20	6	12	11	2	3	4	18	2	1
7	8	8	17	10	9	10	9	17	A	18	2	
6	2	3	17	1	7	5	12	16	17	15	8	
21	5	22	0	2	19	16	4	3	B	15	18	4
9	21	4	21	2	15	A	8	1	16	14	17	
16	19	8	1	15	B	18	17	4	15	15	14	
20	B	21	21	2	9	3	12	19	14	8	22	7
22	21	1	20	11	19	19	16	5	0	A	21	
19	3	1	6	7	18	16	18	20	11	17	12	
9	3	2	1	12	11	12	0	7	13	6	1	10
12	0	6	8	14	7	2	3	9	15	2	5	
22	8	22	6	2	A	15	B	14	4	12	13	

1  
Tournament

5

9

Diff: 22 / 49.4213.2442.4825.8676.7475

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There are 22 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

All 22 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 4 independent moves.

- \* The only spot for 3 in the 4th column is (4, 10).
- \* The only spot for A in the 12th 4x3 rectangle is (12, 10).
- \* The only spot for 8 in the 1st eye is (5, 3).
- \* The only spot for 0 in the elements that make up the smile is (3, 9).

Step 2: There are 9 independent moves.

- \* The only spot for B in the 10th row is (3, 10).
- \* The only spot for A in the 5th column is (5, 7).
- \* The only spot for A in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 3 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for B in the 12th 4x3 rectangle is (11, 11).
- \* The only spot for 0 in the 1st eye is (5, 5).
- \* The only spot for 1 in the 1st eye is (5, 4).
- \* The only spot for 5 in the elements that make up the smile is (5, 12).

Step 3: There are 4 independent moves.

- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 4).
- \* The only spot for 0 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 5 in the 10th 4x3 rectangle is (2, 10).
- \* The only spot for 6 in the 11th 4x3 rectangle is (8, 11).

Step 4: There are 2 independent moves.

- \* The only spot for 8 in the 12th row is (10, 12).
- \* The only spot for A in the 6th 4x3 rectangle is (9, 6).

Step 5: There is 1 independent move.

- \* The only spot for A in the 2nd column is (2, 4).

Step 6: There are 3 independent moves.

- \* The only spot for A in the 3rd column is (3, 11).
- \* The only spot for A in the 4th column is (4, 9).
- \* The only spot for A in the 1st 4x3 rectangle is (1, 3).

Step 7: There are 2 independent moves.

- \* The only spot for 4 in the 3rd row is (6, 3).
- \* The only spot for 4 in the 1st 4x3 rectangle is (1, 2).

Step 8: There are 4 independent moves.

- \* The only spot for 1 in the 3rd row is (12, 3).
- \* The only spot for 6 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for 0 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for 4 in the 10th 4x3 rectangle is (2, 12).

Step 9: There are 4 independent moves.

- \* The only spot for B in the 1st column is (1, 5).
- \* The only spot for 1 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 4 in the 12th 4x3 rectangle is (9, 11).

Step 10: There are 2 independent moves.

- \* The only spot for 1 in the 2nd 4x3 rectangle is (7, 2).

- \* The only spot for 3 in the 2nd 4x3 rectangle is (5, 2).

Step 11: There are 4 independent moves.

- \* The only spot for B in the 5th column is (5, 8).
- \* The only spot for B in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for 1 in the 11th 4x3 rectangle is (6, 10).
- \* The only spot for 1 in the elements that make up the smile is (10, 9).

Step 12: There are 8 independent moves.

- \* The only spot for 1 in the 11th row is (1, 11).
- \* The only spot for 4 in the 5th column is (5, 10).
- \* The only spot for B in the 12th column is (12, 9).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (8, 3).
- \* The only spot for 2 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 1 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 8 in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 1 in the 12th 4x3 rectangle is (11, 12).

Step 13: There are 2 independent moves.

- \* The only spot for 2 in the 10th row is (10, 10).
- \* The only spot for 3 in the 12th 4x3 rectangle is (12, 12).

Step 14: There are 5 independent moves.

- \* The only spot for 2 in the 5th row is (11, 5).
- \* The only spot for 2 in the 11th row is (5, 11).
- \* The only spot for 0 in the 12th column is (12, 6).
- \* The only spot for 3 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 0 in the 12th 4x3 rectangle is (9, 12).

Step 15: There are 8 independent moves.

- \* The only spot for 3 in the 5th row is (6, 5).
- \* The only spot for 9 in the 5th column is (5, 6).
- \* The only spot for 7 in the 10th column is (10, 6).
- \* The only spot for 4 in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for 9 in the 12th 4x3 rectangle is (10, 11).
- \* The only spot for 3 in the 2nd eye is (11, 4).
- \* The only spot for 0 in the 2nd eye is (11, 3).
- \* The only spot for 9 in the elements that make up the smile is (7, 12).

Step 16: There are 6 independent moves.

- \* The only spot for 4 in the 9th row is (7, 9).
- \* The only spot for 3 in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 7 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 3 in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for 5 in the 2nd eye is (10, 5).
- \* The only spot for 9 in the 2nd eye is (9, 3).

Step 17: There are 7 independent moves.

- \* The only spot for B in the 3rd row is (4, 3).
- \* The only spot for 6 in the 5th row is (12, 5).
- \* The only spot for 5 in the 6th row is (8, 6).

- \* The only spot for 9 in the 11th column is (11, 9).
- \* The only spot for 5 in the 1st eye is (4, 2).
- \* The only spot for 6 in the 2nd eye is (10, 3).
- \* The only spot for B in the 2nd eye is (9, 2).

Step 18: There are 6 independent moves.

- \* The only spot for 7 in the 2nd row is (11, 2).
- \* The only spot for 2 in the 8th column is (8, 9).
- \* The only spot for 5 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 2 in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 9 in the 6th 4x3 rectangle is (12, 4).
- \* The only spot for 5 in the 8th 4x3 rectangle is (6, 9).

Step 19: There are 7 independent moves.

- \* The only spot for 6 in the 6th row is (2, 6).
- \* The only spot for 8 in the 9th row is (1, 9).
- \* The only spot for 9 in the 3rd column is (3, 1).
- \* The only spot for 6 in the 7th column is (7, 8).
- \* The only spot for 6 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 8 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 2 in the 9th 4x3 rectangle is (9, 7).

Step 20: There are 4 independent moves.

- \* The only spot for 2 in the 4th column is (4, 8).
- \* The only spot for 7 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 6 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 6 in the 9th 4x3 rectangle is (9, 9).

Step 21: There are 7 independent moves.

- \* The only spot for 4 in the 8th row is (12, 8).
- \* The only spot for 5 in the 1st column is (1, 4).
- \* The only spot for 9 in the 4th column is (4, 5).
- \* The only spot for 9 in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 4 in the 7th 4x3 rectangle is (4, 7).
- \* The only spot for 5 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 7 in the 1st eye is (2, 5).

Step 22: There are 5 independent moves.

- \* The only spot for 2 in the 1st column is (1, 12).
- \* The only spot for 7 in the 3rd column is (3, 12).
- \* The only spot for 2 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 7 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 7 in the 9th 4x3 rectangle is (12, 7).



## Solution for Puzzle 22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

0	1	9	7	6	2	B	A	3	4	5	8
4	8	6	5	3	0	1	9	B	A	7	2
A	2	3	B	8	4	5	7	9	6	0	1
5	A	2	0	1	6	7	4	8	B	3	9
B	7	4	9	0	3	A	8	1	5	2	6
3	6	8	1	9	B	2	5	A	7	4	0
6	B	5	4	A	9	0	1	2	3	8	7
7	9	1	2	B	8	6	3	5	0	A	4
8	3	0	A	7	5	4	2	6	1	9	B
9	5	B	3	4	1	8	0	7	2	6	A
1	0	A	8	2	7	3	6	4	9	B	5
2	4	7	6	5	A	9	B	0	8	1	3

Tournament

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## Chapter 14

# Two TournamentPlus tpsmith Puzzles

There are two puzzles in this section ranging in difficulty from thirty-four to forty. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 23** (104/144) DiffKey 34 / 92.3425.5433.3232.1113.4422.B223.4412.2464

**Puzzle 24** (103/144) DiffKey 40 / 5311.5322.C212.1222.31A3.2342.1223.421B.3334+

## tpsmith Puzzle 23, TournamentPlus/34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

104/144

4	0				6				5		
2	8				9						B
								3	4		7
	9					3		A			6
		8	2	B			0				
			A			2			0		
B	A		3	5						9	
			4						3	6	
						B	A	1			
1		6			B						
		5									
				3	8			2			

TournamentPlus

Diff: 34 / 92.3425.5433.3232.1113.4422.B223.4412.2464

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 34 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 23

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>4</b>	<b>0</b>	<sup>3</sup>			<b>6</b>				<b>5</b>		
<b>2</b>	<b>8</b>				<b>9</b>					<sup>1</sup>	<b>B</b>
<sup>1</sup>				<sup>1</sup>			<sup>1</sup>	<b>3</b>	<b>4</b>		<b>7</b>
	<b>9</b>					<b>3</b>		<b>A</b>			<b>6</b>
		<b>8</b>	<b>2</b>	<b>B</b>			<b>0</b>				
	<sup>3</sup>		<b>A</b>			<b>2</b>			<b>0</b>		
<b>B</b>	<b>A</b>		<b>3</b>	<b>5</b>						<b>9</b>	
			<b>4</b>					<sup>1</sup>	<b>3</b>	<b>6</b>	<sup>1</sup>
			<sup>1</sup>		<sup>1</sup>	<b>B</b>	<b>A</b>	<b>1</b>			
<b>1</b>		<b>6</b>			<b>B</b>						
<sup>1</sup>		<b>5</b>	<sup>2</sup>	<sup>3</sup>							
<sup>2</sup>				<b>3</b>	<b>8</b>			<b>2</b>			

TournamentPlus

Diff: 34 / 92.3425.5433.3232.1113.4422.B223.4412.2464

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 34 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 23

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

104/144

<b>4</b>	<b>0</b>		<sup>3</sup>	<sup>22</sup>	<sup>22</sup>	<b>6</b>	<sup>7</sup>	<sup>4</sup>	<sup>7</sup>	<b>5</b>	<sup>8</sup>	<sup>6</sup>	<sup>1</sup>
<b>2</b>	<b>8</b>		<sup>4</sup>	<sup>21</sup>	<sup>23</sup>	<b>9</b>	<sup>33</sup>	<sup>33</sup>	<sup>7</sup>	<sup>6</sup>	<sup>1</sup>	<b>B</b>	
<sup>1</sup>	<sup>9</sup>	<sup>5</sup>	<sup>8</sup>	<sup>1</sup>	<sup>6</sup>	<sup>7</sup>	<sup>1</sup>	<b>3</b>	<b>4</b>	<sup>9</sup>	<b>7</b>		
<sup>18</sup>	<b>9</b>	<sup>20</sup>	<sup>10</sup>	<sup>21</sup>	<sup>20</sup>	<b>3</b>	<sup>6</sup>	<b>A</b>	<sup>4</sup>	<sup>5</sup>	<b>6</b>	<sup>4</sup>	
<sup>11</sup>	<sup>19</sup>	<b>8</b>	<b>2</b>	<b>B</b>	<sup>6</sup>	<sup>20</sup>	<b>0</b>	<sup>19</sup>	<sup>8</sup>	<sup>18</sup>	<sup>12</sup>		
<sup>12</sup>	<sup>3</sup>	<sup>16</sup>	<b>A</b>	<sup>10</sup>	<sup>11</sup>	<b>2</b>	<sup>11</sup>	<sup>14</sup>	<b>0</b>	<sup>15</sup>	<sup>13</sup>		
<b>B</b>	<b>A</b>	<sup>27</sup>	<b>3</b>	<b>5</b>	<sup>33</sup>	<sup>31</sup>	<sup>32</sup>	<sup>26</sup>	<sup>27</sup>	<b>9</b>	<sup>28</sup>	<sup>7</sup>	
<sup>10</sup>	<sup>20</sup>	<sup>26</sup>	<b>4</b>	<sup>8</sup>	<sup>31</sup>	<sup>32</sup>	<sup>27</sup>	<sup>1</sup>	<b>3</b>	<b>6</b>	<sup>1</sup>		
<sup>17</sup>	<sup>9</sup>	<sup>25</sup>	<sup>1</sup>	<sup>25</sup>	<sup>1</sup>	<b>B</b>	<b>A</b>	<b>1</b>	<sup>23</sup>	<sup>19</sup>	<sup>24</sup>		
<b>1</b>	<sup>13</sup>	<b>6</b>	<sup>27</sup>	<sup>24</sup>	<b>B</b>	<sup>30</sup>	<sup>34</sup>	<sup>33</sup>	<sup>28</sup>	<sup>7</sup>	<sup>29</sup>	<sup>10</sup>	
<sup>1</sup>	<sup>14</sup>	<b>5</b>	<sup>2</sup>	<sup>3</sup>	<sup>32</sup>	<sup>28</sup>	<sup>34</sup>	<sup>34</sup>	<sup>33</sup>	<sup>13</sup>	<sup>30</sup>		
<sup>2</sup>	<sup>18</sup>	<sup>19</sup>	<sup>26</sup>	<b>3</b>	<b>8</b>	<sup>32</sup>	<sup>33</sup>	<b>2</b>	<sup>34</sup>	<sup>4</sup>	<sup>28</sup>		

<sup>1</sup>  
TournamentPlus

<sup>5</sup>

<sup>9</sup>

Diff: 34 / 92.3425.5433.3232.1113.4422.B223.4412.2464

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 34 steps required to solve the puzzle above with a total of 104 empty locations that must be determined, out of a total puzzle size of 144.

All 34 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 9 independent moves.

- \* The only spot for B in the 3rd row is (8, 3).
- \* The only spot for 9 in the 3rd row is (1, 3).
- \* The only spot for 8 in the 4th column is (4, 9).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (11, 2).
- \* The only spot for 3 in the 8th 4x3 rectangle is (6, 9).
- \* The only spot for A in the 9th 4x3 rectangle is (12, 8).
- \* The only spot for B in the 9th 4x3 rectangle is (9, 8).
- \* The only spot for 8 in the 10th 4x3 rectangle is (1, 11).
- \* The only spot for 0 in the 1st eye is (5, 3).

Step 2: There are 2 independent moves.

- \* The only spot for A in the 1st column is (1, 12).
- \* The only spot for B in the elements that make up the smile is (4, 11).

Step 3: There are 3 independent moves.

- \* The only spot for B in the 2nd column is (2, 6).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 1).
- \* The only spot for A in the elements that make up the smile is (5, 11).

Step 4: There are 4 independent moves.

- \* The only spot for 3 in the 1st row is (8, 1).
- \* The only spot for B in the 11th column is (11, 12).
- \* The only spot for 3 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for B in the 6th 4x3 rectangle is (10, 4).

Step 5: There are 2 independent moves.

- \* The only spot for 2 in the 6th 4x3 rectangle is (11, 4).
- \* The only spot for A in the 1st eye is (3, 3).

Step 6: There are 5 independent moves.

- \* The only spot for 2 in the 3rd row is (6, 3).
- \* The only spot for 8 in the 4th row is (8, 4).
- \* The only spot for A in the 6th column is (6, 5).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for A in the 2nd eye is (10, 2).

Step 7: There are 5 independent moves.

- \* The only spot for 8 in the 3rd row is (7, 3).
- \* The only spot for A in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for A in the 12th 4x3 rectangle is (11, 10).
- \* The only spot for 6 in the 2nd eye is (9, 2).

Step 8: There are 4 independent moves.

- \* The only spot for 6 in the 4th column is (4, 3).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 8 in the 8th 4x3 rectangle is (5, 8).
- \* The only spot for 9 in the 2nd eye is (10, 5).

Step 9: There are 3 independent moves.

- \* The only spot for 5 in the 3rd row is (2, 3).

- \* The only spot for 6 in the 2nd column is (2, 9).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (11, 3).

Step 10: There are 3 independent moves.

- \* The only spot for 5 in the 8th row is (1, 8).
- \* The only spot for 5 in the 4th column is (4, 4).
- \* The only spot for 6 in the 5th column is (5, 6).

Step 11: There are 3 independent moves.

- \* The only spot for 5 in the 6th column is (6, 6).
- \* The only spot for 6 in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for 9 in the 5th 4x3 rectangle is (8, 6).

Step 12: There are 2 independent moves.

- \* The only spot for 3 in the 5th row is (12, 5).
- \* The only spot for 3 in the 4th 4x3 rectangle is (1, 6).

Step 13: There are 3 independent moves.

- \* The only spot for 3 in the 10th row is (2, 10).
- \* The only spot for 1 in the 6th 4x3 rectangle is (12, 6).
- \* The only spot for 3 in the 12th 4x3 rectangle is (11, 11).

Step 14: There are 2 independent moves.

- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 2 in the 10th 4x3 rectangle is (2, 11).

Step 15: There is 1 independent move.

- \* The only spot for 4 in the 6th 4x3 rectangle is (11, 6).

Step 16: There is 1 independent move.

- \* The only spot for 7 in the 6th row is (3, 6).

Step 17: There is 1 independent move.

- \* The only spot for 7 in the 1st column is (1, 9).

Step 18: There are 3 independent moves.

- \* The only spot for 0 in the 1st column is (1, 4).
- \* The only spot for 7 in the 2nd column is (2, 12).
- \* The only spot for 7 in the 11th column is (11, 5).

Step 19: There are 4 independent moves.

- \* The only spot for 4 in the 2nd column is (2, 5).
- \* The only spot for 5 in the 11th column is (11, 9).
- \* The only spot for 4 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 5 in the 2nd eye is (9, 5).

Step 20: There are 4 independent moves.

- \* The only spot for 1 in the 5th row is (7, 5).
- \* The only spot for 1 in the 2nd column is (2, 8).
- \* The only spot for 1 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 4 in the 5th 4x3 rectangle is (6, 4).

Step 21: There are 2 independent moves.

- \* The only spot for 7 in the 5th 4x3 rectangle is (5, 4).
- \* The only spot for 1 in the 1st eye is (4, 2).

Step 22: There are 2 independent moves.

- \* The only spot for 7 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 1 in the 2nd 4x3 rectangle is (5, 1).

Step 23: There are 2 independent moves.

- \* 2 must be placed at (10, 9) because it is the only value left that is not already in the 9th row, the 10th column, the 9th 4x3 rectangle or the elements that make up the smile.
- \* 4 must be placed at (5, 2) because it is the only value left that is not already in the 2nd row, the 5th column or the 2nd 4x3 rectangle.

Step 24: There are 2 independent moves.

- \* The only spot for 4 in the 9th row is (12, 9).
- \* The only spot for 2 in the 5th column is (5, 10).

Step 25: There are 2 independent moves.

- \* The only spot for 0 in the 9th row is (3, 9).
- \* The only spot for 9 in the 5th column is (5, 9).

Step 26: There are 3 independent moves.

- \* The only spot for 0 in the 9th column is (9, 7).
- \* The only spot for 9 in the 7th 4x3 rectangle is (3, 8).
- \* The only spot for 0 in the 10th 4x3 rectangle is (4, 12).

Step 27: There are 4 independent moves.

- \* The only spot for 2 in the 8th row is (8, 8).
- \* The only spot for 2 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 7 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 9 in the 10th 4x3 rectangle is (4, 10).

Step 28: There are 4 independent moves.

- \* The only spot for 9 in the 12th row is (12, 12).
- \* The only spot for 8 in the 10th column is (10, 10).
- \* The only spot for 8 in the 9th 4x3 rectangle is (12, 7).
- \* The only spot for 9 in the 11th 4x3 rectangle is (7, 11).

Step 29: There is 1 independent move.

- \* The only spot for 5 in the 12th 4x3 rectangle is (12, 10).

Step 30: There are 2 independent moves.

- \* The only spot for 0 in the 10th row is (7, 10).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 11).

Step 31: There are 2 independent moves.

- \* The only spot for 4 in the 7th column is (7, 7).
- \* The only spot for 0 in the 8th 4x3 rectangle is (6, 8).

Step 32: There are 4 independent moves.

- \* The only spot for 7 in the 6th column is (6, 11).
- \* The only spot for 6 in the 7th column is (7, 12).
- \* The only spot for 7 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 6 in the 8th 4x3 rectangle is (8, 7).

Step 33: There are 6 independent moves.

- \* The only spot for 5 in the 7th column is (7, 2).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for 1 in the 8th 4x3 rectangle is (6, 7).



- \* The only spot for 6 in the 12th 4x3 rectangle is (10, 11).
- \* The only spot for 5 in the elements that make up the smile is (8, 12).
- \* The only spot for 7 in the elements that make up the smile is (9, 10).

Step 34: There are 4 independent moves.

- \* The only spot for 4 in the 10th row is (8, 10).
- \* The only spot for 1 in the 12th 4x3 rectangle is (10, 12).
- \* The only spot for 4 in the 12th 4x3 rectangle is (9, 11).
- \* The only spot for 1 in the elements that make up the smile is (8, 11).

## Solution for Puzzle 23

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

4	0	B	7	1	6	A	3	9	5	8	2
2	8	3	1	4	9	5	7	6	A	0	B
9	5	A	6	0	2	8	B	3	4	1	7
0	9	1	5	7	4	3	8	A	B	2	6
6	4	8	2	B	A	1	0	5	9	7	3
3	B	7	A	6	5	2	9	8	0	4	1
B	A	2	3	5	1	4	6	0	7	9	8
5	1	9	4	8	0	7	2	B	3	6	A
7	6	0	8	9	3	B	A	1	2	5	4
1	3	6	9	2	B	0	4	7	8	A	5
8	2	5	B	A	7	9	1	4	6	3	0
A	7	4	0	3	8	6	5	2	1	B	9

TournamentPlus

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## tpsmith Puzzle 24, TournamentPlus/40

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

103/144

5	1				2		3				
	6		B	8		9					
7					A			9		4	
3				5			7		4		
	A	9			3						
	8								6	3	
		7				8		2			6
1			A			6					
	2									B	A
			3	9			0				
									8		2
		B	6	7		4					

TournamentPlus

Diff: 40 / 5311.5322.C212.1222.31A3.2342.1223.421B+

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the smile.

There are 40 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 24

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

103/144

5	1		<sup>1</sup>		2		3				
	6		B	8		9					
7					A		<sup>3</sup>	9		4	
3				5			7		4		
	A	9	<sup>1</sup>		3		<sup>2</sup>				
	8								6	3	
		7				8		2			6
1			A	<sup>2</sup>		6					
	2								<sup>2</sup>	B	A
			3	9			0				<sup>1</sup>
						<sup>1</sup>			8		2
		B	6	7		4	<sup>1</sup>				

TournamentPlus

Diff: 40 / 5311.5322.C212.1222.31A3.2342.1223.421B+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 40 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 24

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

103/144

<b>5</b>	<b>1</b>	10	1	6	<b>2</b>	27	<b>3</b>	40	39	17	26	<sup>1</sup>
11	<b>6</b>	5	<b>B</b>	<b>8</b>	28	<b>9</b>	9	38	37	38	39	
<b>7</b>	17	16	15	5	<b>A</b>	29	3	<b>9</b>	28	<b>4</b>	27	
<b>3</b>	9	5	23	<b>5</b>	24	23	<b>7</b>	26	<b>4</b>	12	25	<sup>4</sup>
5	<b>A</b>	<b>9</b>	1	4	<b>3</b>	29	2	22	38	39	29	
6	<b>8</b>	20	22	32	34	21	33	38	<b>6</b>	<b>3</b>	37	
9	34	<b>7</b>	31	36	32	<b>8</b>	36	<b>2</b>	37	29	<b>6</b>	<sup>7</sup>
<b>1</b>	33	17	<b>A</b>	2	30	<b>6</b>	34	35	39	18	38	
5	<b>2</b>	14	30	37	33	28	35	36	2	<b>B</b>	<b>A</b>	
12	7	22	<b>3</b>	<b>9</b>	14	20	<b>0</b>	16	21	23	1	<sup>10</sup>
8	6	23	10	35	15	1	36	20	<b>8</b>	7	<b>2</b>	
13	19	<b>B</b>	<b>6</b>	<b>7</b>	24	<b>4</b>	1	39	40	8	39	

<sup>1</sup>  
TournamentPlus

<sup>5</sup>

<sup>9</sup>

Diff: 40 / 5311.5322.C212.1222.31A3.2342.1223.421B+

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There are 40 steps required to solve the puzzle above with a total of 103 empty locations that must be determined, out of a total puzzle size of 144.

All 40 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 5 independent moves.

- \* The only spot for 9 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 3 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 4 in the 12th 4x3 rectangle is (12, 10).
- \* The only spot for 7 in the 1st eye is (4, 5).
- \* The only spot for 2 in the elements that make up the smile is (8, 12).

Step 2: There are 3 independent moves.

- \* The only spot for 8 in the 8th column is (8, 5).
- \* The only spot for 2 in the 8th 4x3 rectangle is (5, 8).
- \* The only spot for 9 in the elements that make up the smile is (10, 9).

Step 3: There is 1 independent move.

- \* The only spot for 6 in the 2nd eye is (8, 3).

Step 4: There is 1 independent move.

- \* The only spot for 6 in the 1st eye is (5, 5).

Step 5: There are 5 independent moves.

- \* The only spot for 4 in the 5th row is (1, 5).
- \* The only spot for 6 in the 1st column is (1, 9).
- \* The only spot for 6 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 1 in the 1st eye is (5, 3).
- \* The only spot for 4 in the 1st eye is (3, 2).

Step 6: There are 3 independent moves.

- \* The only spot for 4 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for B in the 4th 4x3 rectangle is (1, 6).
- \* The only spot for 4 in the 10th 4x3 rectangle is (2, 11).

Step 7: There are 2 independent moves.

- \* The only spot for 7 in the 11th row is (11, 11).
- \* The only spot for 7 in the 10th 4x3 rectangle is (2, 10).

Step 8: There are 2 independent moves.

- \* The only spot for 9 in the 11th row is (1, 11).
- \* The only spot for 9 in the 11th column is (11, 12).

Step 9: There are 3 independent moves.

- \* 0 must be placed at (1, 7) because it is the only value left that is not already in the 7th row, the 1st column or the 7th 4x3 rectangle.
- \* 0 must be placed at (2, 4) because it is the only value left that is not already in the 4th row, the 2nd column, the 4th 4x3 rectangle or the 1st eye.
- \* 5 must be placed at (8, 2) because it is the only value left that is not already in the 2nd row, the 8th column or the 2nd 4x3 rectangle.

Step 10: There are 2 independent moves.

- \* The only spot for 0 in the 4th column is (4, 11).
- \* The only spot for 0 in the 1st 4x3 rectangle is (3, 1).

Step 11: There is 1 independent move.

- \* The only spot for A in the 1st 4x3 rectangle is (1, 2).

Step 12: There are 2 independent moves.

- \* The only spot for 2 in the 1st column is (1, 10).

- \* The only spot for A in the 2nd eye is (11, 4).
- Step 13: There is 1 independent move.
- \* The only spot for 8 in the 1st column is (1, 12).
- Step 14: There are 2 independent moves.
- \* The only spot for 8 in the 11th 4x3 rectangle is (6, 10).
  - \* The only spot for 8 in the elements that make up the smile is (3, 9).
- Step 15: There are 2 independent moves.
- \* The only spot for 6 in the 11th 4x3 rectangle is (6, 11).
  - \* The only spot for 8 in the 1st eye is (4, 3).
- Step 16: There are 2 independent moves.
- \* The only spot for 2 in the 1st eye is (3, 3).
  - \* The only spot for 6 in the elements that make up the smile is (9, 10).
- Step 17: There are 3 independent moves.
- \* The only spot for 3 in the 3rd column is (3, 8).
  - \* The only spot for 6 in the 3rd 4x3 rectangle is (11, 1).
  - \* The only spot for 3 in the 1st eye is (2, 3).
- Step 18: There is 1 independent move.
- \* The only spot for 8 in the 11th column is (11, 8).
- Step 19: There is 1 independent move.
- \* 5 must be placed at (2, 12) because it is the only value left that is not already in the 12th row, the 2nd column or the 10th 4x3 rectangle.
- Step 20: There are 3 independent moves.
- \* The only spot for 5 in the 3rd column is (3, 6).
  - \* The only spot for 5 in the 11th 4x3 rectangle is (7, 10).
  - \* The only spot for 5 in the elements that make up the smile is (9, 11).
- Step 21: There are 2 independent moves.
- \* The only spot for A in the 7th column is (7, 6).
  - \* The only spot for B in the 12th 4x3 rectangle is (10, 10).
- Step 22: There are 3 independent moves.
- \* The only spot for 2 in the 6th row is (4, 6).
  - \* The only spot for A in the 10th row is (3, 10).
  - \* The only spot for B in the 2nd eye is (9, 5).
- Step 23: There are 4 independent moves.
- \* The only spot for 2 in the 4th row is (7, 4).
  - \* The only spot for 1 in the 10th row is (11, 10).
  - \* The only spot for 1 in the 4th 4x3 rectangle is (4, 4).
  - \* The only spot for 1 in the 10th 4x3 rectangle is (3, 11).
- Step 24: There are 2 independent moves.
- \* The only spot for B in the 5th 4x3 rectangle is (6, 4).
  - \* The only spot for 1 in the elements that make up the smile is (6, 12).
- Step 25: There is 1 independent move.
- \* The only spot for 9 in the 4th row is (12, 4).
- Step 26: There are 2 independent moves.
- \* The only spot for 8 in the 12th column is (12, 1).

- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 4).

Step 27: There are 2 independent moves.

- \* The only spot for B in the 1st row is (7, 1).
- \* The only spot for B in the 3rd 4x3 rectangle is (12, 3).

Step 28: There are 3 independent moves.

- \* The only spot for 7 in the 7th column is (7, 9).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 5 in the 3rd 4x3 rectangle is (10, 3).

Step 29: There are 4 independent moves.

- \* The only spot for 1 in the 7th column is (7, 5).
- \* The only spot for 5 in the 11th column is (11, 7).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 5 in the 6th 4x3 rectangle is (12, 5).

Step 30: There are 2 independent moves.

- \* The only spot for 5 in the 8th row is (6, 8).
- \* The only spot for 5 in the 7th 4x3 rectangle is (4, 9).

Step 31: There is 1 independent move.

- \* The only spot for 4 in the 7th 4x3 rectangle is (4, 7).

Step 32: There are 2 independent moves.

- \* 9 must be placed at (6, 7) because it is the only value left that is not already in the 7th row, the 6th column or the 8th 4x3 rectangle.
- \* 0 must be placed at (5, 6) because it is the only value left that is not already in the 6th row, the 5th column or the 5th 4x3 rectangle.

Step 33: There are 3 independent moves.

- \* The only spot for 9 in the 5th 4x3 rectangle is (8, 6).
- \* The only spot for 9 in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 0 in the 8th 4x3 rectangle is (6, 9).

Step 34: There are 3 independent moves.

- \* The only spot for B in the 8th row is (8, 8).
- \* The only spot for 4 in the 5th 4x3 rectangle is (6, 6).
- \* The only spot for B in the 7th 4x3 rectangle is (2, 7).

Step 35: There are 3 independent moves.

- \* The only spot for 4 in the 8th row is (9, 8).
- \* The only spot for 4 in the 8th 4x3 rectangle is (8, 9).
- \* The only spot for B in the elements that make up the smile is (5, 11).

Step 36: There are 4 independent moves.

- \* The only spot for 1 in the 9th row is (9, 9).
- \* The only spot for A in the 5th column is (5, 7).
- \* The only spot for 1 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for A in the elements that make up the smile is (8, 11).

Step 37: There are 4 independent moves.

- \* The only spot for 1 in the 6th 4x3 rectangle is (12, 6).
- \* The only spot for 3 in the 8th 4x3 rectangle is (5, 9).
- \* The only spot for 3 in the 9th 4x3 rectangle is (10, 7).



- \* The only spot for 1 in the 2nd eye is (10, 2).

Step 38: There are 5 independent moves.

- \* The only spot for 2 in the 10th column is (10, 5).
- \* The only spot for 7 in the 12th column is (12, 8).
- \* The only spot for 2 in the 3rd 4x3 rectangle is (11, 2).
- \* The only spot for 7 in the 6th 4x3 rectangle is (9, 6).
- \* The only spot for 3 in the 2nd eye is (9, 2).

Step 39: There are 6 independent moves.

- \* The only spot for 0 in the 9th column is (9, 12).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 0 in the 9th 4x3 rectangle is (10, 8).
- \* The only spot for 3 in the 12th 4x3 rectangle is (12, 12).
- \* The only spot for 0 in the 2nd eye is (11, 5).

Step 40: There are 2 independent moves.

- \* The only spot for A in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for A in the 12th 4x3 rectangle is (10, 12).

## Solution for Puzzle 24

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

5	1	0	9	4	2	B	3	A	7	6	8
A	6	4	B	8	7	9	5	3	1	2	0
7	3	2	8	1	A	0	6	9	5	4	B
3	0	6	1	5	B	2	7	8	4	A	9
4	A	9	7	6	3	1	8	B	2	0	5
B	8	5	2	0	4	A	9	7	6	3	1
0	B	7	4	A	9	8	1	2	3	5	6
1	9	3	A	2	5	6	B	4	0	8	7
6	2	8	5	3	0	7	4	1	9	B	A
2	7	A	3	9	8	5	0	6	B	1	4
9	4	1	0	B	6	3	A	5	8	7	2
8	5	B	6	7	1	4	2	0	A	9	3

TournamentPlus

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## Chapter 15

# Two Challenging tpsmith-serious Puzzles

All two puzzles in this section are at difficulty level twenty. The puzzles are arranged by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 25** (96/144) DiffKey 20 / 9677.4349.5321.3263.8833

**Puzzle 26** (96/144) DiffKey 20 / 8563.3122.B225.9879.7861

## tpsmith-serious Puzzle 25, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		A					5	2	1		
0			B			A				9	
				9	B				7		
9		2						1			3
	B			A							
1	4					6		9		8	
		0	8	3	9				A		
	6		5						8		7
	7	1		B	8	0					
3							1	5	2		
			1			3	8				6
			A	2			9				8

Challenging

Diff: 20 / 9677.4349.5321.3263.8833

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 25

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<sup>3</sup>	A					5	2	1		
0			B			A		<sup>1</sup>		9	
			<sup>3</sup>	9	B				7	<sup>2</sup>	
9	<sup>1</sup>	2						1			3
	B			A	<sup>2</sup>	<sup>1</sup>					
1	4					6		9		8	<sup>1</sup>
		0	8	3	9	<sup>1</sup>	<sup>2</sup>		A		<sup>1</sup>
	6	<sup>1</sup>	5						8		7
	7	1	<sup>2</sup>	B	8	0	<sup>3</sup>				<sup>3</sup>
3	<sup>1</sup>		<sup>2</sup>		<sup>3</sup>		1	5	2		
			1			3	8	<sup>3</sup>	<sup>3</sup>		6
			A	2	<sup>2</sup>		9			<sup>1</sup>	8

Challenging

Diff: 20 / 9677.4349.5321.3263.8833

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There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 25

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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12	3	<b>A</b>	4	17	9	16	<b>5</b>	<b>2</b>	<b>1</b>	20	20	<sup>1</sup>
<b>0</b>	6	13	<b>B</b>	15	10	<b>A</b>	4	1	8	<b>9</b>	14	
15	7	15	3	<b>9</b>	<b>B</b>	5	16	11	<b>7</b>	2	15	
<b>9</b>	1	<b>2</b>	18	15	17	18	16	<b>1</b>	17	7	<b>3</b>	<sup>4</sup>
15	<b>B</b>	14	18	<b>A</b>	2	1	8	8	18	17	4	
<b>1</b>	<b>4</b>	8	9	8	5	<b>6</b>	17	<b>9</b>	17	<b>8</b>	1	
7	8	<b>0</b>	<b>8</b>	<b>3</b>	<b>9</b>	1	2	10	<b>A</b>	11	1	<sup>7</sup>
8	<b>6</b>	1	<b>5</b>	5	6	4	4	10	<b>8</b>	9	<b>7</b>	
4	<b>7</b>	<b>1</b>	2	<b>B</b>	<b>8</b>	<b>0</b>	3	7	6	5	3	
<b>3</b>	1	19	2	4	3	18	<b>1</b>	<b>5</b>	<b>2</b>	19	20	<sup>10</sup>
8	8	18	<b>1</b>	17	18	<b>3</b>	<b>8</b>	3	3	19	<b>6</b>	
13	9	13	<b>A</b>	<b>2</b>	2	18	<b>9</b>	9	17	1	<b>8</b>	

<sup>1</sup>  
Challenging

<sup>5</sup>

<sup>9</sup>  
Diff: 20 / 9677.4349.5321.3263.8833

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There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 9 independent moves.

- \* The only spot for A in the 6th row is (12, 6).
- \* The only spot for 9 in the 8th row is (3, 8).
- \* The only spot for 1 in the 12th column is (12, 7).
- \* The only spot for 9 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 5 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 8 in the 10th 4x3 rectangle is (2, 10).
- \* The only spot for 1 in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for A in the 1st eye is (2, 4).
- \* The only spot for 8 in the 2nd eye is (9, 2).

Step 2: There are 6 independent moves.

- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 3 in the 7th 4x3 rectangle is (4, 9).
- \* The only spot for 7 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 5 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for A in the 2nd eye is (11, 3).
- \* The only spot for 9 in the elements that make up the mouth is (4, 10).

Step 3: There are 7 independent moves.

- \* The only spot for A in the 10th row is (6, 10).
- \* The only spot for 2 in the 4th column is (4, 3).
- \* The only spot for 9 in the 12th column is (12, 9).
- \* The only spot for 9 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 6 in the 8th 4x3 rectangle is (8, 9).
- \* The only spot for 9 in the 12th 4x3 rectangle is (10, 11).
- \* The only spot for A in the 12th 4x3 rectangle is (9, 11).

Step 4: There are 7 independent moves.

- \* The only spot for A in the 9th row is (1, 9).
- \* The only spot for 4 in the 4th column is (4, 1).
- \* The only spot for 2 in the 7th column is (7, 8).
- \* The only spot for 2 in the 12th column is (12, 5).
- \* The only spot for A in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for 6 in the 11th 4x3 rectangle is (5, 10).
- \* The only spot for 2 in the 2nd eye is (8, 2).

Step 5: There are 4 independent moves.

- \* The only spot for 2 in the 9th row is (11, 9).
- \* The only spot for 1 in the 7th column is (7, 3).
- \* The only spot for 2 in the 5th 4x3 rectangle is (6, 6).
- \* The only spot for 1 in the 8th 4x3 rectangle is (5, 8).

Step 6: There are 3 independent moves.

- \* The only spot for 4 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 5 in the 9th 4x3 rectangle is (10, 9).
- \* The only spot for 1 in the 1st eye is (2, 2).

Step 7: There are 4 independent moves.

- \* The only spot for 4 in the 9th row is (9, 9).

- \* The only spot for 3 in the 2nd column is (2, 3).
- \* The only spot for 4 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 5 in the 2nd eye is (11, 4).

Step 8: There are 9 independent moves.

- \* The only spot for 3 in the 5th row is (8, 5).
- \* The only spot for 2 in the 1st column is (1, 11).
- \* The only spot for 5 in the 2nd column is (2, 11).
- \* The only spot for 3 in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 5 in the 5th 4x3 rectangle is (5, 6).
- \* The only spot for B in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 2 in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 7 in the 2nd eye is (9, 5).
- \* The only spot for 3 in the 2nd eye is (10, 2).

Step 9: There are 5 independent moves.

- \* The only spot for 7 in the 6th row is (4, 6).
- \* The only spot for 3 in the 11th column is (11, 8).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 0 in the 10th 4x3 rectangle is (2, 12).
- \* The only spot for 3 in the 12th 4x3 rectangle is (9, 12).

Step 10: There are 3 independent moves.

- \* The only spot for B in the 9th column is (9, 7).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (6, 2).
- \* The only spot for 0 in the 9th 4x3 rectangle is (9, 8).

Step 11: There are 2 independent moves.

- \* The only spot for 6 in the 9th column is (9, 3).
- \* The only spot for 6 in the 9th 4x3 rectangle is (11, 7).

Step 12: There is 1 independent move.

- \* The only spot for 6 in the 1st 4x3 rectangle is (1, 1).

Step 13: There are 3 independent moves.

- \* The only spot for 7 in the 1st column is (1, 12).
- \* The only spot for 7 in the 1st 4x3 rectangle is (3, 2).
- \* The only spot for 6 in the 10th 4x3 rectangle is (3, 12).

Step 14: There are 2 independent moves.

- \* The only spot for 5 in the 2nd row is (12, 2).
- \* The only spot for 5 in the 1st eye is (3, 5).

Step 15: There are 6 independent moves.

- \* The only spot for 4 in the 2nd row is (5, 2).
- \* The only spot for 8 in the 3rd column is (3, 3).
- \* The only spot for 5 in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 8 in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for 8 in the 1st eye is (5, 4).

Step 16: There are 3 independent moves.

- \* The only spot for 0 in the 3rd row is (8, 3).



- \* The only spot for 4 in the 8th column is (8, 4).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (7, 1).

Step 17: There are 8 independent moves.

- \* The only spot for 0 in the 5th column is (5, 11).
- \* The only spot for B in the 8th column is (8, 6).
- \* The only spot for 4 in the 10th column is (10, 12).
- \* The only spot for 0 in the 10th column is (10, 6).
- \* The only spot for 7 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 0 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 4 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for B in the 2nd eye is (10, 4).

Step 18: There are 8 independent moves.

- \* The only spot for 6 in the 4th row is (4, 4).
- \* The only spot for 4 in the 11th row is (3, 11).
- \* The only spot for B in the 12th row is (7, 12).
- \* The only spot for 7 in the 6th column is (6, 11).
- \* The only spot for 7 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 4 in the 11th 4x3 rectangle is (7, 10).
- \* The only spot for 0 in the 1st eye is (4, 5).
- \* The only spot for 6 in the 2nd eye is (10, 5).

Step 19: There are 3 independent moves.

- \* The only spot for B in the 11th row is (11, 11).
- \* The only spot for 7 in the 12th 4x3 rectangle is (11, 10).
- \* The only spot for B in the elements that make up the mouth is (3, 10).

Step 20: There are 3 independent moves.

- \* The only spot for 0 in the 11th column is (11, 1).
- \* The only spot for B in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 10).

## Solution for Puzzle 25

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

6	9	A	4	7	3	8	5	2	1	0	B
0	1	7	B	4	6	A	2	8	3	9	5
5	3	8	2	9	B	1	0	6	7	A	4
9	A	2	6	8	0	7	4	1	B	5	3
8	B	5	0	A	1	9	3	7	6	4	2
1	4	3	7	5	2	6	B	9	0	8	A
4	2	0	8	3	9	5	7	B	A	6	1
B	6	9	5	1	4	2	A	0	8	3	7
A	7	1	3	B	8	0	6	4	5	2	9
3	8	B	9	6	A	4	1	5	2	7	0
2	5	4	1	0	7	3	8	A	9	B	6
7	0	6	A	2	5	B	9	3	4	1	8

Challenging

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## tpsmith-serious Puzzle 26, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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2		3			9	7				0	
					0			2		3	
		9	B	2					4		
	B		1								3
7				0		A				4	B
0	8					4				5	
			A		6	0				8	5
	3					8			1		0
			4		1			B			
B	A		7				9		8		
					4				2		
4	9			7					A		6

Challenging

Diff: 20 / 8563.3122.B225.9879.7861

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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2	<sup>2</sup>	3			9	7			<sup>3</sup>	0	
					0		<sup>1</sup>	2	<sup>2</sup>	3	<sup>3</sup>
	<sup>1</sup>	9	B	2					4		
	B	<sup>1</sup>	1	<sup>2</sup>					<sup>1</sup>		3
7	<sup>2</sup>		<sup>1</sup>	0		A				4	B
0	8		<sup>3</sup>			4				5	<sup>1</sup>
			A		6	0				8	5
	3					8			1		0
<sup>3</sup>		<sup>2</sup>	4		1	<sup>3</sup>		B			
B	A		7				9	<sup>3</sup>	8		<sup>1</sup>
<sup>1</sup>					4				2		
4	9			7					A		6

Challenging

Diff: 20 / 8563.3122.B225.9879.7861

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>2</b>	<sup>2</sup>	<b>3</b>	<sup>15</sup>	<sup>13</sup>	<b>9</b>	<b>7</b>	<sup>14</sup>	<sup>13</sup>	<sup>3</sup>	<b>0</b>	<sup>14</sup>	<sup>1</sup>
<sup>14</sup>	<sup>18</sup>	<sup>19</sup>	<sup>13</sup>	<sup>12</sup>	<b>0</b>	<sup>15</sup>	<sup>1</sup>	<b>2</b>	<sup>2</sup>	<b>3</b>	<sup>3</sup>	
<sup>13</sup>	<sup>1</sup>	<b>9</b>	<b>B</b>	<b>2</b>	<sup>15</sup>	<sup>14</sup>	<sup>10</sup>	<sup>17</sup>	<b>4</b>	<sup>16</sup>	<sup>13</sup>	
<sup>10</sup>	<b>B</b>	<sup>1</sup>	<b>1</b>	<sup>2</sup>	<sup>15</sup>	<sup>16</sup>	<sup>16</sup>	<sup>12</sup>	<sup>1</sup>	<sup>13</sup>	<b>3</b>	<sup>4</sup>
<b>7</b>	<sup>2</sup>	<sup>12</sup>	<sup>1</sup>	<b>0</b>	<sup>9</sup>	<b>A</b>	<sup>12</sup>	<sup>11</sup>	<sup>12</sup>	<b>4</b>	<b>B</b>	
<b>0</b>	<b>8</b>	<sup>11</sup>	<sup>3</sup>	<sup>16</sup>	<sup>14</sup>	<b>4</b>	<sup>15</sup>	<sup>18</sup>	<sup>18</sup>	<b>5</b>	<sup>1</sup>	
<sup>16</sup>	<sup>14</sup>	<sup>19</sup>	<b>A</b>	<sup>18</sup>	<b>6</b>	<b>0</b>	<sup>19</sup>	<sup>17</sup>	<sup>20</sup>	<b>8</b>	<b>5</b>	<sup>7</sup>
<sup>15</sup>	<b>3</b>	<sup>18</sup>	<sup>17</sup>	<sup>17</sup>	<sup>13</sup>	<b>8</b>	<sup>19</sup>	<sup>16</sup>	<sup>1</sup>	<sup>18</sup>	<b>0</b>	
<sup>3</sup>	<sup>19</sup>	<sup>2</sup>	<b>4</b>	<sup>18</sup>	<b>1</b>	<sup>3</sup>	<sup>18</sup>	<b>B</b>	<sup>19</sup>	<sup>17</sup>	<sup>9</sup>	
<b>B</b>	<b>A</b>	<sup>17</sup>	<b>7</b>	<sup>16</sup>	<sup>16</sup>	<sup>15</sup>	<b>9</b>	<sup>3</sup>	<b>8</b>	<sup>8</sup>	<sup>1</sup>	<sup>10</sup>
<sup>1</sup>	<sup>13</sup>	<sup>5</sup>	<sup>4</sup>	<sup>14</sup>	<b>4</b>	<sup>8</sup>	<sup>13</sup>	<sup>5</sup>	<b>2</b>	<sup>6</sup>	<sup>7</sup>	
<b>4</b>	<b>9</b>	<sup>14</sup>	<sup>17</sup>	<b>7</b>	<sup>5</sup>	<sup>16</sup>	<sup>4</sup>	<sup>4</sup>	<b>A</b>	<sup>7</sup>	<b>6</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Challenging

Diff: 20 / 8563.3122.B225.9879.7861

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There are 20 steps required to solve the puzzle above with a total of 96 empty locations that must be determined, out of a total puzzle size of 144.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 8 independent moves.

- \* The only spot for 3 in the 1st column is (1, 11).
- \* The only spot for 0 in the 10th column is (10, 4).
- \* The only spot for 4 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 2 in the 6th 4x3 rectangle is (12, 6).
- \* The only spot for 4 in the 12th 4x3 rectangle is (12, 10).
- \* The only spot for 3 in the 1st eye is (4, 5).
- \* The only spot for 0 in the 1st eye is (2, 3).
- \* The only spot for 4 in the 2nd eye is (8, 2).

Step 2: There are 5 independent moves.

- \* The only spot for 4 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 2 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for 0 in the 7th 4x3 rectangle is (3, 9).
- \* The only spot for 9 in the 1st eye is (5, 4).
- \* The only spot for B in the 2nd eye is (10, 2).

Step 3: There are 6 independent moves.

- \* The only spot for 0 in the 10th row is (9, 10).
- \* The only spot for 5 in the 10th column is (10, 1).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 9 in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 8 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 9 in the 8th 4x3 rectangle is (7, 9).

Step 4: There are 3 independent moves.

- \* The only spot for 0 in the 11th row is (4, 11).
- \* The only spot for 0 in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 3 in the 12th 4x3 rectangle is (9, 12).

Step 5: There are 3 independent moves.

- \* The only spot for 8 in the 11th row is (3, 11).
- \* The only spot for 8 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 5 in the 12th 4x3 rectangle is (9, 11).

Step 6: There is 1 independent move.

- \* The only spot for 9 in the 12th 4x3 rectangle is (11, 11).

Step 7: There are 2 independent moves.

- \* The only spot for B in the 12th 4x3 rectangle is (11, 12).
- \* The only spot for 7 in the 12th 4x3 rectangle is (12, 11).

Step 8: There are 2 independent moves.

- \* The only spot for B in the 7th column is (7, 11).
- \* The only spot for 1 in the 12th 4x3 rectangle is (11, 10).

Step 9: There are 2 independent moves.

- \* A must be placed at (12, 9) because it is the only value left that is not already in the 9th row, the 12th column or the 9th 4x3 rectangle.
- \* 5 must be placed at (6, 5) because it is the only value left that is not already in the 5th row, the 6th column or the 5th 4x3 rectangle.

Step 10: There are 2 independent moves.

- \* The only spot for 5 in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 5 in the 2nd eye is (8, 3).

Step 11: There are 2 independent moves.

- \* The only spot for A in the 4th 4x3 rectangle is (3, 6).
- \* The only spot for 1 in the 2nd eye is (9, 5).

Step 12: There are 5 independent moves.

- \* The only spot for 8 in the 5th row is (8, 5).
- \* The only spot for 6 in the 4th 4x3 rectangle is (3, 5).
- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 4).
- \* The only spot for A in the 1st eye is (5, 2).
- \* The only spot for 9 in the 2nd eye is (10, 5).

Step 13: There are 9 independent moves.

- \* The only spot for A in the 1st row is (9, 1).
- \* The only spot for 8 in the 3rd row is (12, 3).
- \* The only spot for A in the 6th column is (6, 8).
- \* The only spot for A in the 1st 4x3 rectangle is (1, 3).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for A in the 6th 4x3 rectangle is (11, 4).
- \* The only spot for 6 in the 10th 4x3 rectangle is (2, 11).
- \* The only spot for 8 in the 1st eye is (4, 2).
- \* The only spot for A in the elements that make up the mouth is (8, 11).

Step 14: There are 8 independent moves.

- \* The only spot for 1 in the 3rd row is (7, 3).
- \* The only spot for 1 in the 2nd column is (2, 7).
- \* The only spot for B in the 6th column is (6, 6).
- \* The only spot for 1 in the 1st 4x3 rectangle is (1, 2).
- \* The only spot for B in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 1 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 1 in the elements that make up the mouth is (5, 11).

Step 15: There are 7 independent moves.

- \* The only spot for 6 in the 1st column is (1, 8).
- \* The only spot for 7 in the 6th column is (6, 4).
- \* The only spot for 3 in the 7th column is (7, 10).
- \* The only spot for 6 in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 3 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 1 in the 5th 4x3 rectangle is (8, 6).

Step 16: There are 9 independent moves.

- \* The only spot for 9 in the 8th row is (9, 8).
- \* The only spot for 2 in the 6th column is (6, 10).
- \* The only spot for 5 in the 7th column is (7, 12).
- \* The only spot for 6 in the 8th column is (8, 4).
- \* The only spot for 3 in the 5th 4x3 rectangle is (5, 6).

- \* The only spot for 2 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 9 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for 7 in the 2nd eye is (11, 3).
- \* The only spot for 6 in the elements that make up the mouth is (5, 10).

Step 17: There are 7 independent moves.

- \* The only spot for 4 in the 8th row is (5, 8).
- \* The only spot for 5 in the 4th column is (4, 8).
- \* The only spot for 6 in the 11th column is (11, 9).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (9, 3).
- \* The only spot for 4 in the 9th 4x3 rectangle is (9, 7).
- \* The only spot for 2 in the 10th 4x3 rectangle is (4, 12).
- \* The only spot for 5 in the elements that make up the mouth is (3, 10).

Step 18: There are 8 independent moves.

- \* The only spot for B in the 8th row is (3, 8).
- \* The only spot for 2 in the 9th row is (8, 9).
- \* The only spot for 7 in the 9th column is (9, 6).
- \* The only spot for 6 in the 6th 4x3 rectangle is (10, 6).
- \* The only spot for 5 in the 8th 4x3 rectangle is (5, 9).
- \* The only spot for B in the 8th 4x3 rectangle is (5, 7).
- \* The only spot for 2 in the 9th 4x3 rectangle is (11, 8).
- \* The only spot for 5 in the 1st eye is (2, 2).

Step 19: There are 6 independent moves.

- \* The only spot for 7 in the 8th row is (8, 8).
- \* The only spot for 3 in the 9th row is (10, 9).
- \* The only spot for 7 in the 2nd column is (2, 9).
- \* The only spot for 2 in the 7th 4x3 rectangle is (3, 7).
- \* The only spot for 3 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 7 in the 1st eye is (3, 2).

Step 20: There is 1 independent move.

- \* The only spot for 7 in the 9th 4x3 rectangle is (10, 7).



## Solution for Puzzle 26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	4	3	6	8	9	7	B	A	5	0	1
1	5	7	8	A	0	6	4	2	B	3	9
A	0	9	B	2	3	1	5	6	4	7	8
5	B	4	1	9	7	2	6	8	0	A	3
7	2	6	3	0	5	A	8	1	9	4	B
0	8	A	9	3	B	4	1	7	6	5	2
9	1	2	A	B	6	0	3	4	7	8	5
6	3	B	5	4	A	8	7	9	1	2	0
8	7	0	4	5	1	9	2	B	3	6	A
B	A	5	7	6	2	3	9	0	8	1	4
3	6	8	0	1	4	B	A	5	2	9	7
4	9	1	2	7	8	5	0	3	A	B	6

Challenging

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## Chapter 16

# Two Tournament tpsmith-serious Puzzles

There are two puzzles in this section ranging in difficulty from twenty-four to twenty-six. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 27** (102/144) DiffKey 24 / 3211.2121.3335.5457.5799.7542

**Puzzle 28** (93/144) DiffKey 26 / 42.5312.3111.1211.3134.7536.9895

## tpsmith-serious Puzzle 27, Tournament/24

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

102/144

6		0					2				
	4		A	3	7					B	
			2			A					
								3		6	
		7		1		3	8				
5	8		3			9					
				5				A			
		2						4		0	
		6		9	4			1	5		
					B	5	0				
2	7		1		6			8			
3					8				4	7	

Tournament

Diff: 24 / 3211.2121.3335.5457.5799.7542

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 24 steps required to solve the puzzle above with a total of 102 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 27

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

102/144

6		0					2				
	4		A	3	7					B	
			2			A					
								3		6	
		7		1		3	8				
5	8		3			9					
				5				A			
		2						4		0	
		6		9	4			1	5		
				<sup>1</sup>	B	5	0	<sup>2</sup>	<sup>1</sup>		
2	7		1		6		<sup>1</sup>	8			
3					8	<sup>3</sup>	<sup>2</sup>		4	7	

Tournament

Diff: 24 / 3211.2121.3335.5457.5799.7542

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There are 24 steps required to solve the puzzle above with a total of 102 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 27

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

102/144

<b>6</b>	<sup>19</sup>	<b>0</b>	<sup>20</sup>	<sup>9</sup>	<sup>17</sup>	<sup>14</sup>	<b>2</b>	<sup>20</sup>	<sup>19</sup>	<sup>17</sup>	<sup>18</sup>	<sup>1</sup>
<sup>20</sup>	<b>4</b>	<sup>14</sup>	<b>A</b>	<b>3</b>	<b>7</b>	<sup>13</sup>	<sup>16</sup>	<sup>19</sup>	<sup>12</sup>	<b>B</b>	<sup>19</sup>	
<sup>20</sup>	<sup>15</sup>	<sup>18</sup>	<b>2</b>	<sup>15</sup>	<sup>16</sup>	<b>A</b>	<sup>17</sup>	<sup>19</sup>	<sup>20</sup>	<sup>13</sup>	<sup>10</sup>	
<sup>12</sup>	<sup>5</sup>	<sup>13</sup>	<sup>14</sup>	<sup>16</sup>	<sup>12</sup>	<sup>16</sup>	<sup>9</sup>	<b>3</b>	<sup>10</sup>	<b>6</b>	<sup>11</sup>	<sup>4</sup>
<sup>18</sup>	<sup>19</sup>	<b>7</b>	<sup>13</sup>	<b>1</b>	<sup>13</sup>	<b>3</b>	<b>8</b>	<sup>18</sup>	<sup>11</sup>	<sup>10</sup>	<sup>17</sup>	
<b>5</b>	<b>8</b>	<sup>8</sup>	<b>3</b>	<sup>12</sup>	<sup>12</sup>	<b>9</b>	<sup>11</sup>	<sup>19</sup>	<sup>20</sup>	<sup>18</sup>	<sup>19</sup>	
<sup>19</sup>	<sup>23</sup>	<sup>17</sup>	<sup>7</sup>	<b>5</b>	<sup>20</sup>	<sup>21</sup>	<sup>21</sup>	<b>A</b>	<sup>15</sup>	<sup>22</sup>	<sup>22</sup>	<sup>7</sup>
<sup>20</sup>	<sup>23</sup>	<b>2</b>	<sup>16</sup>	<sup>14</sup>	<sup>21</sup>	<sup>22</sup>	<sup>24</sup>	<b>4</b>	<sup>20</sup>	<b>0</b>	<sup>23</sup>	
<sup>16</sup>	<sup>22</sup>	<b>6</b>	<sup>21</sup>	<b>9</b>	<b>4</b>	<sup>20</sup>	<sup>23</sup>	<b>1</b>	<b>5</b>	<sup>21</sup>	<sup>24</sup>	
<sup>7</sup>	<sup>20</sup>	<sup>15</sup>	<sup>15</sup>	<sup>1</sup>	<b>B</b>	<b>5</b>	<b>0</b>	<sup>2</sup>	<sup>1</sup>	<sup>18</sup>	<sup>19</sup>	<sup>10</sup>
<b>2</b>	<b>7</b>	<sup>16</sup>	<b>1</b>	<sup>5</sup>	<b>6</b>	<sup>6</sup>	<sup>1</sup>	<b>8</b>	<sup>21</sup>	<sup>22</sup>	<sup>21</sup>	
<b>3</b>	<sup>20</sup>	<sup>9</sup>	<sup>20</sup>	<sup>4</sup>	<b>8</b>	<sup>3</sup>	<sup>2</sup>	<sup>18</sup>	<b>4</b>	<b>7</b>	<sup>20</sup>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Tournament

Diff: 24 / 3211.2121.3335.5457.5799.7542

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There are 24 steps required to solve the puzzle above with a total of 102 empty locations that must be determined, out of a total puzzle size of 144.

All 24 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 3 independent moves.

- \* The only spot for 3 in the 11th 4x3 rectangle is (8, 11).
- \* The only spot for 1 in the elements that make up the mouth is (10, 10).
- \* The only spot for 7 in the elements that make up the mouth is (5, 10).

Step 2: There are 2 independent moves.

- \* The only spot for 9 in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 2 in the elements that make up the mouth is (9, 10).

Step 3: There is 1 independent move.

- \* The only spot for 1 in the 11th 4x3 rectangle is (7, 12).

Step 4: There is 1 independent move.

- \* The only spot for 2 in the 11th 4x3 rectangle is (5, 12).

Step 5: There are 2 independent moves.

- \* The only spot for A in the 11th 4x3 rectangle is (5, 11).
- \* The only spot for 2 in the 1st eye is (2, 4).

Step 6: There is 1 independent move.

- \* The only spot for 4 in the 11th 4x3 rectangle is (7, 11).

Step 7: There are 2 independent moves.

- \* The only spot for 4 in the 4th column is (4, 7).
- \* The only spot for 4 in the 10th 4x3 rectangle is (1, 10).

Step 8: There is 1 independent move.

- \* The only spot for 4 in the 4th 4x3 rectangle is (3, 6).

Step 9: There are 3 independent moves.

- \* The only spot for A in the 3rd column is (3, 12).
- \* The only spot for 4 in the 5th column is (5, 1).
- \* The only spot for 4 in the 5th 4x3 rectangle is (8, 4).

Step 10: There are 3 independent moves.

- \* The only spot for 4 in the 11th column is (11, 5).
- \* The only spot for 4 in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 7 in the 2nd eye is (10, 4).

Step 11: There are 3 independent moves.

- \* The only spot for 7 in the 5th 4x3 rectangle is (8, 6).
- \* The only spot for 8 in the 6th 4x3 rectangle is (12, 4).
- \* The only spot for A in the 2nd eye is (10, 5).

Step 12: There are 5 independent moves.

- \* The only spot for 5 in the 4th row is (6, 4).
- \* The only spot for A in the 6th row is (6, 6).
- \* The only spot for A in the 4th 4x3 rectangle is (1, 4).
- \* The only spot for 6 in the 5th 4x3 rectangle is (5, 6).
- \* The only spot for 2 in the 2nd eye is (10, 2).

Step 13: There are 5 independent moves.

- \* The only spot for 6 in the 2nd 4x3 rectangle is (7, 2).
- \* The only spot for 1 in the 4th 4x3 rectangle is (3, 4).
- \* The only spot for 2 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 6 in the 1st eye is (4, 5).

- \* The only spot for 8 in the 2nd eye is (11, 3).

Step 14: There are 4 independent moves.

- \* The only spot for 9 in the 4th row is (4, 4).
- \* The only spot for 8 in the 5th column is (5, 8).
- \* The only spot for 8 in the 2nd 4x3 rectangle is (7, 1).
- \* The only spot for 8 in the 1st eye is (3, 2).

Step 15: There are 5 independent moves.

- \* The only spot for B in the 2nd 4x3 rectangle is (5, 3).
- \* The only spot for 8 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 5 in the 1st eye is (2, 3).
- \* The only spot for 8 in the elements that make up the mouth is (4, 10).
- \* The only spot for 9 in the elements that make up the mouth is (3, 10).

Step 16: There are 7 independent moves.

- \* The only spot for 5 in the 3rd column is (3, 11).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 5 in the 2nd 4x3 rectangle is (8, 2).
- \* The only spot for B in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 8 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 5 in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for 0 in the 1st eye is (5, 4).

Step 17: There are 5 independent moves.

- \* The only spot for B in the 3rd column is (3, 7).
- \* The only spot for 5 in the 11th column is (11, 1).
- \* The only spot for 9 in the 2nd 4x3 rectangle is (6, 1).
- \* The only spot for 5 in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for 1 in the 2nd eye is (8, 3).

Step 18: There are 7 independent moves.

- \* The only spot for B in the 1st column is (1, 5).
- \* The only spot for 3 in the 3rd column is (3, 3).
- \* The only spot for A in the 11th column is (11, 10).
- \* The only spot for 1 in the 11th column is (11, 6).
- \* The only spot for A in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for 9 in the 6th 4x3 rectangle is (9, 5).
- \* The only spot for 5 in the 12th 4x3 rectangle is (9, 12).

Step 19: There are 10 independent moves.

- \* The only spot for 1 in the 1st row is (2, 1).
- \* The only spot for 0 in the 1st column is (1, 7).
- \* The only spot for B in the 9th column is (9, 6).
- \* The only spot for 6 in the 9th column is (9, 3).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (12, 2).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 0 in the 4th 4x3 rectangle is (2, 5).
- \* The only spot for 2 in the 6th 4x3 rectangle is (12, 6).
- \* The only spot for 3 in the 12th 4x3 rectangle is (12, 10).

- \* The only spot for 0 in the 2nd eye is (9, 2).

Step 20: There are 14 independent moves.

- \* The only spot for 9 in the 2nd row is (1, 2).
- \* The only spot for 7 in the 3rd row is (1, 3).
- \* The only spot for 1 in the 7th row is (6, 7).
- \* The only spot for 6 in the 10th row is (2, 10).
- \* The only spot for B in the 2nd column is (2, 12).
- \* The only spot for 6 in the 10th column is (10, 8).
- \* The only spot for B in the 1st 4x3 rectangle is (4, 1).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (10, 3).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for 0 in the 6th 4x3 rectangle is (10, 6).
- \* The only spot for 1 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for 0 in the 8th 4x3 rectangle is (7, 9).
- \* The only spot for 0 in the 10th 4x3 rectangle is (4, 12).
- \* The only spot for 6 in the 12th 4x3 rectangle is (12, 12).

Step 21: There are 7 independent moves.

- \* The only spot for 2 in the 9th row is (11, 9).
- \* The only spot for B in the 10th column is (10, 11).
- \* The only spot for 7 in the 7th 4x3 rectangle is (4, 9).
- \* The only spot for 3 in the 8th 4x3 rectangle is (6, 8).
- \* The only spot for 6 in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 2 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 11).

Step 22: There are 5 independent moves.

- \* The only spot for 7 in the 7th row is (12, 7).
- \* The only spot for 3 in the 9th row is (2, 9).
- \* The only spot for 7 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 3 in the 9th 4x3 rectangle is (11, 7).
- \* The only spot for 9 in the 12th 4x3 rectangle is (11, 11).

Step 23: There are 4 independent moves.

- \* The only spot for 9 in the 7th row is (2, 7).
- \* The only spot for A in the 9th row is (8, 9).
- \* The only spot for A in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 9 in the 9th 4x3 rectangle is (12, 8).

Step 24: There are 2 independent moves.

- \* The only spot for B in the 8th 4x3 rectangle is (8, 8).
- \* The only spot for B in the 9th 4x3 rectangle is (12, 9).



## Solution for Puzzle 27

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

6	1	0	B	4	9	8	2	7	3	5	A
9	4	8	A	3	7	6	5	0	2	B	1
7	5	3	2	B	0	A	1	6	9	8	4
A	2	1	9	0	5	B	4	3	7	6	8
B	0	7	6	1	2	3	8	9	A	4	5
5	8	4	3	6	A	9	7	B	0	1	2
0	9	B	4	5	1	2	6	A	8	3	7
1	A	2	5	8	3	7	B	4	6	0	9
8	3	6	7	9	4	0	A	1	5	2	B
4	6	9	8	7	B	5	0	2	1	A	3
2	7	5	1	A	6	4	3	8	B	9	0
3	B	A	0	2	8	1	9	5	4	7	6

Tournament

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## tpsmith-serious Puzzle 28, Tournament/26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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			<b>B</b>		<b>2</b>	<b>1</b>					
					<b>7</b>				<b>6</b>		
<b>5</b>	<b>9</b>		<b>8</b>	<b>B</b>							<b>4</b>
			<b>7</b>	<b>5</b>	<b>3</b>					<b>4</b>	
<b>4</b>	<b>5</b>	<b>3</b>					<b>0</b>	<b>9</b>			
<b>8</b>							<b>7</b>		<b>3</b>	<b>5</b>	
		<b>B</b>	<b>0</b>			<b>4</b>	<b>8</b>	<b>1</b>			<b>5</b>
		<b>4</b>					<b>9</b>			<b>8</b>	
		<b>8</b>		<b>7</b>		<b>6</b>		<b>0</b>	<b>4</b>		
				<b>0</b>		<b>3</b>			<b>8</b>		
<b>2</b>	<b>8</b>		<b>3</b>	<b>A</b>							<b>9</b>
	<b>7</b>				<b>8</b>		<b>1</b>		<b>0</b>	<b>B</b>	<b>3</b>

Tournament

Diff: 26 / 42.5312.3111.1211.3134.7536.9895

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 26 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

93/144

			<b>B</b>		<b>2</b>	<b>1</b>					<sup>3</sup>
				<sup>1</sup>	<b>7</b>	<sup>1</sup>			<b>6</b>		
<b>5</b>	<b>9</b>		<b>8</b>	<b>B</b>							<b>4</b>
<sup>2</sup>			<b>7</b>	<b>5</b>	<b>3</b>			<sup>2</sup>		<b>4</b>	
<b>4</b>	<b>5</b>	<b>3</b>				<sup>3</sup>	<b>0</b>	<b>9</b>			
<b>8</b>	<sup>3</sup>						<b>7</b>		<b>3</b>	<b>5</b>	
		<b>B</b>	<b>0</b>			<b>4</b>	<b>8</b>	<b>1</b>			<b>5</b>
		<b>4</b>					<b>9</b>			<b>8</b>	
		<b>8</b>	<sup>3</sup>	<b>7</b>		<b>6</b>		<b>0</b>	<b>4</b>		
<sup>3</sup>				<b>0</b>		<b>3</b>			<b>8</b>		
<b>2</b>	<b>8</b>	<sup>1</sup>	<b>3</b>	<b>A</b>		<sup>1</sup>					<b>9</b>
	<b>7</b>				<b>8</b>		<b>1</b>		<b>0</b>	<b>B</b>	<b>3</b>

Tournament

Diff: 26 / 42.5312.3111.1211.3134.7536.9895

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 26 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

93/144

21	22	26	<b>B</b>	15	<b>2</b>	<b>1</b>	25	25	22	23	3	<sup>1</sup>
23	11	25	12	1	<b>7</b>	1	23	23	<b>6</b>	20	25	
<b>5</b>	<b>9</b>	26	<b>8</b>	<b>B</b>	18	19	24	26	25	20	<b>4</b>	
2	4	18	<b>7</b>	<b>5</b>	<b>3</b>	24	24	2	24	<b>4</b>	19	<sup>4</sup>
<b>4</b>	<b>5</b>	<b>3</b>	24	17	18	3	<b>0</b>	<b>9</b>	21	25	22	
<b>8</b>	3	10	25	8	9	25	<b>7</b>	19	<b>3</b>	<b>5</b>	4	
22	24	<b>B</b>	<b>0</b>	19	20	<b>4</b>	<b>8</b>	<b>1</b>	23	23	<b>5</b>	<sup>7</sup>
23	25	<b>4</b>	4	18	19	24	<b>9</b>	26	23	<b>8</b>	19	
12	26	<b>8</b>	3	<b>7</b>	6	<b>6</b>	23	<b>0</b>	<b>4</b>	24	25	
3	13	6	7	<b>0</b>	7	<b>3</b>	17	17	<b>8</b>	23	22	<sup>10</sup>
<b>2</b>	<b>8</b>	1	<b>3</b>	<b>A</b>	15	1	14	22	21	20	<b>9</b>	
20	<b>7</b>	7	19	16	<b>8</b>	5	<b>1</b>	15	<b>0</b>	<b>B</b>	<b>3</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

Tournament

Diff: 26 / 42.5312.3111.1211.3134.7536.9895

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 26 steps required to solve the puzzle above with a total of 93 empty locations that must be determined, out of a total puzzle size of 144.

All 26 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 4 independent moves.

- \* The only spot for 9 in the 2nd row is (7, 2).
- \* The only spot for 0 in the 10th 4x3 rectangle is (3, 11).
- \* The only spot for 7 in the 11th 4x3 rectangle is (7, 11).
- \* The only spot for 8 in the 1st eye is (5, 2).

Step 2: There are 2 independent moves.

- \* The only spot for 9 in the 4th row is (1, 4).
- \* The only spot for 8 in the 2nd eye is (9, 4).

Step 3: There are 5 independent moves.

- \* The only spot for B in the 1st column is (1, 10).
- \* The only spot for 8 in the 3rd 4x3 rectangle is (12, 1).
- \* The only spot for B in the 4th 4x3 rectangle is (2, 6).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 9 in the 7th 4x3 rectangle is (4, 9).

Step 4: There are 3 independent moves.

- \* The only spot for 0 in the 6th row is (12, 6).
- \* The only spot for 0 in the 4th 4x3 rectangle is (2, 4).
- \* The only spot for 5 in the 7th 4x3 rectangle is (4, 8).

Step 5: There is 1 independent move.

- \* The only spot for 5 in the 7th column is (7, 12).

Step 6: There are 2 independent moves.

- \* The only spot for 5 in the 6th column is (6, 9).
- \* The only spot for 5 in the 10th 4x3 rectangle is (3, 10).

Step 7: There are 3 independent moves.

- \* The only spot for 9 in the 10th 4x3 rectangle is (3, 12).
- \* The only spot for 9 in the elements that make up the mouth is (6, 10).
- \* The only spot for 1 in the elements that make up the mouth is (4, 10).

Step 8: There is 1 independent move.

- \* The only spot for 9 in the 5th 4x3 rectangle is (5, 6).

Step 9: There is 1 independent move.

- \* The only spot for 4 in the 5th 4x3 rectangle is (6, 6).

Step 10: There is 1 independent move.

- \* The only spot for 1 in the 6th row is (3, 6).

Step 11: There is 1 independent move.

- \* The only spot for 1 in the 1st eye is (2, 2).

Step 12: There are 2 independent moves.

- \* The only spot for 1 in the 9th row is (1, 9).
- \* The only spot for 4 in the 1st eye is (4, 2).

Step 13: There is 1 independent move.

- \* The only spot for 4 in the 10th 4x3 rectangle is (2, 10).

Step 14: There is 1 independent move.

- \* The only spot for 4 in the elements that make up the mouth is (8, 11).

Step 15: There are 3 independent moves.

- \* The only spot for 4 in the 2nd 4x3 rectangle is (5, 1).

- \* The only spot for 4 in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for B in the elements that make up the mouth is (6, 11).

Step 16: There is 1 independent move.

- \* The only spot for 2 in the 12th row is (5, 12).

Step 17: There are 3 independent moves.

- \* The only spot for 6 in the 5th column is (5, 5).
- \* The only spot for 6 in the 11th 4x3 rectangle is (8, 10).
- \* The only spot for 2 in the elements that make up the mouth is (9, 10).

Step 18: There are 4 independent moves.

- \* The only spot for 1 in the 5th column is (5, 8).
- \* The only spot for 6 in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 5).
- \* The only spot for 6 in the 1st eye is (3, 4).

Step 19: There are 7 independent moves.

- \* The only spot for 6 in the 4th column is (4, 12).
- \* The only spot for 3 in the 5th column is (5, 7).
- \* The only spot for 0 in the 6th column is (6, 8).
- \* The only spot for 6 in the 12th column is (12, 8).
- \* The only spot for 1 in the 12th column is (12, 4).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 6 in the 6th 4x3 rectangle is (9, 6).

Step 20: There are 5 independent moves.

- \* The only spot for A in the 6th column is (6, 7).
- \* The only spot for A in the 10th 4x3 rectangle is (1, 12).
- \* The only spot for 6 in the 12th 4x3 rectangle is (11, 11).
- \* The only spot for 1 in the 2nd eye is (11, 3).
- \* The only spot for 0 in the 2nd eye is (11, 2).

Step 21: There are 3 independent moves.

- \* The only spot for 0 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for 1 in the 12th 4x3 rectangle is (10, 11).
- \* The only spot for 7 in the 2nd eye is (10, 5).

Step 22: There are 6 independent moves.

- \* The only spot for B in the 5th row is (12, 5).
- \* The only spot for 6 in the 1st column is (1, 7).
- \* The only spot for 5 in the 10th column is (10, 1).
- \* The only spot for 7 in the 12th column is (12, 10).
- \* The only spot for 6 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 5 in the 12th 4x3 rectangle is (9, 11).

Step 23: There are 10 independent moves.

- \* The only spot for 7 in the 7th row is (11, 7).
- \* The only spot for B in the 9th row is (8, 9).
- \* The only spot for B in the 10th column is (10, 8).
- \* The only spot for 9 in the 10th column is (10, 7).
- \* The only spot for 3 in the 1st 4x3 rectangle is (1, 2).

- \* The only spot for B in the 3rd 4x3 rectangle is (9, 2).
- \* The only spot for 9 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 7 in the 7th 4x3 rectangle is (1, 8).
- \* The only spot for A in the 12th 4x3 rectangle is (11, 10).
- \* The only spot for 5 in the 2nd eye is (8, 2).

Step 24: There are 8 independent moves.

- \* The only spot for A in the 5th row is (4, 5).
- \* The only spot for 2 in the 7th row is (2, 7).
- \* The only spot for 2 in the 8th column is (8, 4).
- \* The only spot for 3 in the 11th column is (11, 9).
- \* The only spot for B in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for A in the 6th 4x3 rectangle is (10, 4).
- \* The only spot for 2 in the 8th 4x3 rectangle is (7, 8).
- \* The only spot for 3 in the 2nd eye is (8, 3).

Step 25: There are 10 independent moves.

- \* The only spot for A in the 2nd row is (12, 2).
- \* The only spot for 2 in the 10th column is (10, 3).
- \* The only spot for A in the 2nd 4x3 rectangle is (8, 1).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (9, 1).
- \* The only spot for 2 in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for A in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 2 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for 3 in the 7th 4x3 rectangle is (2, 8).
- \* The only spot for 2 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 2 in the 1st eye is (3, 2).

Step 26: There are 5 independent moves.

- \* The only spot for 7 in the 1st row is (3, 1).
- \* The only spot for A in the 1st 4x3 rectangle is (3, 3).
- \* The only spot for 7 in the 3rd 4x3 rectangle is (9, 3).
- \* The only spot for A in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for A in the 9th 4x3 rectangle is (9, 8).

## Solution for Puzzle 28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

0	6	7	B	4	2	1	A	3	5	9	8
3	1	2	4	8	7	9	5	B	6	0	A
5	9	A	8	B	6	0	3	7	2	1	4
9	0	6	7	5	3	B	2	8	A	4	1
4	5	3	A	6	1	8	0	9	7	2	B
8	B	1	2	9	4	A	7	6	3	5	0
6	2	B	0	3	A	4	8	1	9	7	5
7	3	4	5	1	0	2	9	A	B	8	6
1	A	8	9	7	5	6	B	0	4	3	2
B	4	5	1	0	9	3	6	2	8	A	7
2	8	0	3	A	B	7	4	5	1	6	9
A	7	9	6	2	8	5	1	4	0	B	3

Tournament

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## Chapter 17

# Two TournamentPlus tpsmith-serious Puzzles

There are two puzzles in this section ranging in difficulty from thirty-two to forty-three. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 29** (101/144) DiffKey 32 / 6134.3131.A123.1331.2245.4464.2364.3375

**Puzzle 30** (105/144) DiffKey 43 / 653.3B22.2332.213B.1211.2222.1312.B232.2B12.1223+

## tpsmith-serious Puzzle 29, TournamentPlus/32

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

101/144

								9			3
9	2				3					0	
		6	0						B		
				A				5			4
A	8		5	2				B			
		4			B	6			0		1
			6				8			9	B
7				1	6						A
2			4			A		1			
		1									
		8				0	A		2		
						1	9		8	4	

TournamentPlus

Diff: 32 / 6134.3131.A123.1331.2245.4464.2364.3375

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 32 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 29

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

101/144

								9			3
9	2				3					0	
		6	0						B		<sup>1</sup>
				A				5		<sup>1</sup>	4
A	8		5	2				B			
		4	<sup>1</sup>		B	6			0		1
			6				8			9	B
7			<sup>1</sup>	1	6						A
2			4			A		1			
	<sup>3</sup>	1								<sup>2</sup>	
		8		<sup>3</sup>		0	A		2	<sup>1</sup>	
		<sup>1</sup>				1	9	<sup>3</sup>	8	4	

TournamentPlus

Diff: 32 / 6134.3131.A123.1331.2245.4464.2364.3375

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 32 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 29

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

101/144

7	12	17	4	32	28	29	31	<b>9</b>	5	19	<b>3</b>	<sup>1</sup>
<b>9</b>	<b>2</b>	18	14	7	<b>3</b>	17	19	12	4	<b>0</b>	18	
13	10	<b>6</b>	<b>0</b>	11	5	12	14	15	<b>B</b>	6	1	
14	8	27	16	<b>A</b>	26	27	31	<b>5</b>	30	1	<b>4</b>	<sup>4</sup>
<b>A</b>	<b>8</b>	26	<b>5</b>	<b>2</b>	15	31	25	<b>B</b>	27	31	20	
9	19	<b>4</b>	1	20	<b>B</b>	<b>6</b>	21	5	<b>0</b>	4	<b>1</b>	
25	11	4	<b>6</b>	29	29	28	<b>8</b>	27	30	<b>9</b>	<b>B</b>	<sup>7</sup>
<b>7</b>	22	31	1	<b>1</b>	<b>6</b>	27	23	26	28	31	<b>A</b>	
<b>2</b>	23	31	<b>4</b>	32	21	<b>A</b>	32	<b>1</b>	20	30	7	
24	3	<b>1</b>	20	32	27	32	28	22	19	2	24	<sup>10</sup>
23	20	<b>8</b>	23	3	24	<b>0</b>	<b>A</b>	23	<b>2</b>	1	21	
15	24	1	22	21	22	<b>1</b>	<b>9</b>	3	<b>8</b>	<b>4</b>	23	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

TournamentPlus

Diff: 32 / 6134.3131.A123.1331.2245.4464.2364.3375

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 32 steps required to solve the puzzle above with a total of 101 empty locations that must be determined, out of a total puzzle size of 144.

All 32 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 6 independent moves.

- \* The only spot for 2 in the 4th row is (11, 4).
- \* The only spot for 2 in the 3rd column is (3, 12).
- \* The only spot for 2 in the 12th column is (12, 3).
- \* The only spot for 2 in the 4th 4x3 rectangle is (4, 6).
- \* The only spot for 8 in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for 1 in the 12th 4x3 rectangle is (11, 11).

Step 2: There is 1 independent move.

- \* The only spot for B in the 12th 4x3 rectangle is (11, 10).

Step 3: There are 3 independent moves.

- \* The only spot for A in the 10th row is (2, 10).
- \* The only spot for A in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for B in the elements that make up the mouth is (5, 11).

Step 4: There are 4 independent moves.

- \* The only spot for A in the 2nd row is (10, 2).
- \* The only spot for A in the 4th column is (4, 1).
- \* The only spot for A in the 6th 4x3 rectangle is (11, 6).
- \* The only spot for A in the 7th 4x3 rectangle is (3, 7).

Step 5: There are 3 independent moves.

- \* The only spot for A in the 2nd 4x3 rectangle is (6, 3).
- \* The only spot for 1 in the 3rd 4x3 rectangle is (10, 1).
- \* The only spot for 8 in the 6th 4x3 rectangle is (9, 6).

Step 6: There is 1 independent move.

- \* The only spot for 8 in the 2nd eye is (11, 3).

Step 7: There are 3 independent moves.

- \* The only spot for 8 in the 1st 4x3 rectangle is (1, 1).
- \* The only spot for 8 in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 8 in the 1st eye is (5, 2).

Step 8: There is 1 independent move.

- \* The only spot for 6 in the 1st eye is (2, 4).

Step 9: There is 1 independent move.

- \* 3 must be placed at (1, 6) because it is the only value left that is not already in the 6th row, the 1st column or the 4th 4x3 rectangle.

Step 10: There is 1 independent move.

- \* The only spot for 3 in the 1st eye is (2, 3).

Step 11: There are 2 independent moves.

- \* The only spot for 1 in the 2nd column is (2, 7).
- \* The only spot for 4 in the 1st eye is (5, 3).

Step 12: There are 3 independent moves.

- \* The only spot for 4 in the 1st 4x3 rectangle is (2, 1).
- \* The only spot for 9 in the 2nd 4x3 rectangle is (7, 3).
- \* The only spot for 4 in the 2nd eye is (9, 2).

Step 13: There is 1 independent move.

- \* The only spot for 5 in the 3rd row is (1, 3).

Step 14: There are 3 independent moves.

- \* The only spot for 1 in the 3rd row is (8, 3).
- \* The only spot for 1 in the 1st column is (1, 4).
- \* The only spot for 1 in the 1st 4x3 rectangle is (4, 2).

Step 15: There are 3 independent moves.

- \* The only spot for 7 in the 3rd row is (9, 3).
- \* The only spot for B in the 1st column is (1, 12).
- \* The only spot for 1 in the 5th 4x3 rectangle is (6, 5).

Step 16: There is 1 independent move.

- \* The only spot for B in the 4th column is (4, 4).

Step 17: There are 2 independent moves.

- \* The only spot for B in the 2nd row is (7, 2).
- \* The only spot for B in the 1st 4x3 rectangle is (3, 1).

Step 18: There are 2 independent moves.

- \* The only spot for 5 in the 2nd row is (12, 2).
- \* The only spot for 7 in the 1st 4x3 rectangle is (3, 2).

Step 19: There are 4 independent moves.

- \* The only spot for 6 in the 2nd row is (8, 2).
- \* The only spot for 6 in the 3rd 4x3 rectangle is (11, 1).
- \* The only spot for 7 in the 4th 4x3 rectangle is (2, 6).
- \* The only spot for 5 in the 12th 4x3 rectangle is (10, 10).

Step 20: There are 5 independent moves.

- \* The only spot for 9 in the 6th row is (5, 6).
- \* The only spot for 5 in the 11th row is (2, 11).
- \* The only spot for 6 in the 6th 4x3 rectangle is (12, 5).
- \* The only spot for 6 in the 9th 4x3 rectangle is (10, 9).
- \* The only spot for 9 in the elements that make up the mouth is (4, 10).

Step 21: There are 4 independent moves.

- \* The only spot for 6 in the 12th row is (5, 12).
- \* The only spot for 5 in the 5th 4x3 rectangle is (8, 6).
- \* The only spot for 9 in the 8th 4x3 rectangle is (6, 9).
- \* The only spot for 9 in the 12th 4x3 rectangle is (12, 11).

Step 22: There are 4 independent moves.

- \* The only spot for 3 in the 12th row is (4, 12).
- \* The only spot for 9 in the 2nd column is (2, 8).
- \* The only spot for 5 in the 11th 4x3 rectangle is (6, 12).
- \* The only spot for 6 in the elements that make up the mouth is (9, 10).

Step 23: There are 6 independent moves.

- \* The only spot for B in the 8th row is (8, 8).
- \* The only spot for 7 in the 12th row is (12, 12).
- \* The only spot for B in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for 7 in the 10th 4x3 rectangle is (4, 11).
- \* The only spot for 6 in the 10th 4x3 rectangle is (1, 11).
- \* The only spot for 3 in the 12th 4x3 rectangle is (9, 11).

Step 24: There are 4 independent moves.

- \* The only spot for 4 in the 11th row is (6, 11).
- \* The only spot for 0 in the 2nd column is (2, 12).
- \* The only spot for 4 in the 10th 4x3 rectangle is (1, 10).
- \* The only spot for 0 in the 12th 4x3 rectangle is (12, 10).

Step 25: There are 2 independent moves.

- \* The only spot for 0 in the 1st column is (1, 7).
- \* The only spot for 4 in the 8th column is (8, 5).

Step 26: There are 3 independent moves.

- \* The only spot for 0 in the 5th row is (3, 5).
- \* The only spot for 0 in the 5th 4x3 rectangle is (6, 4).
- \* The only spot for 0 in the 9th 4x3 rectangle is (9, 8).

Step 27: There are 6 independent moves.

- \* The only spot for 9 in the 5th row is (10, 5).
- \* The only spot for 2 in the 8th row is (7, 8).
- \* The only spot for 8 in the 6th column is (6, 10).
- \* The only spot for 8 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 2 in the 9th 4x3 rectangle is (9, 7).
- \* The only spot for 9 in the 1st eye is (3, 4).

Step 28: There are 4 independent moves.

- \* The only spot for 4 in the 8th row is (10, 8).
- \* The only spot for 2 in the 6th column is (6, 1).
- \* The only spot for 4 in the 8th 4x3 rectangle is (7, 7).
- \* The only spot for 2 in the elements that make up the mouth is (8, 10).

Step 29: There are 3 independent moves.

- \* The only spot for 5 in the 7th row is (5, 7).
- \* The only spot for 7 in the 6th column is (6, 7).
- \* The only spot for 5 in the 7th column is (7, 1).

Step 30: There are 3 independent moves.

- \* The only spot for 3 in the 7th row is (10, 7).
- \* The only spot for 7 in the 10th column is (10, 4).
- \* The only spot for 7 in the 9th 4x3 rectangle is (11, 9).

Step 31: There are 7 independent moves.

- \* The only spot for 3 in the 8th row is (3, 8).
- \* The only spot for 5 in the 9th row is (3, 9).
- \* The only spot for 7 in the 8th column is (8, 1).
- \* The only spot for 7 in the 5th 4x3 rectangle is (7, 5).
- \* The only spot for 3 in the 6th 4x3 rectangle is (11, 5).
- \* The only spot for 5 in the 9th 4x3 rectangle is (11, 8).
- \* The only spot for 3 in the 2nd eye is (8, 4).

Step 32: There are 5 independent moves.

- \* The only spot for 3 in the 7th column is (7, 10).
- \* The only spot for 0 in the 8th column is (8, 9).
- \* The only spot for 0 in the 2nd 4x3 rectangle is (5, 1).
- \* The only spot for 3 in the 8th 4x3 rectangle is (5, 9).
- \* The only spot for 7 in the elements that make up the mouth is (5, 10).

## Solution for Puzzle 29

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

8	4	B	A	0	2	5	7	9	1	6	3
9	2	7	1	8	3	B	6	4	A	0	5
5	3	6	0	4	A	9	1	7	B	8	2
1	6	9	B	A	0	8	3	5	7	2	4
A	8	0	5	2	1	7	4	B	9	3	6
3	7	4	2	9	B	6	5	8	0	A	1
0	1	A	6	5	7	4	8	2	3	9	B
7	9	3	8	1	6	2	B	0	4	5	A
2	B	5	4	3	9	A	0	1	6	7	8
4	A	1	9	7	8	3	2	6	5	B	0
6	5	8	7	B	4	0	A	3	2	1	9
B	0	2	3	6	5	1	9	A	8	4	7

TournamentPlus

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## tpsmith-serious Puzzle 30, TournamentPlus/43

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>A</b>			<b>5</b>	<b>B</b>		<b>8</b>					
		<b>3</b>		<b>0</b>		<b>A</b>		<b>8</b>			
							<b>4</b>			<b>B</b>	
			<b>4</b>					<b>9</b>		<b>3</b>	<b>5</b>
					<b>7</b>	<b>B</b>	<b>6</b>				
			<b>7</b>		<b>9</b>					<b>2</b>	<b>1</b>
		<b>5</b>	<b>3</b>								<b>4</b>
	<b>6</b>				<b>0</b>				<b>A</b>		
			<b>0</b>	<b>6</b>							
<b>3</b>							<b>0</b>				
				<b>2</b>				<b>0</b>		<b>A</b>	<b>7</b>
<b>0</b>		<b>B</b>		<b>4</b>							<b>3</b>

TournamentPlus

Diff: 43 / 653.3B22.2332.213B.1211.2222.1312.B232.2B12+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B) exactly once in each row, each column, each 4x3 rectangle, each eye, and the elements that make up the mouth.

There are 43 steps required to solve the puzzle above with a total of 105 empty locations that must be determined, out of a total puzzle size of 144.

## First Three Steps to Solve Puzzle 30

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>A</b>			<b>5</b>	<b>B</b>		<b>8</b>					
<sup>1</sup>	<sup>2</sup>	<b>3</b>	<sup>3</sup>	<b>0</b>		<b>A</b>		<b>8</b>			
				<sup>1</sup>			<b>4</b>			<b>B</b>	
			<b>4</b>			<sup>2</sup>		<b>9</b>	<sup>1</sup>	<b>3</b>	<b>5</b>
					<b>7</b>	<b>B</b>	<b>6</b>		<sup>2</sup>	<sup>1</sup>	
			<b>7</b>		<b>9</b>	<sup>1</sup>	<sup>2</sup>			<b>2</b>	<b>1</b>
		<b>5</b>	<b>3</b>							<sup>3</sup>	<b>4</b>
	<b>6</b>	<sup>2</sup>			<b>0</b>				<b>A</b>		
			<b>0</b>	<b>6</b>	<sup>1</sup>						
<b>3</b>		<sup>3</sup>					<b>0</b>				
				<b>2</b>				<b>0</b>		<b>A</b>	<b>7</b>
<b>0</b>		<b>B</b>		<b>4</b>							<b>3</b>

TournamentPlus

Diff: 43 / 653.3B22.2332.213B.1211.2222.1312.B232.2B12+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 43 steps required to solve the puzzle above with a total of 105 empty locations that must be determined, out of a total puzzle size of 144.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 30

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>A</b>	15	30	<b>5</b>	<b>B</b>	21	<b>8</b>	17	35	34	28	7	<sup>1</sup>
1	2	<b>3</b>	3	<b>0</b>	14	<b>A</b>	15	<b>8</b>	23	22	4	
20	12	7	29	1	22	16	<b>4</b>	17	30	<b>B</b>	6	
4	14	4	<b>4</b>	11	12	2	13	<b>9</b>	1	<b>3</b>	<b>5</b>	<sup>4</sup>
10	9	32	31	14	<b>7</b>	<b>B</b>	<b>6</b>	5	2	1	6	
5	8	10	<b>7</b>	9	<b>9</b>	1	2	26	27	<b>2</b>	<b>1</b>	
40	41	<b>5</b>	<b>3</b>	43	29	33	42	27	42	3	<b>4</b>	<sup>7</sup>
38	<b>6</b>	2	41	41	<b>0</b>	36	40	37	<b>A</b>	42	39	
39	42	40	<b>0</b>	<b>6</b>	1	37	41	38	35	40	40	
<b>3</b>	9	3	21	42	25	28	<b>0</b>	33	43	25	8	<sup>10</sup>
41	10	39	40	<b>2</b>	24	19	23	<b>0</b>	25	<b>A</b>	<b>7</b>	
<b>0</b>	11	<b>B</b>	20	<b>4</b>	30	18	43	31	32	42	<b>3</b>	
<sup>1</sup>				<sup>5</sup>			<sup>9</sup>					

TournamentPlus

Diff: 43 / 653.3B22.2332.213B.1211.2222.1312.B232.2B12+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 43 steps required to solve the puzzle above with a total of 105 empty locations that must be determined, out of a total puzzle size of 144.

All 43 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 6 independent moves.

- \* The only spot for 4 in the 2nd row is (1, 2).
- \* The only spot for 4 in the 5th row is (11, 5).
- \* The only spot for 4 in the 6th column is (6, 9).
- \* The only spot for 4 in the 5th 4x3 rectangle is (7, 6).
- \* The only spot for 7 in the 6th 4x3 rectangle is (10, 4).
- \* The only spot for 5 in the 1st eye is (5, 3).

Step 2: There are 5 independent moves.

- \* The only spot for 7 in the 2nd row is (2, 2).
- \* The only spot for 5 in the 5th 4x3 rectangle is (8, 6).
- \* The only spot for 0 in the 5th 4x3 rectangle is (7, 4).
- \* The only spot for 4 in the 7th 4x3 rectangle is (3, 8).
- \* The only spot for 0 in the 2nd eye is (10, 5).

Step 3: There are 3 independent moves.

- \* The only spot for B in the 1st 4x3 rectangle is (4, 2).
- \* The only spot for 0 in the 9th 4x3 rectangle is (11, 7).
- \* The only spot for 7 in the 10th 4x3 rectangle is (3, 10).

Step 4: There are 3 independent moves.

- \* The only spot for 9 in the 2nd row is (12, 2).
- \* The only spot for B in the 4th row is (1, 4).
- \* The only spot for 6 in the 1st eye is (3, 4).

Step 5: There are 2 independent moves.

- \* 8 must be placed at (1, 6) because it is the only value left that is not already in the 6th row, the 1st column or the 4th 4x3 rectangle.
- \* A must be placed at (9, 5) because it is the only value left that is not already in the 5th row, the 9th column, the 6th 4x3 rectangle or the 2nd eye.

Step 6: There are 2 independent moves.

- \* The only spot for A in the 3rd 4x3 rectangle is (12, 3).
- \* The only spot for 8 in the 6th 4x3 rectangle is (12, 5).

Step 7: There are 2 independent moves.

- \* The only spot for 0 in the 3rd row is (3, 3).
- \* The only spot for 0 in the 3rd 4x3 rectangle is (12, 1).

Step 8: There are 2 independent moves.

- \* The only spot for 6 in the 12th column is (12, 10).
- \* The only spot for 0 in the 4th 4x3 rectangle is (2, 6).

Step 9: There are 3 independent moves.

- \* The only spot for 3 in the 6th row is (5, 6).
- \* The only spot for 2 in the 10th row is (2, 10).
- \* The only spot for 3 in the 4th 4x3 rectangle is (2, 5).

Step 10: There are 3 independent moves.

- \* The only spot for A in the 6th row is (3, 6).
- \* The only spot for 5 in the 4th 4x3 rectangle is (1, 5).
- \* The only spot for 4 in the 10th 4x3 rectangle is (2, 11).

Step 11: There are 2 independent moves.

- \* The only spot for 5 in the 10th 4x3 rectangle is (2, 12).
  - \* The only spot for A in the 1st eye is (5, 4).
- Step 12: There are 2 independent moves.
- \* The only spot for 8 in the 5th 4x3 rectangle is (6, 4).
  - \* The only spot for 8 in the 1st eye is (2, 3).
- Step 13: There is 1 independent move.
- \* The only spot for 2 in the 5th 4x3 rectangle is (8, 4).
- Step 14: There are 3 independent moves.
- \* The only spot for 2 in the 2nd row is (6, 2).
  - \* The only spot for 1 in the 4th row is (2, 4).
  - \* The only spot for 1 in the 5th 4x3 rectangle is (5, 5).
- Step 15: There are 2 independent moves.
- \* 1 must be placed at (8, 2) because it is the only value left that is not already in the 2nd row, the 8th column, the 2nd 4x3 rectangle or the 2nd eye.
  - \* 9 must be placed at (2, 1) because it is the only value left that is not already in the 1st row, the 2nd column or the 1st 4x3 rectangle.
- Step 16: There is 1 independent move.
- \* The only spot for 9 in the 2nd 4x3 rectangle is (7, 3).
- Step 17: There are 2 independent moves.
- \* The only spot for 7 in the 3rd row is (9, 3).
  - \* The only spot for 7 in the 2nd 4x3 rectangle is (8, 1).
- Step 18: There is 1 independent move.
- \* The only spot for 7 in the 11th 4x3 rectangle is (7, 12).
- Step 19: There is 1 independent move.
- \* The only spot for 6 in the 7th column is (7, 11).
- Step 20: There are 2 independent moves.
- \* The only spot for 6 in the 1st column is (1, 3).
  - \* The only spot for 6 in the 10th 4x3 rectangle is (4, 12).
- Step 21: There are 2 independent moves.
- \* The only spot for 6 in the 2nd 4x3 rectangle is (6, 1).
  - \* The only spot for A in the 10th 4x3 rectangle is (4, 10).
- Step 22: There are 2 independent moves.
- \* The only spot for 6 in the 11th column is (11, 2).
  - \* The only spot for 3 in the 2nd 4x3 rectangle is (6, 3).
- Step 23: There are 2 independent moves.
- \* The only spot for 5 in the 2nd eye is (10, 2).
  - \* The only spot for 3 in the elements that make up the mouth is (8, 11).
- Step 24: There is 1 independent move.
- \* The only spot for 5 in the 11th row is (6, 11).
- Step 25: There are 3 independent moves.
- \* The only spot for B in the 11th row is (10, 11).
  - \* The only spot for B in the 11th 4x3 rectangle is (6, 10).
  - \* The only spot for 5 in the 12th 4x3 rectangle is (11, 10).
- Step 26: There is 1 independent move.

- \* The only spot for B in the 6th 4x3 rectangle is (9, 6).

Step 27: There are 2 independent moves.

- \* The only spot for 6 in the 9th column is (9, 7).
- \* The only spot for 6 in the 6th 4x3 rectangle is (10, 6).

Step 28: There are 2 independent moves.

- \* 1 must be placed at (7, 10) because it is the only value left that is not already in the 10th row, the 7th column, the 11th 4x3 rectangle or the elements that make up the mouth.
- \* 1 must be placed at (11, 1) because it is the only value left that is not already in the 1st row, the 11th column or the 3rd 4x3 rectangle.

Step 29: There are 2 independent moves.

- \* The only spot for 1 in the 1st 4x3 rectangle is (4, 3).
- \* The only spot for 1 in the 8th 4x3 rectangle is (6, 7).

Step 30: There are 3 independent moves.

- \* The only spot for 2 in the 3rd row is (10, 3).
- \* The only spot for A in the 6th column is (6, 12).
- \* The only spot for 2 in the 1st 4x3 rectangle is (3, 1).

Step 31: There are 2 independent moves.

- \* The only spot for 2 in the 12th 4x3 rectangle is (9, 12).
- \* The only spot for 2 in the 1st eye is (4, 5).

Step 32: There are 2 independent moves.

- \* The only spot for 1 in the 12th 4x3 rectangle is (10, 12).
- \* The only spot for 9 in the 1st eye is (3, 5).

Step 33: There are 2 independent moves.

- \* 4 must be placed at (9, 10) because it is the only value left that is not already in the 10th row, the 9th column, the 12th 4x3 rectangle or the elements that make up the mouth.
- \* 2 must be placed at (7, 7) because it is the only value left that is not already in the 7th row, the 7th column or the 8th 4x3 rectangle.

Step 34: There is 1 independent move.

- \* The only spot for 4 in the 3rd 4x3 rectangle is (10, 1).

Step 35: There are 2 independent moves.

- \* The only spot for 3 in the 10th column is (10, 9).
- \* The only spot for 3 in the 3rd 4x3 rectangle is (9, 1).

Step 36: There is 1 independent move.

- \* The only spot for 3 in the 8th 4x3 rectangle is (7, 8).

Step 37: There are 2 independent moves.

- \* The only spot for 5 in the 8th row is (9, 8).
- \* The only spot for 5 in the 8th 4x3 rectangle is (7, 9).

Step 38: There are 2 independent moves.

- \* The only spot for 1 in the 8th row is (1, 8).
- \* The only spot for 1 in the 9th 4x3 rectangle is (9, 9).

Step 39: There are 3 independent moves.

- \* The only spot for 2 in the 8th row is (12, 8).
- \* The only spot for 2 in the 7th 4x3 rectangle is (1, 9).
- \* The only spot for 1 in the 10th 4x3 rectangle is (3, 11).

Step 40: There are 6 independent moves.

- \* The only spot for B in the 8th row is (8, 8).
- \* The only spot for 7 in the 9th row is (11, 9).
- \* The only spot for 8 in the 3rd column is (3, 9).
- \* The only spot for 7 in the 7th 4x3 rectangle is (1, 7).
- \* The only spot for B in the 9th 4x3 rectangle is (12, 9).
- \* The only spot for 8 in the 10th 4x3 rectangle is (4, 11).

Step 41: There are 5 independent moves.

- \* The only spot for 9 in the 9th row is (8, 9).
- \* The only spot for 9 in the 7th 4x3 rectangle is (4, 8).
- \* The only spot for B in the 7th 4x3 rectangle is (2, 7).
- \* The only spot for 7 in the 8th 4x3 rectangle is (5, 8).
- \* The only spot for 9 in the 10th 4x3 rectangle is (1, 11).

Step 42: There are 6 independent moves.

- \* The only spot for 8 in the 8th row is (11, 8).
- \* The only spot for 9 in the 11th column is (11, 12).
- \* The only spot for A in the 7th 4x3 rectangle is (2, 9).
- \* The only spot for A in the 8th 4x3 rectangle is (8, 7).
- \* The only spot for 9 in the 9th 4x3 rectangle is (10, 7).
- \* The only spot for 9 in the 11th 4x3 rectangle is (5, 10).

Step 43: There are 3 independent moves.

- \* The only spot for 8 in the 8th 4x3 rectangle is (5, 7).
- \* The only spot for 8 in the 11th 4x3 rectangle is (8, 12).
- \* The only spot for 8 in the elements that make up the mouth is (10, 10).

## Solution for Puzzle 30

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

<b>A</b>	<b>9</b>	<b>2</b>	<b>5</b>	<b>B</b>	<b>6</b>	<b>8</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>
<b>4</b>	<b>7</b>	<b>3</b>	<b>B</b>	<b>0</b>	<b>2</b>	<b>A</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>6</b>	<b>9</b>
<b>6</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>B</b>	<b>A</b>
<b>B</b>	<b>1</b>	<b>6</b>	<b>4</b>	<b>A</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>5</b>
<b>5</b>	<b>3</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>B</b>	<b>6</b>	<b>A</b>	<b>0</b>	<b>4</b>	<b>8</b>
<b>8</b>	<b>0</b>	<b>A</b>	<b>7</b>	<b>3</b>	<b>9</b>	<b>4</b>	<b>5</b>	<b>B</b>	<b>6</b>	<b>2</b>	<b>1</b>
<b>7</b>	<b>B</b>	<b>5</b>	<b>3</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>A</b>	<b>6</b>	<b>9</b>	<b>0</b>	<b>4</b>
<b>1</b>	<b>6</b>	<b>4</b>	<b>9</b>	<b>7</b>	<b>0</b>	<b>3</b>	<b>B</b>	<b>5</b>	<b>A</b>	<b>8</b>	<b>2</b>
<b>2</b>	<b>A</b>	<b>8</b>	<b>0</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>9</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>B</b>
<b>3</b>	<b>2</b>	<b>7</b>	<b>A</b>	<b>9</b>	<b>B</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>6</b>
<b>9</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>3</b>	<b>0</b>	<b>B</b>	<b>A</b>	<b>7</b>
<b>0</b>	<b>5</b>	<b>B</b>	<b>6</b>	<b>4</b>	<b>A</b>	<b>7</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>9</b>	<b>3</b>

TournamentPlus

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## Chapter 18

# Two Challenging Sudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from eighteen to nineteen. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 31** (125/225) DiffKey 18 / 94.7997.8959.9443.5442

**Puzzle 32** (126/225) DiffKey 19 / 999.7124.3359.8975.4694

## Sudoku-15 Puzzle 31, Challenging/18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	4	D			A	0	2		8					7
		7		9					5	0	4		8	2
2	1			0		C		9				A		
			9	A		1		0	E			C	7	3
	B	3	E		6				C	8		0	1	
		0		C	5	7					6			
0	D	5						2	A		7	4		1
4			A					5		D	9	E		
B	9		8		C				0	A				
	3	2	0				5			4		1		
	E			B	0		D	3			8			5
9				D		2							6	B
3		9		E			B			6	1	5		0
			D			3	6	C				9	E	
7			2				0	E	9		B		D	

Challenging

Diff: 18 / 94.7997.8959.9443.5442

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 18 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 31

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	4	D			A	0	2		8	<sup>1</sup>	<sup>3</sup>		<sup>2</sup>	7
		7		9					5	0	4		8	2
2	1	<sup>1</sup>		0		C		9				A		
			9	A		1		0	E			C	7	3
<sup>3</sup>	B	3	E	<sup>1</sup>	6				C	8	<sup>2</sup>	0	1	
		0		C	5	7					6			
0	D	5						2	A		7	4		1
4	<sup>2</sup>	<sup>3</sup>	A	<sup>3</sup>				5		D	9	E	<sup>1</sup>	<sup>1</sup>
B	9	<sup>1</sup>	8		C				0	A				
	3	2	0				5			4		1		
	E			B	0		D	3		<sup>3</sup>	8			5
9				D		2	<sup>1</sup>				<sup>1</sup>	<sup>3</sup>	6	B
3		9		E			B			6	1	5	<sup>3</sup>	0
	<sup>1</sup>	<sup>1</sup>	D			3	6	C		<sup>1</sup>		9	E	
7			2			<sup>1</sup>	0	E	9	<sup>2</sup>	B	<sup>1</sup>	D	

Challenging

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There are 18 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 31

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>4</sup>	<b>4</b>	<b>D</b>	<sup>5</sup>	<sup>6</sup>	<b>A</b>	<b>0</b>	<b>2</b>	<sup>10</sup>	<b>8</b>	<sup>1</sup>	<sup>3</sup>	<sup>9</sup>	<sup>2</sup>	<b>7</b>	<sup>1</sup>
<sup>12</sup>	<sup>11</sup>	<b>7</b>	<sup>12</sup>	<b>9</b>	<sup>9</sup>	<sup>11</sup>	<sup>10</sup>	<sup>11</sup>	<b>5</b>	<b>0</b>	<b>4</b>	<sup>10</sup>	<b>8</b>	<b>2</b>	
<b>2</b>	<b>1</b>	<sup>1</sup>	<sup>11</sup>	<b>0</b>	<sup>11</sup>	<b>C</b>	<sup>15</sup>	<b>9</b>	<sup>14</sup>	<sup>8</sup>	<sup>6</sup>	<b>A</b>	<sup>7</sup>	<sup>7</sup>	
<sup>8</sup>	<sup>9</sup>	<sup>5</sup>	<b>9</b>	<b>A</b>	<sup>8</sup>	<b>1</b>	<sup>9</sup>	<b>0</b>	<b>E</b>	<sup>8</sup>	<sup>8</sup>	<b>C</b>	<b>7</b>	<b>3</b>	<sup>4</sup>
<sup>3</sup>	<b>B</b>	<b>3</b>	<b>E</b>	<sup>1</sup>	<b>6</b>	<sup>18</sup>	<sup>5</sup>	<sup>17</sup>	<b>C</b>	<b>8</b>	<sup>2</sup>	<b>0</b>	<b>1</b>	<sup>6</sup>	
<sup>9</sup>	<sup>8</sup>	<b>0</b>	<sup>7</sup>	<b>C</b>	<b>5</b>	<b>7</b>	<sup>6</sup>	<sup>8</sup>	<sup>7</sup>	<sup>4</sup>	<b>6</b>	<sup>7</sup>	<sup>4</sup>	<sup>5</sup>	
<b>0</b>	<b>D</b>	<b>5</b>	<sup>7</sup>	<sup>7</sup>	<sup>5</sup>	<sup>10</sup>	<sup>11</sup>	<b>2</b>	<b>A</b>	<sup>4</sup>	<b>7</b>	<b>4</b>	<sup>5</sup>	<b>1</b>	<sup>7</sup>
<b>4</b>	<sup>2</sup>	<sup>3</sup>	<b>A</b>	<sup>3</sup>	<sup>10</sup>	<sup>16</sup>	<sup>11</sup>	<b>5</b>	<sup>16</sup>	<b>D</b>	<b>9</b>	<b>E</b>	<sup>1</sup>	<sup>1</sup>	
<b>B</b>	<b>9</b>	<sup>1</sup>	<b>8</b>	<sup>4</sup>	<b>C</b>	<sup>17</sup>	<sup>15</sup>	<sup>16</sup>	<b>0</b>	<b>A</b>	<sup>7</sup>	<sup>4</sup>	<sup>8</sup>	<sup>5</sup>	
<sup>15</sup>	<b>3</b>	<b>2</b>	<b>0</b>	<sup>5</sup>	<sup>10</sup>	<sup>16</sup>	<b>5</b>	<sup>17</sup>	<sup>15</sup>	<b>4</b>	<sup>5</sup>	<b>1</b>	<sup>14</sup>	<sup>4</sup>	<sup>10</sup>
<sup>14</sup>	<b>E</b>	<sup>13</sup>	<sup>6</sup>	<b>B</b>	<b>0</b>	<sup>4</sup>	<b>D</b>	<b>3</b>	<sup>15</sup>	<sup>3</sup>	<b>8</b>	<sup>4</sup>	<sup>13</sup>	<b>5</b>	
<b>9</b>	<sup>4</sup>	<sup>12</sup>	<sup>5</sup>	<b>D</b>	<sup>13</sup>	<b>2</b>	<sup>1</sup>	<sup>11</sup>	<sup>13</sup>	<sup>6</sup>	<sup>1</sup>	<sup>3</sup>	<b>6</b>	<b>B</b>	
<b>3</b>	<sup>10</sup>	<b>9</b>	<sup>11</sup>	<b>E</b>	<sup>12</sup>	<sup>17</sup>	<b>B</b>	<sup>18</sup>	<sup>8</sup>	<b>6</b>	<b>1</b>	<b>5</b>	<sup>3</sup>	<b>0</b>	<sup>13</sup>
<sup>11</sup>	<sup>1</sup>	<sup>1</sup>	<b>D</b>	<sup>4</sup>	<sup>10</sup>	<b>3</b>	<b>6</b>	<b>C</b>	<sup>8</sup>	<sup>1</sup>	<sup>6</sup>	<b>9</b>	<b>E</b>	<sup>5</sup>	
<b>7</b>	<sup>11</sup>	<sup>10</sup>	<b>2</b>	<sup>5</sup>	<sup>11</sup>	<sup>1</sup>	<b>0</b>	<b>E</b>	<b>9</b>	<sup>2</sup>	<b>B</b>	<sup>1</sup>	<b>D</b>	<sup>4</sup>	
<sup>1</sup>					<sup>6</sup>					<sup>11</sup>					

Challenging

Diff: 18 / 94.7997.8959.9443.5442

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There are 18 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

All 18 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 8 in the 13th column is (13, 15).
- \* The only spot for 8 in the 1st 5x3 rectangle is (3, 3).
- \* The only spot for 1 in the 3rd 5x3 rectangle is (11, 1).
- \* The only spot for 7 in the 4th 5x3 rectangle is (5, 5).
- \* The only spot for E in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for 8 in the 9th 5x3 rectangle is (15, 8).
- \* The only spot for 0 in the 9th 5x3 rectangle is (14, 8).
- \* The only spot for C in the 11th 5x3 rectangle is (8, 12).
- \* The only spot for 0 in the 12th 5x3 rectangle is (12, 12).
- \* The only spot for B in the 13th 5x3 rectangle is (3, 14).
- \* The only spot for 0 in the 13th 5x3 rectangle is (2, 14).
- \* The only spot for 5 in the 14th 5x3 rectangle is (7, 15).
- \* The only spot for 7 in the 15th 5x3 rectangle is (11, 14).

Step 2: There are 4 independent moves.

- \* The only spot for 2 in the 5th row is (12, 5).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for 7 in the 7th 5x3 rectangle is (2, 8).
- \* The only spot for 3 in the 15th 5x3 rectangle is (11, 15).

Step 3: There are 7 independent moves.

- \* The only spot for 5 in the 5th row is (1, 5).
- \* The only spot for 2 in the 8th row is (5, 8).
- \* The only spot for C in the 8th row is (3, 8).
- \* The only spot for 2 in the 11th column is (11, 11).
- \* The only spot for C in the 3rd 5x3 rectangle is (12, 1).
- \* The only spot for 3 in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for 2 in the 15th 5x3 rectangle is (14, 13).

Step 4: There are 12 independent moves.

- \* The only spot for E in the 1st row is (1, 1).
- \* The only spot for 9 in the 11th row is (7, 11).
- \* The only spot for 5 in the 2nd column is (2, 12).
- \* The only spot for C in the 11th column is (11, 7).
- \* The only spot for 9 in the 11th column is (11, 6).
- \* The only spot for 4 in the 14th column is (14, 6).
- \* The only spot for 1 in the 7th 5x3 rectangle is (5, 9).
- \* The only spot for 2 in the 9th 5x3 rectangle is (13, 9).
- \* The only spot for 7 in the 12th 5x3 rectangle is (13, 11).
- \* The only spot for 9 in the 12th 5x3 rectangle is (15, 10).
- \* The only spot for 5 in the 13th 5x3 rectangle is (5, 14).
- \* The only spot for C in the 15th 5x3 rectangle is (15, 15).

Step 5: There are 12 independent moves.

- \* The only spot for 5 in the 1st row is (4, 1).
- \* The only spot for 4 in the 5th column is (5, 15).
- \* The only spot for 8 in the 5th column is (5, 10).
- \* The only spot for 9 in the 6th column is (6, 7).

- \* The only spot for 4 in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for 9 in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for E in the 6th 5x3 rectangle is (15, 6).
- \* The only spot for 6 in the 9th 5x3 rectangle is (15, 9).
- \* The only spot for B in the 9th 5x3 rectangle is (14, 7).
- \* The only spot for 7 in the 10th 5x3 rectangle is (4, 12).
- \* The only spot for D in the 12th 5x3 rectangle is (12, 10).
- \* The only spot for 4 in the 15th 5x3 rectangle is (15, 14).

Step 6: There are 7 independent moves.

- \* The only spot for 3 in the 1st row is (5, 1).
- \* The only spot for A in the 8th column is (8, 6).
- \* The only spot for E in the 12th column is (12, 3).
- \* The only spot for A in the 6th 5x3 rectangle is (15, 5).
- \* The only spot for 4 in the 10th 5x3 rectangle is (4, 11).
- \* The only spot for E in the 12th 5x3 rectangle is (11, 12).
- \* The only spot for A in the 15th 5x3 rectangle is (12, 14).

Step 7: There are 8 independent moves.

- \* The only spot for 1 in the 4th column is (4, 6).
- \* The only spot for 6 in the 5th column is (5, 7).
- \* The only spot for 3 in the 12th column is (12, 9).
- \* The only spot for D in the 15th column is (15, 3).
- \* The only spot for 3 in the 3rd 5x3 rectangle is (14, 3).
- \* The only spot for 3 in the 5th 5x3 rectangle is (10, 6).
- \* The only spot for D in the 6th 5x3 rectangle is (13, 6).
- \* The only spot for 3 in the 7th 5x3 rectangle is (4, 7).

Step 8: There are 10 independent moves.

- \* The only spot for B in the 6th row is (9, 6).
- \* The only spot for 2 in the 6th row is (2, 6).
- \* The only spot for 2 in the 10th column is (10, 14).
- \* The only spot for D in the 10th column is (10, 13).
- \* The only spot for 5 in the 12th column is (12, 4).
- \* The only spot for 5 in the 3rd 5x3 rectangle is (11, 3).
- \* The only spot for D in the 4th 5x3 rectangle is (1, 4).
- \* The only spot for 2 in the 5th 5x3 rectangle is (6, 4).
- \* The only spot for B in the 6th 5x3 rectangle is (11, 4).
- \* The only spot for 5 in the 9th 5x3 rectangle is (14, 9).

Step 9: There are 5 independent moves.

- \* The only spot for B in the 1st row is (13, 1).
- \* The only spot for 8 in the 6th row is (1, 6).
- \* The only spot for D in the 6th column is (6, 2).
- \* The only spot for 6 in the 4th 5x3 rectangle is (2, 4).
- \* The only spot for 8 in the 5th 5x3 rectangle is (8, 4).

Step 10: There are 9 independent moves.

- \* The only spot for 6 in the 1st row is (9, 1).

- \* The only spot for 8 in the 14th row is (6, 14).
- \* The only spot for E in the 6th column is (6, 10).
- \* The only spot for 3 in the 6th column is (6, 8).
- \* The only spot for 3 in the 2nd 5x3 rectangle is (8, 2).
- \* The only spot for 6 in the 3rd 5x3 rectangle is (13, 2).
- \* The only spot for 8 in the 8th 5x3 rectangle is (7, 7).
- \* The only spot for 6 in the 13th 5x3 rectangle is (3, 15).
- \* The only spot for 8 in the 13th 5x3 rectangle is (2, 13).

Step 11: There are 12 independent moves.

- \* The only spot for C in the 2nd column is (2, 2).
- \* The only spot for B in the 6th column is (6, 3).
- \* The only spot for 1 in the 8th column is (8, 8).
- \* The only spot for 6 in the 1st 5x3 rectangle is (4, 3).
- \* The only spot for 1 in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for E in the 2nd 5x3 rectangle is (7, 2).
- \* The only spot for E in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for 8 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for A in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for 1 in the 13th 5x3 rectangle is (1, 14).
- \* The only spot for C in the 13th 5x3 rectangle is (4, 13).
- \* The only spot for 1 in the 14th 5x3 rectangle is (6, 15).

Step 12: There are 4 independent moves.

- \* The only spot for A in the 12th row is (3, 12).
- \* The only spot for 7 in the 6th column is (6, 13).
- \* The only spot for B in the 1st 5x3 rectangle is (4, 2).
- \* The only spot for A in the 1st 5x3 rectangle is (1, 2).

Step 13: There are 4 independent moves.

- \* The only spot for A in the 11th row is (14, 11).
- \* The only spot for 1 in the 12th row is (10, 12).
- \* The only spot for 4 in the 6th column is (6, 12).
- \* The only spot for 1 in the 10th 5x3 rectangle is (3, 11).

Step 14: There are 3 independent moves.

- \* The only spot for C in the 11th row is (1, 11).
- \* The only spot for 4 in the 10th column is (10, 3).
- \* The only spot for C in the 12th 5x3 rectangle is (14, 10).

Step 15: There are 5 independent moves.

- \* The only spot for 6 in the 11th row is (10, 11).
- \* The only spot for 4 in the 8th column is (8, 9).
- \* The only spot for 7 in the 10th column is (10, 10).
- \* The only spot for 7 in the 2nd 5x3 rectangle is (8, 3).
- \* The only spot for 6 in the 10th 5x3 rectangle is (1, 10).

Step 16: There are 4 independent moves.

- \* The only spot for B in the 10th column is (10, 8).
- \* The only spot for 7 in the 8th 5x3 rectangle is (9, 9).

- \* The only spot for 6 in the 8th 5x3 rectangle is (7, 8).
- \* The only spot for B in the 11th 5x3 rectangle is (7, 10).

Step 17: There are 4 independent moves.

- \* The only spot for A in the 7th column is (7, 13).
- \* The only spot for D in the 9th column is (9, 5).
- \* The only spot for D in the 8th 5x3 rectangle is (7, 9).
- \* The only spot for A in the 11th 5x3 rectangle is (9, 10).

Step 18: There are 2 independent moves.

- \* The only spot for 4 in the 5th 5x3 rectangle is (7, 5).
- \* The only spot for 4 in the 14th 5x3 rectangle is (9, 13).



## Solution for Puzzle 31

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

E	4	D	5	3	A	0	2	6	8	1	C	B	9	7
A	C	7	B	9	D	E	3	1	5	0	4	6	8	2
2	1	8	6	0	B	C	7	9	4	5	E	A	3	D
D	6	4	9	A	2	1	8	0	E	B	5	C	7	3
5	B	3	E	7	6	4	9	D	C	8	2	0	1	A
8	2	0	1	C	5	7	A	B	3	9	6	D	4	E
0	D	5	3	6	9	8	E	2	A	C	7	4	B	1
4	7	C	A	2	3	6	1	5	B	D	9	E	0	8
B	9	E	8	1	C	D	4	7	0	A	3	2	5	6
6	3	2	0	8	E	B	5	A	7	4	D	1	C	9
C	E	1	4	B	0	9	D	3	6	2	8	7	A	5
9	5	A	7	D	4	2	C	8	1	E	0	3	6	B
3	8	9	C	E	7	A	B	4	D	6	1	5	2	0
1	0	B	D	5	8	3	6	C	2	7	A	9	E	4
7	A	6	2	4	1	5	0	E	9	3	B	8	D	C

Challenging

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## Sudoku-15 Puzzle 32, Challenging/19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		C		D		9			4	3	E		1	
0		5		9		7	D		C					2
	2	7	6		8			B		0		A		
	5					C			7		A			
8		E			A					B		9	2	6
	4		A	6	2	1			9	5				
A			0	5			9	8	6				3	
		3		1			A	C		8		D		5
6					4			5			2		7	E
			4		3		2		A	D	9	8		0
	D		5					9	8			C	E	4
	8		3	2		D	C							
D			2	E	9	8					5	6		
		9		7					5	E	0		D	
5		A				2	7	D			4	3		

Challenging

Diff: 19 / 999.7124.3359.8975.4694

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 19 steps required to solve the puzzle above with a total of 126 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 32

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	<sup>2</sup>	C		D		9		<sup>1</sup>	4	3	E		1	
0	<sup>3</sup>	5		9		7	D	<sup>2</sup>	C					2
	2	7	6	<sup>1</sup>	8			B		0		A		<sup>3</sup>
<sup>2</sup>	5		<sup>2</sup>			C			7		A			
8		E			A	<sup>2</sup>	<sup>3</sup>		<sup>3</sup>	B		9	2	6
	4		A	6	2	1			9	5				
A	<sup>3</sup>	<sup>1</sup>	0	5	<sup>2</sup>		9	8	6				3	
<sup>2</sup>		3		1	<sup>3</sup>		A	C	<sup>1</sup>	8	<sup>3</sup>	D	<sup>2</sup>	5
6	<sup>3</sup>	<sup>1</sup>	<sup>2</sup>		4			5		<sup>1</sup>	2	<sup>3</sup>	7	E
			4		3		2	<sup>2</sup>	A	D	9	8		0
<sup>3</sup>	D		5	<sup>1</sup>				9	8	<sup>1</sup>	<sup>1</sup>	C	E	4
<sup>1</sup>	8		3	2		D	C	<sup>1</sup>						
D		<sup>2</sup>	2	E	9	8					5	6		
		9		7		<sup>1</sup>	<sup>3</sup>		5	E	0	<sup>1</sup>	D	<sup>3</sup>
5		A		<sup>2</sup>		2	7	D		<sup>2</sup>	4	3		

Challenging

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There are 19 steps required to solve the puzzle above with a total of 126 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 32

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>8</sup>	<sup>2</sup>	<b>C</b>	<sup>4</sup>	<b>D</b>	<sup>15</sup>	<b>9</b>	<sup>14</sup>	<sup>1</sup>	<b>4</b>	<b>3</b>	<b>E</b>	<sup>6</sup>	<b>1</b>	<sup>7</sup>	<sup>1</sup>
<b>0</b>	<sup>3</sup>	<b>5</b>	<sup>10</sup>	<b>9</b>	<sup>11</sup>	<b>7</b>	<b>D</b>	<sup>2</sup>	<b>C</b>	<sup>18</sup>	<sup>17</sup>	<sup>18</sup>	<sup>17</sup>	<b>2</b>	
<sup>11</sup>	<b>2</b>	<b>7</b>	<b>6</b>	<sup>1</sup>	<b>8</b>	<sup>6</sup>	<sup>10</sup>	<b>B</b>	<sup>11</sup>	<b>0</b>	<sup>4</sup>	<b>A</b>	<sup>5</sup>	<sup>3</sup>	
<sup>2</sup>	<b>5</b>	<sup>16</sup>	<sup>2</sup>	<sup>19</sup>	<sup>14</sup>	<b>C</b>	<sup>15</sup>	<sup>18</sup>	<b>7</b>	<sup>17</sup>	<b>A</b>	<sup>18</sup>	<sup>16</sup>	<sup>17</sup>	<sup>4</sup>
<b>8</b>	<sup>13</sup>	<b>E</b>	<sup>4</sup>	<sup>18</sup>	<b>A</b>	<sup>2</sup>	<sup>3</sup>	<sup>19</sup>	<sup>3</sup>	<b>B</b>	<sup>13</sup>	<b>9</b>	<b>2</b>	<b>6</b>	
<sup>12</sup>	<b>4</b>	<sup>15</sup>	<b>A</b>	<b>6</b>	<b>2</b>	<b>1</b>	<sup>16</sup>	<sup>17</sup>	<b>9</b>	<b>5</b>	<sup>19</sup>	<sup>18</sup>	<sup>17</sup>	<sup>16</sup>	
<b>A</b>	<sup>3</sup>	<sup>1</sup>	<b>0</b>	<b>5</b>	<sup>2</sup>	<sup>4</sup>	<b>9</b>	<b>8</b>	<b>6</b>	<sup>9</sup>	<sup>13</sup>	<sup>10</sup>	<b>3</b>	<sup>14</sup>	<sup>7</sup>
<sup>2</sup>	<sup>11</sup>	<b>3</b>	<sup>12</sup>	<b>1</b>	<sup>3</sup>	<sup>4</sup>	<b>A</b>	<b>C</b>	<sup>1</sup>	<b>8</b>	<sup>3</sup>	<b>D</b>	<sup>2</sup>	<b>5</b>	
<b>6</b>	<sup>3</sup>	<sup>1</sup>	<sup>2</sup>	<sup>4</sup>	<b>4</b>	<sup>7</sup>	<sup>14</sup>	<b>5</b>	<sup>13</sup>	<sup>1</sup>	<b>2</b>	<sup>3</sup>	<b>7</b>	<b>E</b>	
<sup>11</sup>	<sup>12</sup>	<sup>13</sup>	<b>4</b>	<sup>15</sup>	<b>3</b>	<sup>14</sup>	<b>2</b>	<sup>2</sup>	<b>A</b>	<b>D</b>	<b>9</b>	<b>8</b>	<sup>7</sup>	<b>0</b>	<sup>10</sup>
<sup>3</sup>	<b>D</b>	<sup>14</sup>	<b>5</b>	<sup>1</sup>	<sup>13</sup>	<sup>15</sup>	<sup>12</sup>	<b>9</b>	<b>8</b>	<sup>1</sup>	<sup>1</sup>	<b>C</b>	<b>E</b>	<b>4</b>	
<sup>1</sup>	<b>8</b>	<sup>9</sup>	<b>3</b>	<b>2</b>	<sup>7</sup>	<b>D</b>	<b>C</b>	<sup>1</sup>	<sup>8</sup>	<sup>18</sup>	<sup>18</sup>	<sup>19</sup>	<sup>18</sup>	<sup>13</sup>	
<b>D</b>	<sup>11</sup>	<sup>2</sup>	<b>2</b>	<b>E</b>	<b>9</b>	<b>8</b>	<sup>13</sup>	<sup>12</sup>	<sup>14</sup>	<sup>8</sup>	<b>5</b>	<b>6</b>	<sup>13</sup>	<sup>12</sup>	<sup>13</sup>
<sup>4</sup>	<sup>13</sup>	<b>9</b>	<sup>12</sup>	<b>7</b>	<sup>10</sup>	<sup>1</sup>	<sup>3</sup>	<sup>11</sup>	<b>5</b>	<b>E</b>	<b>0</b>	<sup>1</sup>	<b>D</b>	<sup>3</sup>	
<b>5</b>	<sup>10</sup>	<b>A</b>	<sup>11</sup>	<sup>2</sup>	<sup>9</sup>	<b>2</b>	<b>7</b>	<b>D</b>	<sup>11</sup>	<sup>2</sup>	<b>4</b>	<b>3</b>	<sup>13</sup>	<sup>12</sup>	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

Challenging

Diff: 19 / 999.7124.3359.8975.4694

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There are 19 steps required to solve the puzzle above with a total of 126 empty locations that must be determined, out of a total puzzle size of 225.

All 19 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 2 in the 7th row is (3, 7).
- \* The only spot for 8 in the 3rd column is (3, 9).
- \* The only spot for 4 in the 5th column is (5, 3).
- \* The only spot for A in the 7th column is (7, 14).
- \* The only spot for 2 in the 2nd 5x3 rectangle is (9, 1).
- \* The only spot for 2 in the 8th 5x3 rectangle is (10, 8).
- \* The only spot for A in the 9th 5x3 rectangle is (11, 9).
- \* The only spot for 9 in the 10th 5x3 rectangle is (1, 12).
- \* The only spot for A in the 10th 5x3 rectangle is (5, 11).
- \* The only spot for 4 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for 3 in the 12th 5x3 rectangle is (12, 11).
- \* The only spot for 2 in the 12th 5x3 rectangle is (11, 11).
- \* The only spot for 2 in the 15th 5x3 rectangle is (13, 14).

Step 2: There are 13 independent moves.

- \* The only spot for A in the 1st row is (2, 1).
- \* The only spot for D in the 7th row is (6, 7).
- \* The only spot for 4 in the 3rd column is (3, 13).
- \* The only spot for 8 in the 5th column is (5, 15).
- \* The only spot for 4 in the 7th column is (7, 5).
- \* The only spot for 7 in the 9th column is (9, 10).
- \* The only spot for 9 in the 11th column is (11, 15).
- \* The only spot for A in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for 9 in the 4th 5x3 rectangle is (4, 4).
- \* The only spot for 2 in the 4th 5x3 rectangle is (1, 4).
- \* The only spot for D in the 7th 5x3 rectangle is (4, 9).
- \* The only spot for 4 in the 7th 5x3 rectangle is (1, 8).
- \* The only spot for 9 in the 9th 5x3 rectangle is (14, 8).

Step 3: There are 12 independent moves.

- \* The only spot for 3 in the 2nd row is (2, 2).
- \* The only spot for 7 in the 7th row is (2, 7).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (15, 3).
- \* The only spot for D in the 5th 5x3 rectangle is (10, 5).
- \* The only spot for 5 in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for 9 in the 7th 5x3 rectangle is (2, 9).
- \* The only spot for 7 in the 8th 5x3 rectangle is (6, 8).
- \* The only spot for 0 in the 9th 5x3 rectangle is (13, 9).
- \* The only spot for 6 in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 7 in the 10th 5x3 rectangle is (1, 11).
- \* The only spot for 4 in the 14th 5x3 rectangle is (8, 14).
- \* The only spot for 8 in the 15th 5x3 rectangle is (15, 14).

Step 4: There are 7 independent moves.

- \* The only spot for 8 in the 1st row is (4, 1).
- \* The only spot for E in the 7th row is (7, 7).
- \* The only spot for D in the 3rd 5x3 rectangle is (12, 3).

- \* The only spot for 7 in the 4th 5x3 rectangle is (4, 5).
- \* The only spot for C in the 7th 5x3 rectangle is (5, 9).
- \* The only spot for 0 in the 8th 5x3 rectangle is (7, 8).
- \* The only spot for 3 in the 13th 5x3 rectangle is (1, 14).

Step 5: There is 1 independent move.

- \* The only spot for C in the 3rd 5x3 rectangle is (14, 3).

Step 6: There are 2 independent moves.

- \* The only spot for 5 in the 3rd row is (7, 3).
- \* The only spot for 5 in the 3rd 5x3 rectangle is (13, 1).

Step 7: There are 4 independent moves.

- \* The only spot for 5 in the 10th row is (14, 10).
- \* The only spot for 3 in the 7th column is (7, 9).
- \* The only spot for 7 in the 3rd 5x3 rectangle is (15, 1).
- \* The only spot for 5 in the 11th 5x3 rectangle is (6, 12).

Step 8: There are 3 independent moves.

- \* The only spot for B in the 1st row is (1, 1).
- \* The only spot for E in the 11th 5x3 rectangle is (10, 12).
- \* The only spot for 7 in the 15th 5x3 rectangle is (11, 13).

Step 9: There are 3 independent moves.

- \* The only spot for 0 in the 12th row is (3, 12).
- \* The only spot for C in the 11th column is (11, 7).
- \* The only spot for E in the 14th 5x3 rectangle is (6, 15).

Step 10: There are 5 independent moves.

- \* The only spot for E in the 2nd row is (4, 2).
- \* The only spot for 6 in the 15th row is (2, 15).
- \* The only spot for E in the 2nd 5x3 rectangle is (8, 3).
- \* The only spot for 4 in the 9th 5x3 rectangle is (13, 7).
- \* The only spot for C in the 14th 5x3 rectangle is (6, 14).

Step 11: There are 9 independent moves.

- \* The only spot for 1 in the 2nd row is (6, 2).
- \* The only spot for 0 in the 15th row is (10, 15).
- \* The only spot for E in the 1st column is (1, 10).
- \* The only spot for C in the 4th column is (4, 15).
- \* The only spot for 1 in the 1st 5x3 rectangle is (1, 3).
- \* The only spot for 3 in the 2nd 5x3 rectangle is (10, 3).
- \* The only spot for E in the 7th 5x3 rectangle is (2, 8).
- \* The only spot for 0 in the 13th 5x3 rectangle is (2, 13).
- \* The only spot for 6 in the 14th 5x3 rectangle is (9, 14).

Step 12: There are 8 independent moves.

- \* The only spot for 1 in the 15th row is (15, 15).
- \* The only spot for C in the 1st column is (1, 6).
- \* The only spot for 1 in the 4th column is (4, 14).
- \* The only spot for 1 in the 9th column is (9, 13).
- \* The only spot for B in the 7th 5x3 rectangle is (4, 8).

- \* The only spot for C in the 10th 5x3 rectangle is (2, 10).
- \* The only spot for 1 in the 11th 5x3 rectangle is (8, 11).
- \* The only spot for C in the 15th 5x3 rectangle is (15, 13).

Step 13: There are 11 independent moves.

- \* The only spot for B in the 15th row is (14, 15).
- \* The only spot for 1 in the 2nd column is (2, 5).
- \* The only spot for A in the 15th column is (15, 12).
- \* The only spot for C in the 6th 5x3 rectangle is (12, 5).
- \* The only spot for 1 in the 8th 5x3 rectangle is (10, 9).
- \* The only spot for 1 in the 9th 5x3 rectangle is (12, 7).
- \* The only spot for 1 in the 10th 5x3 rectangle is (3, 10).
- \* The only spot for 0 in the 11th 5x3 rectangle is (6, 11).
- \* The only spot for B in the 13th 5x3 rectangle is (2, 14).
- \* The only spot for 3 in the 14th 5x3 rectangle is (8, 13).
- \* The only spot for A in the 15th 5x3 rectangle is (14, 13).

Step 14: There are 7 independent moves.

- \* The only spot for 6 in the 10th row is (7, 10).
- \* The only spot for B in the 6th column is (6, 4).
- \* The only spot for 0 in the 2nd 5x3 rectangle is (8, 1).
- \* The only spot for B in the 8th 5x3 rectangle is (8, 9).
- \* The only spot for B in the 9th 5x3 rectangle is (15, 7).
- \* The only spot for 6 in the 10th 5x3 rectangle is (3, 11).
- \* The only spot for B in the 14th 5x3 rectangle is (10, 13).

Step 15: There are 5 independent moves.

- \* The only spot for 6 in the 2nd 5x3 rectangle is (6, 1).
- \* The only spot for B in the 4th 5x3 rectangle is (3, 6).
- \* The only spot for 6 in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for B in the 10th 5x3 rectangle is (5, 10).
- \* The only spot for B in the 11th 5x3 rectangle is (7, 11).

Step 16: There are 4 independent moves.

- \* The only spot for 8 in the 4th row is (14, 4).
- \* The only spot for D in the 6th row is (15, 6).
- \* The only spot for D in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for 8 in the 5th 5x3 rectangle is (8, 6).

Step 17: There are 6 independent moves.

- \* The only spot for 3 in the 6th row is (9, 6).
- \* The only spot for 4 in the 14th column is (14, 2).
- \* The only spot for 8 in the 3rd 5x3 rectangle is (12, 2).
- \* The only spot for 0 in the 6th 5x3 rectangle is (14, 6).
- \* The only spot for 3 in the 6th 5x3 rectangle is (15, 4).
- \* The only spot for 4 in the 6th 5x3 rectangle is (11, 4).

Step 18: There are 9 independent moves.

- \* The only spot for E in the 6th row is (13, 6).
- \* The only spot for 1 in the 11th column is (11, 12).

- \* The only spot for B in the 12th column is (12, 12).
- \* The only spot for 6 in the 14th column is (14, 12).
- \* The only spot for B in the 3rd 5x3 rectangle is (13, 2).
- \* The only spot for 6 in the 3rd 5x3 rectangle is (11, 2).
- \* The only spot for 3 in the 4th 5x3 rectangle is (5, 5).
- \* The only spot for E in the 5th 5x3 rectangle is (9, 4).
- \* The only spot for 1 in the 6th 5x3 rectangle is (13, 4).

Step 19: There are 4 independent moves.

- \* The only spot for 0 in the 4th 5x3 rectangle is (5, 4).
- \* The only spot for 0 in the 5th 5x3 rectangle is (9, 5).
- \* The only spot for 7 in the 6th 5x3 rectangle is (12, 6).
- \* The only spot for 7 in the 12th 5x3 rectangle is (13, 12).



## Solution for Puzzle 32

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

B	A	C	8	D	6	9	0	2	4	3	E	5	1	7
0	3	5	E	9	1	7	D	A	C	6	8	B	4	2
1	2	7	6	4	8	5	E	B	3	0	D	A	C	9
2	5	D	9	0	B	C	6	E	7	4	A	1	8	3
8	1	E	7	3	A	4	5	0	D	B	C	9	2	6
C	4	B	A	6	2	1	8	3	9	5	7	E	0	D
A	7	2	0	5	D	E	9	8	6	C	1	4	3	B
4	E	3	B	1	7	0	A	C	2	8	6	D	9	5
6	9	8	D	C	4	3	B	5	1	A	2	0	7	E
E	C	1	4	B	3	6	2	7	A	D	9	8	5	0
7	D	6	5	A	0	B	1	9	8	2	3	C	E	4
9	8	0	3	2	5	D	C	4	E	1	B	7	6	A
D	0	4	2	E	9	8	3	1	B	7	5	6	A	C
3	B	9	1	7	C	A	4	6	5	E	0	2	D	8
5	6	A	C	8	E	2	7	D	0	9	4	3	B	1

Challenging

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## Chapter 19

# Two Tournament Sudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-four to twenty-eight. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 33** (134/225) DiffKey 24 / 9943.4232.31A2.5545.3359.9999

**Puzzle 34** (127/225) DiffKey 28 / 9942.3614.4456.3455.4333.B222.4797

## Sudoku-15 Puzzle 33, Tournament/24

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2				6			B		5	E	9			
	1		B	A			0					8		5
8	5					6		7	2				A	
	8	C		0			9						4	7
		3	9					0	4				2	C
		1			E	D		C		3	A		0	
		B	E		8	4		5		6				9
C				9				6				5	8	
			8		7					C		D		4
	9	6		4	C						D			2
		8	A		2	5			1			C		
3					9	8				A	6	7		
B			4	C		2			D	5	8			
	6						E	4	3	2				
	7		1	3				9			B	0	C	

Tournament

Diff: 24 / 9943.4232.31A2.5545.3359.9999

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 24 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 33

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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2				6			B	<sup>1</sup>	5	E	9			
	1		B	A		<sup>3</sup>	0		<sup>2</sup>		<sup>1</sup>	8	<sup>1</sup>	5
8	5	<sup>1</sup>		<sup>2</sup>		6		7	2		<sup>2</sup>		A	
	8	C		0			9						4	7
		3	9				<sup>2</sup>	0	4				2	C
		1			E	D		C		3	A	<sup>1</sup>	0	<sup>1</sup>
		B	E		8	4	<sup>3</sup>	5		6		<sup>1</sup>		9
C				9				6				5	8	<sup>2</sup>
<sup>1</sup>			8		7				<sup>3</sup>	C		D		4
	9	6		4	C					<sup>1</sup>	D			2
		8	A		2	5	<sup>1</sup>		1	<sup>1</sup>	<sup>2</sup>	C		
3					9	8	<sup>1</sup>			A	6	7		
B			4	C	<sup>3</sup>	2	<sup>2</sup>		D	5	8		<sup>2</sup>	
<sup>2</sup>	6			<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	E	4	3	2				
	7	<sup>1</sup>	1	3				9	<sup>2</sup>	<sup>1</sup>	B	0	C	

Tournament

Diff: 24 / 9943.4232.31A2.5545.3359.9999

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There are 24 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 33

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1) 134/225

<b>2</b>	<sup>21</sup>	<sup>15</sup>	<sup>16</sup>	<b>6</b>	<sup>7</sup>	<sup>10</sup>	<b>B</b>	<sup>1</sup>	<b>5</b>	<b>E</b>	<b>9</b>	<sup>9</sup>	<sup>24</sup>	<sup>23</sup>	<sup>1</sup>
<sup>15</sup>	<b>1</b>	<sup>14</sup>	<b>B</b>	<b>A</b>	<sup>5</sup>	<sup>3</sup>	<b>0</b>	<sup>4</sup>	<sup>2</sup>	<sup>16</sup>	<sup>1</sup>	<b>8</b>	<sup>1</sup>	<b>5</b>	
<b>8</b>	<b>5</b>	<sup>1</sup>	<sup>21</sup>	<sup>2</sup>	<sup>8</sup>	<b>6</b>	<sup>9</sup>	<b>7</b>	<b>2</b>	<sup>20</sup>	<sup>2</sup>	<sup>17</sup>	<b>A</b>	<sup>20</sup>	
<sup>24</sup>	<b>8</b>	<b>C</b>	<sup>12</sup>	<b>0</b>	<sup>21</sup>	<sup>15</sup>	<b>9</b>	<sup>14</sup>	<sup>13</sup>	<sup>13</sup>	<sup>23</sup>	<sup>16</sup>	<b>4</b>	<b>7</b>	<sup>4</sup>
<sup>21</sup>	<sup>24</sup>	<b>3</b>	<b>9</b>	<sup>23</sup>	<sup>22</sup>	<sup>21</sup>	<sup>2</sup>	<b>0</b>	<b>4</b>	<sup>20</sup>	<sup>24</sup>	<sup>5</sup>	<b>2</b>	<b>C</b>	
<sup>22</sup>	<sup>14</sup>	<b>1</b>	<sup>13</sup>	<sup>23</sup>	<b>E</b>	<b>D</b>	<sup>11</sup>	<b>C</b>	<sup>20</sup>	<b>3</b>	<b>A</b>	<sup>1</sup>	<b>0</b>	<sup>1</sup>	
<sup>22</sup>	<sup>23</sup>	<b>B</b>	<b>E</b>	<sup>22</sup>	<b>8</b>	<b>4</b>	<sup>3</sup>	<b>5</b>	<sup>21</sup>	<b>6</b>	<sup>24</sup>	<sup>1</sup>	<sup>24</sup>	<b>9</b>	<sup>7</sup>
<b>C</b>	<sup>13</sup>	<sup>14</sup>	<sup>21</sup>	<b>9</b>	<sup>9</sup>	<sup>19</sup>	<sup>24</sup>	<b>6</b>	<sup>22</sup>	<sup>19</sup>	<sup>23</sup>	<b>5</b>	<b>8</b>	<sup>2</sup>	
<sup>1</sup>	<sup>24</sup>	<sup>20</sup>	<b>8</b>	<sup>21</sup>	<b>7</b>	<sup>19</sup>	<sup>23</sup>	<sup>12</sup>	<sup>3</sup>	<b>C</b>	<sup>22</sup>	<b>D</b>	<sup>18</sup>	<b>4</b>	
<sup>14</sup>	<b>9</b>	<b>6</b>	<sup>20</sup>	<b>4</b>	<b>C</b>	<sup>20</sup>	<sup>21</sup>	<sup>17</sup>	<sup>21</sup>	<sup>1</sup>	<b>D</b>	<sup>17</sup>	<sup>19</sup>	<b>2</b>	<sup>10</sup>
<sup>23</sup>	<sup>24</sup>	<b>8</b>	<b>A</b>	<sup>24</sup>	<b>2</b>	<b>5</b>	<sup>1</sup>	<sup>16</sup>	<b>1</b>	<sup>1</sup>	<sup>2</sup>	<b>C</b>	<sup>23</sup>	<sup>22</sup>	
<b>3</b>	<sup>16</sup>	<sup>22</sup>	<sup>15</sup>	<sup>13</sup>	<b>9</b>	<b>8</b>	<sup>1</sup>	<sup>18</sup>	<sup>18</sup>	<b>A</b>	<b>6</b>	<b>7</b>	<sup>20</sup>	<sup>21</sup>	
<b>B</b>	<sup>20</sup>	<sup>19</sup>	<b>4</b>	<b>C</b>	<sup>3</sup>	<b>2</b>	<sup>2</sup>	<sup>4</sup>	<b>D</b>	<b>5</b>	<b>8</b>	<sup>6</sup>	<sup>2</sup>	<sup>5</sup>	<sup>13</sup>
<sup>2</sup>	<b>6</b>	<sup>21</sup>	<sup>22</sup>	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	<b>E</b>	<b>4</b>	<b>3</b>	<b>2</b>	<sup>24</sup>	<sup>7</sup>	<sup>23</sup>	<sup>24</sup>	
<sup>8</sup>	<b>7</b>	<sup>1</sup>	<b>1</b>	<b>3</b>	<sup>4</sup>	<sup>6</sup>	<sup>5</sup>	<b>9</b>	<sup>2</sup>	<sup>1</sup>	<b>B</b>	<b>0</b>	<b>C</b>	<sup>7</sup>	
<sup>1</sup>					<sup>6</sup>			<sup>11</sup>							

Tournament 6 11 Diff: 24 / 9943.4232.31A2.5545.3359.9999

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There are 24 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.

All 24 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 16 independent moves.

- \* The only spot for 9 in the 3rd row is (3, 3).
- \* The only spot for 4 in the 12th row is (8, 12).
- \* The only spot for 9 in the 11th column is (11, 11).
- \* The only spot for 2 in the 13th column is (13, 7).
- \* The only spot for 8 in the 15th column is (15, 6).
- \* The only spot for 8 in the 2nd 5x3 rectangle is (9, 1).
- \* The only spot for 6 in the 3rd 5x3 rectangle is (14, 2).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (12, 2).
- \* The only spot for 9 in the 6th 5x3 rectangle is (13, 6).
- \* The only spot for 6 in the 7th 5x3 rectangle is (1, 9).
- \* The only spot for 6 in the 11th 5x3 rectangle is (8, 11).
- \* The only spot for 8 in the 12th 5x3 rectangle is (11, 10).
- \* The only spot for 2 in the 13th 5x3 rectangle is (3, 15).
- \* The only spot for 8 in the 13th 5x3 rectangle is (5, 14).
- \* The only spot for C in the 14th 5x3 rectangle is (7, 14).
- \* The only spot for 4 in the 15th 5x3 rectangle is (11, 15).

Step 2: There are 11 independent moves.

- \* The only spot for C in the 2nd row is (10, 2).
- \* The only spot for E in the 3rd row is (5, 3).
- \* The only spot for 9 in the 13th row is (14, 13).
- \* The only spot for 8 in the 10th column is (10, 15).
- \* The only spot for C in the 3rd 5x3 rectangle is (12, 3).
- \* The only spot for 8 in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for A in the 9th 5x3 rectangle is (15, 8).
- \* The only spot for 4 in the 12th 5x3 rectangle is (12, 11).
- \* The only spot for 9 in the 13th 5x3 rectangle is (1, 14).
- \* The only spot for B in the 14th 5x3 rectangle is (6, 14).
- \* The only spot for 7 in the 14th 5x3 rectangle is (8, 13).

Step 3: There are 4 independent moves.

- \* The only spot for 9 in the 10th column is (10, 9).
- \* The only spot for 9 in the 2nd 5x3 rectangle is (7, 2).
- \* The only spot for C in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for 0 in the 14th 5x3 rectangle is (6, 13).

Step 4: There are 3 independent moves.

- \* The only spot for E in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for 6 in the 14th 5x3 rectangle is (6, 15).
- \* The only spot for 1 in the 14th 5x3 rectangle is (9, 13).

Step 5: There are 4 independent moves.

- \* The only spot for 3 in the 2nd row is (6, 2).
- \* The only spot for 6 in the 5th row is (13, 5).
- \* The only spot for 6 in the 15th column is (15, 13).
- \* The only spot for 5 in the 14th 5x3 rectangle is (8, 15).

Step 6: There are 2 independent moves.

- \* The only spot for A in the 14th 5x3 rectangle is (7, 15).
- \* The only spot for 3 in the 15th 5x3 rectangle is (13, 13).

Step 7: There are 3 independent moves.

- \* The only spot for A in the 2nd 5x3 rectangle is (6, 1).
- \* The only spot for E in the 15th 5x3 rectangle is (15, 15).
- \* The only spot for A in the 15th 5x3 rectangle is (13, 14).

Step 8: There are 2 independent moves.

- \* The only spot for D in the 15th row is (1, 15).
- \* The only spot for 4 in the 2nd 5x3 rectangle is (6, 3).

Step 9: There are 3 independent moves.

- \* The only spot for D in the 6th column is (6, 8).
- \* The only spot for D in the 2nd 5x3 rectangle is (8, 3).
- \* The only spot for 4 in the 3rd 5x3 rectangle is (13, 1).

Step 10: There is 1 independent move.

- \* The only spot for 1 in the 2nd 5x3 rectangle is (7, 1).

Step 11: There is 1 independent move.

- \* 2 must be placed at (8, 6) because it is the only value left that is not already in the 6th row, the 8th column or the 5th 5x3 rectangle.

Step 12: There are 2 independent moves.

- \* The only spot for 2 in the 4th 5x3 rectangle is (4, 4).
- \* The only spot for 2 in the 8th 5x3 rectangle is (9, 9).

Step 13: There are 5 independent moves.

- \* The only spot for D in the 4th row is (11, 4).
- \* The only spot for 6 in the 4th row is (10, 4).
- \* The only spot for 2 in the 5th column is (5, 12).
- \* The only spot for 6 in the 4th 5x3 rectangle is (4, 6).
- \* The only spot for 2 in the 7th 5x3 rectangle is (2, 8).

Step 14: There are 5 independent moves.

- \* The only spot for D in the 2nd row is (3, 2).
- \* The only spot for 4 in the 2nd column is (2, 6).
- \* The only spot for A in the 5th 5x3 rectangle is (9, 4).
- \* The only spot for 4 in the 7th 5x3 rectangle is (3, 8).
- \* The only spot for 1 in the 10th 5x3 rectangle is (1, 10).

Step 15: There are 4 independent moves.

- \* The only spot for 7 in the 3rd column is (3, 1).
- \* The only spot for D in the 4th column is (4, 12).
- \* The only spot for 4 in the 1st 5x3 rectangle is (1, 2).
- \* The only spot for 3 in the 5th 5x3 rectangle is (7, 4).

Step 16: There are 5 independent moves.

- \* The only spot for B in the 4th row is (13, 4).
- \* The only spot for C in the 4th column is (4, 1).
- \* The only spot for 7 in the 3rd 5x3 rectangle is (11, 2).
- \* The only spot for C in the 10th 5x3 rectangle is (2, 12).
- \* The only spot for D in the 11th 5x3 rectangle is (9, 11).

Step 17: There are 3 independent moves.

- \* The only spot for 3 in the 9th column is (9, 10).
- \* The only spot for E in the 13th column is (13, 10).
- \* The only spot for 1 in the 13th column is (13, 3).

Step 18: There are 3 independent moves.

- \* The only spot for B in the 9th column is (9, 12).
- \* The only spot for E in the 14th column is (14, 9).
- \* The only spot for E in the 11th 5x3 rectangle is (10, 12).

Step 19: There are 5 independent moves.

- \* The only spot for B in the 9th row is (7, 9).
- \* The only spot for B in the 10th row is (14, 10).
- \* The only spot for E in the 3rd column is (3, 13).
- \* The only spot for E in the 8th 5x3 rectangle is (7, 8).
- \* The only spot for B in the 9th 5x3 rectangle is (11, 8).

Step 20: There are 9 independent moves.

- \* The only spot for 5 in the 10th row is (4, 10).
- \* The only spot for A in the 3rd column is (3, 9).
- \* The only spot for 0 in the 7th column is (7, 10).
- \* The only spot for 1 in the 11th column is (11, 5).
- \* The only spot for 0 in the 11th column is (11, 3).
- \* The only spot for B in the 3rd 5x3 rectangle is (15, 3).
- \* The only spot for B in the 5th 5x3 rectangle is (10, 6).
- \* The only spot for 5 in the 12th 5x3 rectangle is (14, 12).
- \* The only spot for A in the 13th 5x3 rectangle is (2, 13).

Step 21: There are 12 independent moves.

- \* The only spot for 3 in the 3rd row is (4, 3).
- \* The only spot for 7 in the 4th column is (4, 8).
- \* The only spot for A in the 8th column is (8, 10).
- \* The only spot for 0 in the 1st 5x3 rectangle is (2, 1).
- \* The only spot for A in the 4th 5x3 rectangle is (1, 5).
- \* The only spot for 7 in the 5th 5x3 rectangle is (7, 5).
- \* The only spot for 1 in the 5th 5x3 rectangle is (6, 4).
- \* The only spot for 5 in the 7th 5x3 rectangle is (5, 9).
- \* The only spot for A in the 8th 5x3 rectangle is (10, 7).
- \* The only spot for 7 in the 11th 5x3 rectangle is (10, 10).
- \* The only spot for 1 in the 12th 5x3 rectangle is (15, 12).
- \* The only spot for 5 in the 13th 5x3 rectangle is (3, 14).

Step 22: There are 9 independent moves.

- \* The only spot for 5 in the 6th row is (1, 6).
- \* The only spot for 0 in the 9th row is (12, 9).
- \* The only spot for 0 in the 3rd column is (3, 12).
- \* The only spot for 5 in the 5th 5x3 rectangle is (6, 5).
- \* The only spot for 1 in the 7th 5x3 rectangle is (5, 7).
- \* The only spot for 0 in the 7th 5x3 rectangle is (1, 7).



- \* The only spot for 0 in the 8th 5x3 rectangle is (10, 8).
- \* The only spot for 0 in the 12th 5x3 rectangle is (15, 11).
- \* The only spot for 0 in the 13th 5x3 rectangle is (4, 14).

Step 23: There are 10 independent moves.

- \* The only spot for 1 in the 9th row is (8, 9).
- \* The only spot for 7 in the 1st column is (1, 11).
- \* The only spot for D in the 5th column is (5, 5).
- \* The only spot for 1 in the 14th column is (14, 14).
- \* The only spot for 3 in the 15th column is (15, 1).
- \* The only spot for 7 in the 4th 5x3 rectangle is (5, 6).
- \* The only spot for 5 in the 6th 5x3 rectangle is (12, 4).
- \* The only spot for D in the 7th 5x3 rectangle is (2, 7).
- \* The only spot for 1 in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 3 in the 12th 5x3 rectangle is (14, 11).

Step 24: There are 12 independent moves.

- \* The only spot for E in the 1st column is (1, 4).
- \* The only spot for B in the 5th column is (5, 11).
- \* The only spot for 7 in the 14th column is (14, 7).
- \* The only spot for D in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for B in the 4th 5x3 rectangle is (2, 5).
- \* The only spot for E in the 6th 5x3 rectangle is (12, 5).
- \* The only spot for 3 in the 7th 5x3 rectangle is (2, 9).
- \* The only spot for 3 in the 8th 5x3 rectangle is (8, 8).
- \* The only spot for 3 in the 9th 5x3 rectangle is (12, 7).
- \* The only spot for E in the 10th 5x3 rectangle is (2, 11).
- \* The only spot for D in the 15th 5x3 rectangle is (15, 14).
- \* The only spot for 7 in the 15th 5x3 rectangle is (12, 14).

## Solution for Puzzle 33

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	0	7	C	6	A	1	B	8	5	E	9	4	D	3
4	1	D	B	A	3	9	0	E	C	7	2	8	6	5
8	5	9	3	E	4	6	D	7	2	0	C	1	A	B
E	8	C	2	0	1	3	9	A	6	D	5	B	4	7
A	B	3	9	D	5	7	8	0	4	1	E	6	2	C
5	4	1	6	7	E	D	2	C	B	3	A	9	0	8
0	D	B	E	1	8	4	C	5	A	6	3	2	7	9
C	2	4	7	9	D	E	3	6	0	B	1	5	8	A
6	3	A	8	5	7	B	1	2	9	C	0	D	E	4
1	9	6	5	4	C	0	A	3	7	8	D	E	B	2
7	E	8	A	B	2	5	6	D	1	9	4	C	3	0
3	C	0	D	2	9	8	4	B	E	A	6	7	5	1
B	A	E	4	C	0	2	7	1	D	5	8	3	9	6
9	6	5	0	8	B	C	E	4	3	2	7	A	1	D
D	7	2	1	3	6	A	5	9	8	4	B	0	C	E

Tournament

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## Sudoku-15 Puzzle 34, Tournament/28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		8	2	3	7	D								
0	9	A	4			1	6					8		
1					9				2		E	5		0
	8	C			D			2		5		7		E
A	D	1			8		5	E		B		2		
7	3						C	6	B		4		8	1
				A		B		4	6			1	0	7
		9	5					1	7					C
B				0				3	E	9	D	A		
3	6			5		E	A					B	2	8
	E				6	2			C				7	4
		2	7					D		1			E	
4		0							D	8				
			8	7	2		1		A	4		C	B	
2	1			C	4		7			E			A	

Tournament

Diff: 28 / 9942.3614.4456.3455.4333.B222.4797

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 28 steps required to solve the puzzle above with a total of 127 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		8	2	3	7	D					<sup>2</sup>	<sup>2</sup>		
0	9	A	4			1	6				<sup>2</sup>	<sup>3</sup>	8	
1					9				2			E	5	0
	8	C			D			2	<sup>1</sup>	5		7		E
A	D	1			8	<sup>1</sup>	5	E		B		2		
7	3	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>			C	6	B		4		8	1
				A	<sup>3</sup>	B	<sup>1</sup>	4	6		<sup>2</sup>	1	0	7
		9	5				<sup>2</sup>	1	7		<sup>1</sup>	<sup>1</sup>		C
B			<sup>1</sup>	0			<sup>3</sup>	3	E	9	D	A	<sup>3</sup>	
3	6			5	<sup>1</sup>	E	A	<sup>1</sup>				B	2	8
	E		<sup>2</sup>	<sup>1</sup>	6	2			C				7	4
	<sup>1</sup>	2	7					D		1			E	
4	<sup>2</sup>	0							D	8	<sup>1</sup>		<sup>2</sup>	<sup>2</sup>
			8	7	2		1		A	4		C	B	
2	1			C	4		7			E			A	

Tournament

Diff: 28 / 9942.3614.4456.3455.4333.B222.4797

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There are 28 steps required to solve the puzzle above with a total of 127 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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8	7	8	2	3	7	D	9	15	16	12	2	2	13	14	1
0	9	A	4	9	12	1	6	11	12	2	3	8	10	8	
1	6	11	9	10	9	21	24	25	2	15	E	5	11	0	
27	8	C	23	22	D	27	26	2	1	5	16	7	28	E	4
A	D	1	17	27	8	1	5	E	21	B	14	2	28	16	
7	3	1	2	1	20	20	C	6	B	18	4	19	8	1	
15	8	16	17	A	3	B	1	4	6	6	2	1	0	7	7
26	6	9	5	27	19	20	2	1	7	5	1	1	4	C	
B	5	6	1	0	5	4	3	3	E	9	D	A	3	6	
3	6	6	14	5	1	E	A	1	18	13	17	B	2	8	10
27	E	12	2	1	6	2	25	26	C	19	12	26	7	4	
9	1	2	7	26	11	12	22	D	26	1	28	28	E	15	
4	2	0	28	23	10	10	27	11	D	8	1	28	2	2	13
16	8	17	8	7	2	26	1	25	A	4	27	C	B	14	
2	1	15	28	C	4	27	7	24	25	E	27	18	A	13	
1						6						11			

Tournament

Diff: 28 / 9942.3614.4456.3455.4333.B222.4797

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There are 28 steps required to solve the puzzle above with a total of 127 empty locations that must be determined, out of a total puzzle size of 225.

All 28 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 0 in the 2nd column is (2, 12).
- \* The only spot for 1 in the 5th column is (5, 11).
- \* The only spot for 1 in the 6th column is (6, 10).
- \* The only spot for 2 in the 4th 5x3 rectangle is (5, 6).
- \* The only spot for 5 in the 4th 5x3 rectangle is (3, 6).
- \* The only spot for 7 in the 5th 5x3 rectangle is (7, 5).
- \* The only spot for 1 in the 5th 5x3 rectangle is (10, 4).
- \* The only spot for 1 in the 7th 5x3 rectangle is (4, 9).
- \* The only spot for 9 in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for E in the 9th 5x3 rectangle is (13, 8).
- \* The only spot for B in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 7 in the 11th 5x3 rectangle is (9, 10).
- \* The only spot for 7 in the 15th 5x3 rectangle is (12, 13).

Step 2: There are 10 independent moves.

- \* The only spot for 7 in the 2nd row is (11, 2).
- \* The only spot for A in the 2nd column is (2, 13).
- \* The only spot for 1 in the 12th column is (12, 1).
- \* The only spot for 4 in the 13th column is (13, 1).
- \* The only spot for E in the 4th 5x3 rectangle is (4, 6).
- \* The only spot for D in the 8th 5x3 rectangle is (8, 8).
- \* The only spot for 8 in the 9th 5x3 rectangle is (12, 7).
- \* The only spot for A in the 10th 5x3 rectangle is (4, 11).
- \* The only spot for 2 in the 15th 5x3 rectangle is (15, 13).
- \* The only spot for 1 in the 15th 5x3 rectangle is (14, 13).

Step 3: There are 4 independent moves.

- \* The only spot for 5 in the 7th row is (6, 7).
- \* The only spot for 5 in the 14th column is (14, 9).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (12, 2).
- \* The only spot for 2 in the 8th 5x3 rectangle is (8, 9).

Step 4: There are 2 independent moves.

- \* The only spot for 8 in the 9th row is (7, 9).
- \* The only spot for 4 in the 9th 5x3 rectangle is (14, 8).

Step 5: There are 3 independent moves.

- \* The only spot for 3 in the 8th row is (11, 8).
- \* The only spot for 4 in the 2nd column is (2, 9).
- \* The only spot for C in the 8th 5x3 rectangle is (6, 9).

Step 6: There are 6 independent moves.

- \* The only spot for 2 in the 8th row is (2, 8).
- \* The only spot for 7 in the 2nd column is (2, 3).
- \* The only spot for 4 in the 3rd column is (3, 10).
- \* The only spot for 7 in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for 6 in the 9th 5x3 rectangle is (15, 9).
- \* The only spot for 2 in the 9th 5x3 rectangle is (11, 7).

Step 7: There is 1 independent move.

- \* The only spot for B in the 2nd column is (2, 1).

Step 8: There are 4 independent moves.

- \* The only spot for 5 in the 2nd column is (2, 14).
- \* The only spot for C in the 2nd column is (2, 7).
- \* The only spot for 5 in the 1st 5x3 rectangle is (1, 1).
- \* The only spot for B in the 3rd 5x3 rectangle is (15, 2).

Step 9: There are 4 independent moves.

- \* The only spot for E in the 1st row is (8, 1).
- \* The only spot for C in the 1st column is (1, 12).
- \* The only spot for C in the 1st 5x3 rectangle is (4, 3).
- \* The only spot for E in the 1st 5x3 rectangle is (5, 2).

Step 10: There are 4 independent moves.

- \* The only spot for D in the 2nd row is (14, 2).
- \* The only spot for D in the 5th column is (5, 3).
- \* The only spot for C in the 7th column is (7, 13).
- \* The only spot for E in the 14th 5x3 rectangle is (6, 13).

Step 11: There are 5 independent moves.

- \* The only spot for C in the 2nd row is (9, 2).
- \* The only spot for 5 in the 13th row is (9, 13).
- \* The only spot for B in the 6th column is (6, 12).
- \* The only spot for 6 in the 1st 5x3 rectangle is (3, 3).
- \* The only spot for 3 in the 3rd 5x3 rectangle is (14, 3).

Step 12: There are 6 independent moves.

- \* The only spot for 5 in the 11th row is (12, 11).
- \* The only spot for 3 in the 6th column is (6, 2).
- \* The only spot for 5 in the 7th column is (7, 12).
- \* The only spot for 6 in the 11th column is (11, 1).
- \* The only spot for 5 in the 2nd 5x3 rectangle is (10, 2).
- \* The only spot for B in the 10th 5x3 rectangle is (3, 11).

Step 13: There are 3 independent moves.

- \* The only spot for C in the 11th column is (11, 10).
- \* The only spot for C in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for 5 in the 15th 5x3 rectangle is (15, 15).

Step 14: There are 4 independent moves.

- \* The only spot for D in the 10th row is (4, 10).
- \* The only spot for D in the 15th column is (15, 14).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (15, 1).
- \* The only spot for C in the 6th 5x3 rectangle is (12, 5).

Step 15: There are 5 independent moves.

- \* The only spot for A in the 1st row is (9, 1).
- \* The only spot for D in the 1st column is (1, 7).
- \* The only spot for A in the 15th column is (15, 12).
- \* The only spot for A in the 3rd 5x3 rectangle is (11, 3).

- \* The only spot for D in the 13th 5x3 rectangle is (3, 15).

Step 16: There are 5 independent moves.

- \* The only spot for E in the 1st column is (1, 14).
- \* The only spot for 3 in the 15th column is (15, 5).
- \* The only spot for 0 in the 2nd 5x3 rectangle is (10, 1).
- \* The only spot for A in the 6th 5x3 rectangle is (12, 4).
- \* The only spot for E in the 7th 5x3 rectangle is (3, 7).

Step 17: There are 4 independent moves.

- \* The only spot for 0 in the 5th row is (4, 5).
- \* The only spot for 0 in the 10th row is (12, 10).
- \* The only spot for 3 in the 3rd column is (3, 14).
- \* The only spot for 3 in the 7th 5x3 rectangle is (4, 7).

Step 18: There are 3 independent moves.

- \* The only spot for 9 in the 10th row is (10, 10).
- \* The only spot for 0 in the 11th column is (11, 6).
- \* The only spot for 0 in the 15th 5x3 rectangle is (13, 15).

Step 19: There are 3 independent moves.

- \* The only spot for 0 in the 6th column is (6, 8).
- \* The only spot for D in the 11th column is (11, 11).
- \* The only spot for D in the 6th 5x3 rectangle is (13, 6).

Step 20: There are 3 independent moves.

- \* The only spot for 9 in the 6th row is (7, 6).
- \* The only spot for A in the 6th column is (6, 6).
- \* The only spot for A in the 8th 5x3 rectangle is (7, 8).

Step 21: There are 2 independent moves.

- \* 4 must be placed at (10, 5) because it is the only value left that is not already in the 5th row, the 10th column or the 5th 5x3 rectangle.
- \* 4 must be placed at (7, 3) because it is the only value left that is not already in the 3rd row, the 7th column or the 2nd 5x3 rectangle.

Step 22: There are 2 independent moves.

- \* The only spot for 4 in the 4th 5x3 rectangle is (5, 4).
- \* The only spot for 4 in the 11th 5x3 rectangle is (8, 12).

Step 23: There are 2 independent moves.

- \* The only spot for B in the 5th column is (5, 13).
- \* The only spot for B in the 4th 5x3 rectangle is (4, 4).

Step 24: There are 2 independent moves.

- \* The only spot for B in the 8th column is (8, 3).
- \* The only spot for B in the 14th 5x3 rectangle is (9, 15).

Step 25: There are 4 independent moves.

- \* The only spot for 8 in the 8th column is (8, 11).
- \* The only spot for 8 in the 2nd 5x3 rectangle is (9, 3).
- \* The only spot for 8 in the 14th 5x3 rectangle is (10, 15).
- \* The only spot for 9 in the 14th 5x3 rectangle is (9, 14).

Step 26: There are 7 independent moves.



- \* The only spot for 3 in the 11th row is (13, 11).
- \* The only spot for 8 in the 1st column is (1, 8).
- \* The only spot for 0 in the 8th column is (8, 4).
- \* The only spot for 8 in the 10th 5x3 rectangle is (5, 12).
- \* The only spot for 3 in the 11th 5x3 rectangle is (10, 12).
- \* The only spot for 0 in the 11th 5x3 rectangle is (9, 11).
- \* The only spot for 0 in the 14th 5x3 rectangle is (7, 14).

Step 27: There are 9 independent moves.

- \* The only spot for 6 in the 14th row is (12, 14).
- \* The only spot for 6 in the 1st column is (1, 4).
- \* The only spot for 9 in the 5th column is (5, 5).
- \* The only spot for 3 in the 8th column is (8, 13).
- \* The only spot for 3 in the 5th 5x3 rectangle is (7, 4).
- \* The only spot for 6 in the 7th 5x3 rectangle is (5, 8).
- \* The only spot for 9 in the 10th 5x3 rectangle is (1, 11).
- \* The only spot for 6 in the 14th 5x3 rectangle is (7, 15).
- \* The only spot for 3 in the 15th 5x3 rectangle is (12, 15).

Step 28: There are 7 independent moves.

- \* The only spot for 9 in the 15th row is (4, 15).
- \* The only spot for 9 in the 12th column is (12, 12).
- \* The only spot for 6 in the 6th 5x3 rectangle is (14, 5).
- \* The only spot for 9 in the 6th 5x3 rectangle is (14, 4).
- \* The only spot for 6 in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for 6 in the 13th 5x3 rectangle is (4, 13).
- \* The only spot for 9 in the 15th 5x3 rectangle is (13, 13).

## Solution for Puzzle 34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

5	B	8	2	3	7	D	E	A	0	6	1	4	C	9
0	9	A	4	E	3	1	6	C	5	7	2	8	D	B
1	7	6	C	D	9	4	B	8	2	A	E	5	3	0
6	8	C	B	4	D	3	0	2	1	5	A	7	9	E
A	D	1	0	9	8	7	5	E	4	B	C	2	6	3
7	3	5	E	2	A	9	C	6	B	0	4	D	8	1
D	C	E	3	A	5	B	9	4	6	2	8	1	0	7
8	2	9	5	6	0	A	D	1	7	3	B	E	4	C
B	4	7	1	0	C	8	2	3	E	9	D	A	5	6
3	6	4	D	5	1	E	A	7	9	C	0	B	2	8
9	E	B	A	1	6	2	8	0	C	D	5	3	7	4
C	0	2	7	8	B	5	4	D	3	1	9	6	E	A
4	A	0	6	B	E	C	3	5	D	8	7	9	1	2
E	5	3	8	7	2	0	1	9	A	4	6	C	B	D
2	1	D	9	C	4	6	7	B	8	E	3	0	A	5

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## Chapter 20

# Two TournamentPlus Sudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from thirty-three to forty-one. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 35** (131/225) DiffKey 33 / 9.5553.32C3.6322.5111.A113.2123.4999.7443

**Puzzle 36** (132/225) DiffKey 41 / 9.9441.A111.1112.211C.2111.2A33.211C.4679.4565+

## Sudoku-15 Puzzle 35, TournamentPlus/33

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7			B					0	C				2	D
0		2					9		B			3		4
	5		4	C	3		2						7	
			8	0	4			E	7	6			D	
	3		7		D	C		9			8			
		B	9		A				6	0		4		7
B		8		A	9	5		2			3			
6	9						4			2	B			A
	C						6	3	D	8				
	7		0	6	1						A	C		B
		D				B	E	A		3	0			
	2	5		B			D		0			8		
2	A			E		D				5				8
D		4	5		6						1	2	A	
8							3	5	A		D	0		

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 33 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 35

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7			B			<sup>1</sup>	<sup>1</sup>	0	C				2	D
0		2						9	B			3	<sup>1</sup>	4
	5		4	C	3		2	<sup>1</sup>					7	<sup>1</sup>
			8	0	4		<sup>2</sup>	E	7	6	<sup>3</sup>		D	
	3	<sup>1</sup>	7		D	C	<sup>1</sup>	9	<sup>2</sup>		8			
		B	9	<sup>3</sup>	A		<sup>3</sup>		6	0		4		7
B		8		A	9	5		2			3			
6	9						4			2	B			A
	C		<sup>1</sup>		<sup>1</sup>	<sup>1</sup>	6	3	D	8				
	7		0	6	1	<sup>2</sup>			<sup>1</sup>	<sup>1</sup>	A	C		B
		D				B	E	A	<sup>3</sup>	3	0			<sup>1</sup>
<sup>2</sup>	2	5	<sup>3</sup>	B			D		0			8		
2	A			E		D				5				8
D		4	5		6						1	2	A	
8					<sup>2</sup>		3	5	A		D	0		

TournamentPlus

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There are 33 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 35

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>7</b>	<sup>29</sup>	<sup>26</sup>	<b>B</b>	<sup>25</sup>	<sup>27</sup>	<sup>1</sup>	<sup>1</sup>	<b>0</b>	<b>C</b>	<sup>28</sup>	<sup>28</sup>	<sup>29</sup>	<b>2</b>	<b>D</b>	<sup>1</sup>
<b>0</b>	<sup>28</sup>	<b>2</b>	<sup>28</sup>	<sup>27</sup>	<sup>6</sup>	<sup>29</sup>	<b>9</b>	<sup>30</sup>	<b>B</b>	<sup>4</sup>	<sup>5</sup>	<b>3</b>	<sup>1</sup>	<b>4</b>	
<sup>12</sup>	<b>5</b>	<sup>27</sup>	<b>4</b>	<b>C</b>	<b>3</b>	<sup>29</sup>	<b>2</b>	<sup>1</sup>	<sup>27</sup>	<sup>32</sup>	<sup>29</sup>	<sup>32</sup>	<b>7</b>	<sup>1</sup>	
<sup>11</sup>	<sup>8</sup>	<sup>12</sup>	<b>8</b>	<b>0</b>	<b>4</b>	<sup>14</sup>	<sup>2</sup>	<b>E</b>	<b>7</b>	<b>6</b>	<sup>3</sup>	<sup>14</sup>	<b>D</b>	<sup>13</sup>	<sup>4</sup>
<sup>9</sup>	<b>3</b>	<sup>1</sup>	<b>7</b>	<sup>10</sup>	<b>D</b>	<b>C</b>	<sup>1</sup>	<b>9</b>	<sup>2</sup>	<sup>30</sup>	<b>8</b>	<sup>10</sup>	<sup>29</sup>	<sup>11</sup>	
<sup>13</sup>	<sup>4</sup>	<b>B</b>	<b>9</b>	<sup>3</sup>	<b>A</b>	<sup>30</sup>	<sup>3</sup>	<sup>29</sup>	<b>6</b>	<b>0</b>	<sup>8</sup>	<b>4</b>	<sup>14</sup>	<b>7</b>	
<b>B</b>	<sup>22</sup>	<b>8</b>	<sup>29</sup>	<b>A</b>	<b>9</b>	<b>5</b>	<sup>20</sup>	<b>2</b>	<sup>29</sup>	<sup>21</sup>	<b>3</b>	<sup>28</sup>	<sup>10</sup>	<sup>17</sup>	<sup>7</sup>
<b>6</b>	<b>9</b>	<sup>19</sup>	<sup>28</sup>	<sup>26</sup>	<sup>26</sup>	<sup>9</sup>	<b>4</b>	<sup>21</sup>	<sup>30</sup>	<b>2</b>	<b>B</b>	<sup>27</sup>	<sup>29</sup>	<b>A</b>	
<sup>24</sup>	<b>C</b>	<sup>10</sup>	<sup>1</sup>	<sup>27</sup>	<sup>1</sup>	<sup>1</sup>	<b>6</b>	<b>3</b>	<b>D</b>	<b>8</b>	<sup>32</sup>	<sup>33</sup>	<sup>33</sup>	<sup>27</sup>	
<sup>11</sup>	<b>7</b>	<sup>10</sup>	<b>0</b>	<b>6</b>	<b>1</b>	<sup>2</sup>	<sup>7</sup>	<sup>6</sup>	<sup>1</sup>	<sup>1</sup>	<b>A</b>	<b>C</b>	<sup>4</sup>	<b>B</b>	<sup>10</sup>
<sup>23</sup>	<sup>25</sup>	<b>D</b>	<sup>14</sup>	<sup>24</sup>	<sup>7</sup>	<b>B</b>	<b>E</b>	<b>A</b>	<sup>3</sup>	<b>3</b>	<b>0</b>	<sup>16</sup>	<sup>15</sup>	<sup>1</sup>	
<sup>2</sup>	<b>2</b>	<b>5</b>	<sup>3</sup>	<b>B</b>	<sup>6</sup>	<sup>4</sup>	<b>D</b>	<sup>5</sup>	<b>0</b>	<sup>31</sup>	<sup>33</sup>	<b>8</b>	<sup>32</sup>	<sup>25</sup>	
<b>2</b>	<b>A</b>	<sup>29</sup>	<sup>27</sup>	<b>E</b>	<sup>8</sup>	<b>D</b>	<sup>21</sup>	<sup>31</sup>	<sup>4</sup>	<b>5</b>	<sup>27</sup>	<sup>31</sup>	<sup>28</sup>	<b>8</b>	<sup>13</sup>
<b>D</b>	<sup>9</sup>	<b>4</b>	<b>5</b>	<sup>18</sup>	<b>6</b>	<sup>29</sup>	<sup>22</sup>	<sup>30</sup>	<sup>5</sup>	<sup>31</sup>	<b>1</b>	<b>2</b>	<b>A</b>	<sup>14</sup>	
<b>8</b>	<sup>10</sup>	<sup>28</sup>	<sup>28</sup>	<sup>26</sup>	<sup>2</sup>	<sup>30</sup>	<b>3</b>	<b>5</b>	<b>A</b>	<sup>30</sup>	<b>D</b>	<b>0</b>	<sup>29</sup>	<sup>28</sup>	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

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Diff: 33 / 9.5553.32C3.6322.5111.A113.2123.4999.7443

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There are 33 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

All 33 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for D in the 3rd row is (9, 3).
- \* The only spot for 2 in the 4th column is (4, 9).
- \* The only spot for A in the 8th column is (8, 1).
- \* The only spot for 3 in the 10th column is (10, 10).
- \* The only spot for 4 in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for 0 in the 3rd 5x3 rectangle is (15, 3).
- \* The only spot for 8 in the 3rd 5x3 rectangle is (14, 2).
- \* The only spot for 6 in the 4th 5x3 rectangle is (3, 5).
- \* The only spot for 0 in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for A in the 8th 5x3 rectangle is (7, 9).
- \* The only spot for B in the 8th 5x3 rectangle is (6, 9).
- \* The only spot for 2 in the 12th 5x3 rectangle is (15, 11).
- \* The only spot for D in the 12th 5x3 rectangle is (11, 10).

Step 2: There are 5 independent moves.

- \* The only spot for 3 in the 1st column is (1, 12).
- \* The only spot for 2 in the 6th column is (6, 15).
- \* The only spot for 2 in the 10th column is (10, 5).
- \* The only spot for B in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for 2 in the 11th 5x3 rectangle is (7, 10).

Step 3: There are 5 independent moves.

- \* The only spot for 2 in the 4th row is (12, 4).
- \* The only spot for 5 in the 10th column is (10, 11).
- \* The only spot for 2 in the 4th 5x3 rectangle is (5, 6).
- \* The only spot for 5 in the 5th 5x3 rectangle is (8, 6).
- \* The only spot for A in the 10th 5x3 rectangle is (4, 12).

Step 4: There are 5 independent moves.

- \* The only spot for A in the 2nd row is (11, 2).
- \* The only spot for 4 in the 10th column is (10, 13).
- \* The only spot for D in the 4th 5x3 rectangle is (2, 6).
- \* The only spot for 9 in the 11th 5x3 rectangle is (7, 12).
- \* The only spot for 5 in the 12th 5x3 rectangle is (14, 10).

Step 5: There are 3 independent moves.

- \* The only spot for C in the 3rd 5x3 rectangle is (12, 2).
- \* The only spot for 6 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for 9 in the 14th 5x3 rectangle is (10, 14).

Step 6: There are 3 independent moves.

- \* The only spot for 5 in the 2nd row is (6, 2).
- \* The only spot for C in the 12th row is (6, 12).
- \* The only spot for 4 in the 11th 5x3 rectangle is (9, 10).

Step 7: There are 2 independent moves.

- \* The only spot for 8 in the 10th row is (8, 10).
- \* The only spot for 7 in the 11th 5x3 rectangle is (6, 11).

Step 8: There are 3 independent moves.

- \* 0 must be placed at (6, 13) because it is the only value left that is not already in the 13th row, the 6th column or the 14th 5x3 rectangle.
- \* E must be placed at (12, 6) because it is the only value left that is not already in the 6th row, the 12th column or the 6th 5x3 rectangle.
- \* 1 must be placed at (2, 4) because it is the only value left that is not already in the 4th row, the 2nd column or the 4th 5x3 rectangle.

Step 9: There are 3 independent moves.

- \* The only spot for E in the 4th 5x3 rectangle is (1, 5).
- \* The only spot for 0 in the 8th 5x3 rectangle is (7, 8).
- \* The only spot for 0 in the 13th 5x3 rectangle is (2, 14).

Step 10: There are 6 independent moves.

- \* The only spot for A in the 5th row is (13, 5).
- \* The only spot for 0 in the 7th row is (14, 7).
- \* The only spot for 4 in the 4th 5x3 rectangle is (5, 5).
- \* The only spot for 0 in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for E in the 10th 5x3 rectangle is (3, 10).
- \* The only spot for B in the 13th 5x3 rectangle is (2, 15).

Step 11: There are 3 independent moves.

- \* The only spot for 5 in the 5th row is (15, 5).
- \* The only spot for 9 in the 10th row is (1, 10).
- \* The only spot for 5 in the 4th 5x3 rectangle is (1, 4).

Step 12: There are 2 independent moves.

- \* The only spot for A in the 1st column is (1, 3).
- \* The only spot for A in the 4th 5x3 rectangle is (3, 4).

Step 13: There are 2 independent moves.

- \* The only spot for C in the 4th row is (15, 4).
- \* The only spot for C in the 4th 5x3 rectangle is (1, 6).

Step 14: There are 5 independent moves.

- \* The only spot for 3 in the 4th row is (7, 4).
- \* The only spot for 3 in the 15th column is (15, 14).
- \* The only spot for 3 in the 6th 5x3 rectangle is (14, 6).
- \* The only spot for 9 in the 6th 5x3 rectangle is (13, 4).
- \* The only spot for C in the 10th 5x3 rectangle is (4, 11).

Step 15: There is 1 independent move.

- \* The only spot for 9 in the 12th 5x3 rectangle is (14, 11).

Step 16: There is 1 independent move.

- \* The only spot for 6 in the 12th 5x3 rectangle is (13, 11).

Step 17: There is 1 independent move.

- \* The only spot for 6 in the 9th 5x3 rectangle is (15, 7).

Step 18: There is 1 independent move.

- \* 7 must be placed at (5, 14) because it is the only value left that is not already in the 14th row, the 5th column or the 13th 5x3 rectangle.

Step 19: There is 1 independent move.

- \* The only spot for 7 in the 7th 5x3 rectangle is (3, 8).



Step 20: There is 1 independent move.

- \* The only spot for 7 in the 8th 5x3 rectangle is (8, 7).

Step 21: There are 3 independent moves.

- \* The only spot for C in the 7th row is (11, 7).
- \* The only spot for 1 in the 8th column is (8, 13).
- \* The only spot for C in the 8th 5x3 rectangle is (9, 8).

Step 22: There are 2 independent moves.

- \* The only spot for 4 in the 7th row is (2, 7).
- \* The only spot for C in the 14th 5x3 rectangle is (8, 14).

Step 23: There is 1 independent move.

- \* The only spot for 4 in the 10th 5x3 rectangle is (1, 11).

Step 24: There are 2 independent moves.

- \* The only spot for 1 in the 1st column is (1, 9).
- \* The only spot for 1 in the 10th 5x3 rectangle is (5, 11).

Step 25: There are 3 independent moves.

- \* The only spot for 8 in the 5th column is (5, 1).
- \* The only spot for 1 in the 15th column is (15, 12).
- \* The only spot for 8 in the 10th 5x3 rectangle is (2, 11).

Step 26: There are 4 independent moves.

- \* The only spot for 9 in the 5th column is (5, 15).
- \* The only spot for 3 in the 5th column is (5, 8).
- \* The only spot for 8 in the 6th column is (6, 8).
- \* The only spot for 3 in the 1st 5x3 rectangle is (3, 1).

Step 27: There are 9 independent moves.

- \* The only spot for 5 in the 8th row is (13, 8).
- \* The only spot for D in the 5th column is (5, 2).
- \* The only spot for E in the 6th column is (6, 1).
- \* The only spot for 8 in the 10th column is (10, 3).
- \* The only spot for 9 in the 15th column is (15, 9).
- \* The only spot for 9 in the 1st 5x3 rectangle is (3, 3).
- \* The only spot for 5 in the 7th 5x3 rectangle is (5, 9).
- \* The only spot for 3 in the 13th 5x3 rectangle is (4, 13).
- \* The only spot for 9 in the 15th 5x3 rectangle is (12, 13).

Step 28: There are 10 independent moves.

- \* The only spot for D in the 8th row is (4, 8).
- \* The only spot for 6 in the 13th row is (14, 13).
- \* The only spot for E in the 2nd column is (2, 2).
- \* The only spot for 1 in the 3rd column is (3, 15).
- \* The only spot for E in the 15th column is (15, 15).
- \* The only spot for 1 in the 1st 5x3 rectangle is (4, 2).
- \* The only spot for 5 in the 3rd 5x3 rectangle is (12, 1).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (11, 1).
- \* The only spot for D in the 9th 5x3 rectangle is (13, 7).
- \* The only spot for 6 in the 13th 5x3 rectangle is (4, 15).

Step 29: There are 13 independent moves.

- \* The only spot for 1 in the 1st row is (13, 1).
- \* The only spot for 6 in the 2nd row is (7, 2).
- \* The only spot for 1 in the 7th row is (10, 7).
- \* The only spot for 1 in the 9th column is (9, 6).
- \* The only spot for B in the 14th column is (14, 5).
- \* The only spot for 6 in the 1st 5x3 rectangle is (2, 1).
- \* The only spot for 1 in the 2nd 5x3 rectangle is (7, 3).
- \* The only spot for 6 in the 3rd 5x3 rectangle is (12, 3).
- \* The only spot for E in the 7th 5x3 rectangle is (4, 7).
- \* The only spot for 1 in the 9th 5x3 rectangle is (14, 8).
- \* The only spot for C in the 13th 5x3 rectangle is (3, 13).
- \* The only spot for E in the 14th 5x3 rectangle is (7, 14).
- \* The only spot for C in the 15th 5x3 rectangle is (14, 15).

Step 30: There are 7 independent moves.

- \* The only spot for 7 in the 7th column is (7, 15).
- \* The only spot for 7 in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for 8 in the 5th 5x3 rectangle is (7, 6).
- \* The only spot for 1 in the 6th 5x3 rectangle is (11, 5).
- \* The only spot for E in the 8th 5x3 rectangle is (10, 8).
- \* The only spot for 8 in the 14th 5x3 rectangle is (9, 14).
- \* The only spot for 4 in the 15th 5x3 rectangle is (11, 15).

Step 31: There are 4 independent moves.

- \* The only spot for B in the 14th row is (11, 14).
- \* The only spot for 7 in the 11th column is (11, 12).
- \* The only spot for B in the 14th 5x3 rectangle is (9, 13).
- \* The only spot for 7 in the 15th 5x3 rectangle is (13, 13).

Step 32: There are 4 independent moves.

- \* The only spot for E in the 11th column is (11, 3).
- \* The only spot for B in the 3rd 5x3 rectangle is (13, 3).
- \* The only spot for 7 in the 9th 5x3 rectangle is (12, 9).
- \* The only spot for E in the 12th 5x3 rectangle is (14, 12).

Step 33: There are 3 independent moves.

- \* The only spot for 4 in the 9th 5x3 rectangle is (14, 9).
- \* The only spot for E in the 9th 5x3 rectangle is (13, 9).
- \* The only spot for 4 in the 12th 5x3 rectangle is (12, 12).

## Solution for Puzzle 35

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

7	6	3	B	8	E	4	A	0	C	9	5	1	2	D
0	E	2	1	D	5	6	9	7	B	A	C	3	8	4
A	5	9	4	C	3	1	2	D	8	E	6	B	7	0
5	1	A	8	0	4	3	B	E	7	6	2	9	D	C
E	3	6	7	4	D	C	0	9	2	1	8	A	B	5
C	D	B	9	2	A	8	5	1	6	0	E	4	3	7
B	4	8	E	A	9	5	7	2	1	C	3	D	0	6
6	9	7	D	3	8	0	4	C	E	2	B	5	1	A
1	C	0	2	5	B	A	6	3	D	8	7	E	4	9
9	7	E	0	6	1	2	8	4	3	D	A	C	5	B
4	8	D	C	1	7	B	E	A	5	3	0	6	9	2
3	2	5	A	B	C	9	D	6	0	7	4	8	E	1
2	A	C	3	E	0	D	1	B	4	5	9	7	6	8
D	0	4	5	7	6	E	C	8	9	B	1	2	A	3
8	B	1	6	9	2	7	3	5	A	4	D	0	C	E

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## Sudoku-15 Puzzle 36, TournamentPlus/41

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				D	9	C		4			1	7		8
	1	8		0		E	2		5	6				
	9	2	4		8						E		A	
5	2				D		9		7	3		6		
					C							1	2	0
B	6	E	1			0				D		C		
0		A			4			7		8				E
8	D	1		6		5				0	9			
				2			A	8		7				1
			5				4		E			8	C	D
A			3			D			8		6		1	
		9	2			A			6		7			3
			A		6			2	9		B	0	3	
6	0			7		3	D	A						5
		B	9	1	5						D			

TournamentPlus

Diff: 41 / 9.9441.A111.1112.211C.2111.2A33.211C.4679+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 5x3 rectangle.

There are 41 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 36

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>2</sup>	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	<b>D</b>	<b>9</b>	<b>C</b>		<b>4</b>		<sup>1</sup>	<b>1</b>	<b>7</b>	<sup>1</sup>	<b>8</b>
<sup>2</sup>	<b>1</b>	<b>8</b>		<b>0</b>	<sup>1</sup>	<b>E</b>	<b>2</b>		<b>5</b>	<b>6</b>				
	<b>9</b>	<b>2</b>	<b>4</b>		<b>8</b>						<b>E</b>		<b>A</b>	
<b>5</b>	<b>2</b>		<sup>1</sup>		<b>D</b>		<b>9</b>		<b>7</b>	<b>3</b>		<b>6</b>		
		<sup>3</sup>	<sup>1</sup>		<b>C</b>							<b>1</b>	<b>2</b>	<b>0</b>
<b>B</b>	<b>6</b>	<b>E</b>	<b>1</b>			<b>0</b>				<b>D</b>		<b>C</b>		
<b>0</b>		<b>A</b>			<b>4</b>			<b>7</b>		<b>8</b>				<b>E</b>
<b>8</b>	<b>D</b>	<b>1</b>	<sup>1</sup>	<b>6</b>		<b>5</b>				<b>0</b>	<b>9</b>			
			<sup>3</sup>	<b>2</b>			<b>A</b>	<b>8</b>		<b>7</b>				<b>1</b>
<sup>2</sup>		<sup>1</sup>	<b>5</b>				<b>4</b>		<b>E</b>	<sup>2</sup>	<sup>1</sup>	<b>8</b>	<b>C</b>	<b>D</b>
<b>A</b>		<sup>2</sup>	<b>3</b>			<b>D</b>			<b>8</b>		<b>6</b>		<b>1</b>	
<sup>1</sup>		<b>9</b>	<b>2</b>			<b>A</b>			<b>6</b>		<b>7</b>			<b>3</b>
		<sup>2</sup>	<b>A</b>		<b>6</b>			<b>2</b>	<b>9</b>		<b>B</b>	<b>0</b>	<b>3</b>	
<b>6</b>	<b>0</b>		<sup>2</sup>	<b>7</b>		<b>3</b>	<b>D</b>	<b>A</b>						<b>5</b>
<sup>1</sup>	<sup>2</sup>	<b>B</b>	<b>9</b>	<b>1</b>	<b>5</b>						<b>D</b>	<sup>3</sup>	<sup>3</sup>	<sup>1</sup>

TournamentPlus

Diff: 41 / 9.9441.A111.1112.211C.2111.2A33.211C.4679+

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There are 41 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 36

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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2	1	2	1	<b>D</b>	<b>9</b>	<b>C</b>	<sup>40</sup>	<b>4</b>	<sup>41</sup>	1	<b>1</b>	<b>7</b>	1	<b>8</b>	<sup>1</sup>
2	<b>1</b>	<b>8</b>	7	<b>0</b>	1	<b>E</b>	2	<sup>22</sup>	<b>5</b>	<b>6</b>	14	20	21	10	
19	<b>9</b>	<b>2</b>	<b>4</b>	18	<b>8</b>	29	26	32	33	17	<b>E</b>	22	<b>A</b>	13	
<b>5</b>	<b>2</b>	14	1	36	<b>D</b>	25	<b>9</b>	24	<b>7</b>	<b>3</b>	37	<b>6</b>	25	12	<sup>4</sup>
35	37	3	1	35	<b>C</b>	33	41	30	40	24	39	<b>1</b>	<b>2</b>	<b>0</b>	
<b>B</b>	<b>6</b>	<b>E</b>	<b>1</b>	34	33	<b>0</b>	38	38	39	<b>D</b>	40	<b>C</b>	4	11	
<b>0</b>	36	<b>A</b>	8	35	<b>4</b>	36	30	<b>7</b>	31	<b>8</b>	15	34	31	<b>E</b>	<sup>7</sup>
<b>8</b>	<b>D</b>	<b>1</b>	1	<b>6</b>	24	<b>5</b>	39	39	34	<b>0</b>	<b>9</b>	36	29	4	
34	36	4	3	<b>2</b>	28	35	<b>A</b>	<b>8</b>	31	<b>7</b>	9	35	30	<b>1</b>	
2	17	1	<b>5</b>	6	32	33	<b>4</b>	31	<b>E</b>	2	1	<b>8</b>	<b>C</b>	<b>D</b>	<sup>10</sup>
<b>A</b>	39	2	<b>3</b>	38	18	<b>D</b>	38	37	<b>8</b>	30	<b>6</b>	39	<b>1</b>	5	
1	39	<b>9</b>	<b>2</b>	37	32	<b>A</b>	27	39	<b>6</b>	31	<b>7</b>	38	32	<b>3</b>	
17	37	2	<b>A</b>	36	<b>6</b>	32	31	<b>2</b>	<b>9</b>	33	<b>B</b>	<b>0</b>	<b>3</b>	4	<sup>13</sup>
<b>6</b>	<b>0</b>	13	2	<b>7</b>	32	<b>3</b>	<b>D</b>	<b>A</b>	33	32	16	29	23	<b>5</b>	
1	2	<b>B</b>	<b>9</b>	<b>1</b>	<b>5</b>	26	25	33	33	33	<b>D</b>	3	3	1	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

TournamentPlus

Diff: 41 / 9.9441.A111.1112.211C.2111.2A33.211C.4679+

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There are 41 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

All 41 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for A in the 2nd row is (6, 2).
- \* The only spot for D in the 4th column is (4, 5).
- \* The only spot for 0 in the 4th column is (4, 4).
- \* The only spot for 6 in the 4th column is (4, 1).
- \* The only spot for 0 in the 12th column is (12, 10).
- \* The only spot for 6 in the 15th column is (15, 15).
- \* The only spot for A in the 1st 5x3 rectangle is (2, 1).
- \* The only spot for 0 in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (11, 1).
- \* The only spot for 7 in the 7th 5x3 rectangle is (4, 8).
- \* The only spot for D in the 10th 5x3 rectangle is (1, 12).
- \* The only spot for 6 in the 10th 5x3 rectangle is (3, 10).
- \* The only spot for 2 in the 13th 5x3 rectangle is (1, 15).

Step 2: There are 9 independent moves.

- \* The only spot for 5 in the 1st row is (3, 1).
- \* The only spot for 7 in the 2nd row is (1, 2).
- \* The only spot for 8 in the 4th column is (4, 14).
- \* The only spot for E in the 1st 5x3 rectangle is (1, 1).
- \* The only spot for 0 in the 10th 5x3 rectangle is (3, 11).
- \* The only spot for 1 in the 10th 5x3 rectangle is (1, 10).
- \* The only spot for A in the 12th 5x3 rectangle is (11, 10).
- \* The only spot for 3 in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for D in the 13th 5x3 rectangle is (3, 13).

Step 3: There are 4 independent moves.

- \* The only spot for 7 in the 3rd column is (3, 5).
- \* The only spot for E in the 4th column is (4, 9).
- \* The only spot for 8 in the 15th 5x3 rectangle is (14, 15).
- \* The only spot for A in the 15th 5x3 rectangle is (13, 15).

Step 4: There are 4 independent moves.

- \* The only spot for 3 in the 3rd column is (3, 9).
- \* The only spot for 7 in the 14th column is (14, 6).
- \* The only spot for A in the 9th 5x3 rectangle is (15, 8).
- \* The only spot for 7 in the 15th 5x3 rectangle is (15, 13).

Step 5: There is 1 independent move.

- \* The only spot for 2 in the 15th column is (15, 11).

Step 6: There is 1 independent move.

- \* B must be placed at (5, 10) because it is the only value left that is not already in the 10th row, the 5th column or the 10th 5x3 rectangle.

Step 7: There is 1 independent move.

- \* The only spot for B in the 1st 5x3 rectangle is (4, 2).

Step 8: There is 1 independent move.

- \* The only spot for C in the 4th column is (4, 7).

Step 9: There is 1 independent move.

- \* The only spot for C in the 9th 5x3 rectangle is (12, 9).
- Step 10: There is 1 independent move.
- \* The only spot for C in the 2nd row is (15, 2).
- Step 11: There is 1 independent move.
- \* The only spot for 9 in the 15th column is (15, 6).
- Step 12: There is 1 independent move.
- \* The only spot for 4 in the 15th column is (15, 4).
- Step 13: There are 2 independent moves.
- \* The only spot for 4 in the 3rd column is (3, 14).
  - \* The only spot for B in the 15th column is (15, 3).
- Step 14: There are 2 independent moves.
- \* The only spot for C in the 3rd column is (3, 4).
  - \* The only spot for 4 in the 12th column is (12, 2).
- Step 15: There is 1 independent move.
- \* The only spot for 3 in the 12th column is (12, 7).
- Step 16: There is 1 independent move.
- \* The only spot for 2 in the 12th column is (12, 14).
- Step 17: There are 3 independent moves.
- \* C must be placed at (1, 13) because it is the only value left that is not already in the 13th row, the 1st column or the 13th 5x3 rectangle.
  - \* 7 must be placed at (2, 10) because it is the only value left that is not already in the 10th row, the 2nd column or the 10th 5x3 rectangle.
  - \* 5 must be placed at (11, 3) because it is the only value left that is not already in the 3rd row, the 11th column or the 3rd 5x3 rectangle.
- Step 18: There are 2 independent moves.
- \* The only spot for 7 in the 6th column is (6, 11).
  - \* The only spot for C in the 1st 5x3 rectangle is (5, 3).
- Step 19: There is 1 independent move.
- \* The only spot for 3 in the 1st 5x3 rectangle is (1, 3).
- Step 20: There is 1 independent move.
- \* The only spot for 3 in the 3rd 5x3 rectangle is (13, 2).
- Step 21: There is 1 independent move.
- \* The only spot for 9 in the 3rd 5x3 rectangle is (14, 2).
- Step 22: There are 2 independent moves.
- \* The only spot for D in the 2nd row is (9, 2).
  - \* The only spot for D in the 3rd 5x3 rectangle is (13, 3).
- Step 23: There is 1 independent move.
- \* E must be placed at (14, 14) because it is the only value left that is not already in the 14th row, the 14th column or the 15th 5x3 rectangle.
- Step 24: There are 3 independent moves.
- \* The only spot for E in the 4th row is (9, 4).
  - \* The only spot for E in the 6th column is (6, 8).
  - \* The only spot for E in the 6th 5x3 rectangle is (11, 5).
- Step 25: There are 3 independent moves.



- \* The only spot for E in the 15th row is (8, 15).
- \* The only spot for 1 in the 5th 5x3 rectangle is (7, 4).
- \* The only spot for B in the 6th 5x3 rectangle is (14, 4).

Step 26: There are 2 independent moves.

- \* The only spot for 7 in the 8th column is (8, 3).
- \* The only spot for 7 in the 14th 5x3 rectangle is (7, 15).

Step 27: There is 1 independent move.

- \* The only spot for 0 in the 8th column is (8, 12).

Step 28: There is 1 independent move.

- \* The only spot for 0 in the 6th column is (6, 9).

Step 29: There are 3 independent moves.

- \* 9 must be placed at (13, 14) because it is the only value left that is not already in the 14th row, the 13th column or the 15th 5x3 rectangle.
- \* 4 must be placed at (14, 8) because it is the only value left that is not already in the 8th row, the 14th column or the 9th 5x3 rectangle.
- \* 6 must be placed at (7, 3) because it is the only value left that is not already in the 3rd row, the 7th column or the 2nd 5x3 rectangle.

Step 30: There are 4 independent moves.

- \* The only spot for 6 in the 9th row is (14, 9).
- \* The only spot for 6 in the 9th column is (9, 5).
- \* The only spot for 6 in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for 9 in the 12th 5x3 rectangle is (11, 11).

Step 31: There are 6 independent moves.

- \* The only spot for D in the 9th row is (10, 9).
- \* The only spot for 1 in the 8th column is (8, 13).
- \* The only spot for 9 in the 9th column is (9, 10).
- \* The only spot for B in the 11th column is (11, 12).
- \* The only spot for 1 in the 8th 5x3 rectangle is (10, 7).
- \* The only spot for D in the 9th 5x3 rectangle is (14, 7).

Step 32: There are 7 independent moves.

- \* The only spot for B in the 6th column is (6, 14).
- \* The only spot for 1 in the 6th column is (6, 12).
- \* The only spot for 5 in the 14th column is (14, 12).
- \* The only spot for 1 in the 2nd 5x3 rectangle is (9, 3).
- \* The only spot for 3 in the 11th 5x3 rectangle is (6, 10).
- \* The only spot for 8 in the 14th 5x3 rectangle is (7, 13).
- \* The only spot for 1 in the 15th 5x3 rectangle is (11, 14).

Step 33: There are 9 independent moves.

- \* The only spot for 4 in the 13th row is (11, 13).
- \* The only spot for C in the 14th row is (10, 14).
- \* The only spot for 2 in the 6th column is (6, 6).
- \* The only spot for 4 in the 7th column is (7, 5).
- \* The only spot for 0 in the 9th column is (9, 15).
- \* The only spot for 0 in the 2nd 5x3 rectangle is (10, 3).

- \* The only spot for 2 in the 11th 5x3 rectangle is (7, 10).
- \* The only spot for 4 in the 14th 5x3 rectangle is (10, 15).
- \* The only spot for C in the 15th 5x3 rectangle is (11, 15).

Step 34: There are 4 independent moves.

- \* The only spot for 2 in the 7th row is (13, 7).
- \* The only spot for 4 in the 1st column is (1, 9).
- \* The only spot for 4 in the 4th 5x3 rectangle is (5, 6).
- \* The only spot for 2 in the 8th 5x3 rectangle is (10, 8).

Step 35: There are 5 independent moves.

- \* The only spot for 9 in the 9th row is (7, 9).
- \* The only spot for 9 in the 1st column is (1, 5).
- \* The only spot for 3 in the 4th 5x3 rectangle is (5, 5).
- \* The only spot for 9 in the 7th 5x3 rectangle is (5, 7).
- \* The only spot for 5 in the 9th 5x3 rectangle is (13, 9).

Step 36: There are 6 independent moves.

- \* The only spot for B in the 9th row is (2, 9).
- \* The only spot for 5 in the 5th column is (5, 13).
- \* The only spot for B in the 7th column is (7, 7).
- \* The only spot for A in the 4th 5x3 rectangle is (5, 4).
- \* The only spot for 5 in the 7th 5x3 rectangle is (2, 7).
- \* The only spot for B in the 9th 5x3 rectangle is (13, 8).

Step 37: There are 5 independent moves.

- \* The only spot for 8 in the 4th row is (12, 4).
- \* The only spot for 8 in the 5th column is (5, 12).
- \* The only spot for B in the 9th column is (9, 11).
- \* The only spot for 8 in the 4th 5x3 rectangle is (2, 5).
- \* The only spot for E in the 13th 5x3 rectangle is (2, 13).

Step 38: There are 5 independent moves.

- \* The only spot for E in the 12th row is (13, 12).
- \* The only spot for 5 in the 9th column is (9, 6).
- \* The only spot for 8 in the 5th 5x3 rectangle is (8, 6).
- \* The only spot for E in the 10th 5x3 rectangle is (5, 11).
- \* The only spot for 5 in the 11th 5x3 rectangle is (8, 11).

Step 39: There are 8 independent moves.

- \* The only spot for C in the 11th row is (2, 11).
- \* The only spot for 4 in the 12th row is (2, 12).
- \* The only spot for C in the 8th column is (8, 8).
- \* The only spot for 3 in the 9th column is (9, 8).
- \* The only spot for 3 in the 5th 5x3 rectangle is (10, 6).
- \* The only spot for 5 in the 6th 5x3 rectangle is (12, 5).
- \* The only spot for C in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for 4 in the 12th 5x3 rectangle is (13, 11).

Step 40: There are 3 independent moves.

- \* The only spot for 3 in the 2nd 5x3 rectangle is (8, 1).

- \* The only spot for A in the 5th  $5 \times 3$  rectangle is (10, 5).
- \* The only spot for A in the 6th  $5 \times 3$  rectangle is (12, 6).

Step 41: There are 2 independent moves.

- \* The only spot for B in the 2nd  $5 \times 3$  rectangle is (10, 1).
- \* The only spot for B in the 5th  $5 \times 3$  rectangle is (8, 5).

## Solution for Puzzle 36

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

E	A	5	6	D	9	C	3	4	B	2	1	7	0	8
7	1	8	B	0	A	E	2	D	5	6	4	3	9	C
3	9	2	4	C	8	6	7	1	0	5	E	D	A	B
5	2	C	0	A	D	1	9	E	7	3	8	6	B	4
9	8	7	D	3	C	4	B	6	A	E	5	1	2	0
B	6	E	1	4	2	0	8	5	3	D	A	C	7	9
0	5	A	C	9	4	B	6	7	1	8	3	2	D	E
8	D	1	7	6	E	5	C	3	2	0	9	B	4	A
4	B	3	E	2	0	9	A	8	D	7	C	5	6	1
1	7	6	5	B	3	2	4	9	E	A	0	8	C	D
A	C	0	3	E	7	D	5	B	8	9	6	4	1	2
D	4	9	2	8	1	A	0	C	6	B	7	E	5	3
C	E	D	A	5	6	8	1	2	9	4	B	0	3	7
6	0	4	8	7	B	3	D	A	C	1	2	9	E	5
2	3	B	9	1	5	7	E	0	4	C	D	A	8	6

TournamentPlus

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## Chapter 21

# Two Challenging Sudoku-15up Puzzles

There are two puzzles in this section ranging in difficulty from sixteen to twenty. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 37** (125/225) DiffKey 16 / 9955.6469.9999.7532

**Puzzle 38** (124/225) DiffKey 20 / 9952.311D.6455.9879.9555

## Sudoku-15up Puzzle 37, Challenging/16

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

125/225

D	5					9	E	3	4				1	
C	0								9	1	7	3	6	
			9		7	5					3	2	A	0
	4			A	3			6			C	D		E
7	3			D	2			B	A	E				
8				7	9				E				2	
E						B		1	D	7	0	4		
4		5	0				6	E			1		C	A
	9	C	B			3	A			8				
			A	5	1			7			B	E		9
	2	4		E	8	6				3				
		1	7				3	2	5	0				
	8			1	B		5			C		A	E	
B	6		5				0	9	7			8		
3		9			0						D		7	5

Challenging

Diff: 16 / 9955.6469.9999.7532

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 16 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 37

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

125/225

<b>D</b>	<b>5</b>	<sup>1</sup>		<sup>1</sup>		<b>9</b>	<b>E</b>	<b>3</b>	<b>4</b>	<sup>3</sup>			<b>1</b>	
<b>C</b>	<b>0</b>		<sup>1</sup>		<sup>1</sup>				<b>9</b>	<b>1</b>	<b>7</b>	<b>3</b>	<b>6</b>	
			<b>9</b>		<b>7</b>	<b>5</b>				<sup>1</sup>	<b>3</b>	<b>2</b>	<b>A</b>	<b>0</b>
<sup>1</sup>	<b>4</b>			<b>A</b>	<b>3</b>	<sup>2</sup>		<b>6</b>	<sup>1</sup>	<sup>2</sup>	<b>C</b>	<b>D</b>		<b>E</b>
<b>7</b>	<b>3</b>			<b>D</b>	<b>2</b>	<sup>1</sup>		<b>B</b>	<b>A</b>	<b>E</b>		<sup>2</sup>	<sup>3</sup>	
<b>8</b>				<b>7</b>	<b>9</b>				<b>E</b>				<b>2</b>	
<b>E</b>	<sup>2</sup>					<b>B</b>	<sup>1</sup>	<b>1</b>	<b>D</b>	<b>7</b>	<b>0</b>	<b>4</b>	<sup>1</sup>	
<b>4</b>	<sup>1</sup>	<b>5</b>	<b>0</b>				<b>6</b>	<b>E</b>	<sup>2</sup>	<sup>1</sup>	<b>1</b>	<sup>2</sup>	<b>C</b>	<b>A</b>
	<b>9</b>	<b>C</b>	<b>B</b>		<sup>1</sup>	<b>3</b>	<b>A</b>			<b>8</b>				
			<b>A</b>	<b>5</b>	<b>1</b>			<b>7</b>	<sup>1</sup>		<b>B</b>	<b>E</b>		<b>9</b>
<sup>1</sup>	<b>2</b>	<b>4</b>		<b>E</b>	<b>8</b>	<b>6</b>	<sup>1</sup>		<sup>3</sup>	<b>3</b>		<sup>3</sup>		
<sup>2</sup>		<b>1</b>	<b>7</b>	<sup>1</sup>			<b>3</b>	<b>2</b>	<b>5</b>	<b>0</b>				
<sup>2</sup>	<b>8</b>	<sup>1</sup>		<b>1</b>	<b>B</b>		<b>5</b>			<b>C</b>	<sup>1</sup>	<b>A</b>	<b>E</b>	
<b>B</b>	<b>6</b>		<b>5</b>		<sup>3</sup>		<b>0</b>	<b>9</b>	<b>7</b>			<b>8</b>		
<b>3</b>		<b>9</b>			<b>0</b>		<sup>2</sup>				<b>D</b>		<b>7</b>	<b>5</b>

Challenging

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There are 16 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 37

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>D</b>	<b>5</b>		<sup>8</sup>	<sup>1</sup>	<sup>9</sup>	<b>9</b>	<b>E</b>	<b>3</b>	<b>4</b>	<sup>3</sup>	<sup>4</sup>	<sup>12</sup>	<b>1</b>	<sup>12</sup>	<sup>1</sup>
<b>C</b>	<b>0</b>	<sup>9</sup>	<sup>1</sup>	<sup>10</sup>	<sup>1</sup>	<sup>15</sup>	<sup>14</sup>	<sup>16</sup>	<b>9</b>	<b>1</b>	<b>7</b>	<b>3</b>	<b>6</b>	<sup>8</sup>	
<sup>8</sup>	<sup>9</sup>	<sup>7</sup>	<b>9</b>	<sup>9</sup>	<b>7</b>	<b>5</b>	<sup>12</sup>	<sup>13</sup>	<sup>5</sup>	<sup>1</sup>	<b>3</b>	<b>2</b>	<b>A</b>	<b>0</b>	
<sup>1</sup>	<b>4</b>	<sup>8</sup>	<sup>10</sup>	<b>A</b>	<b>3</b>	<sup>2</sup>	<sup>9</sup>	<b>6</b>	<sup>1</sup>	<sup>2</sup>	<b>C</b>	<b>D</b>	<sup>7</sup>	<b>E</b>	
<b>7</b>	<b>3</b>	<sup>10</sup>	<sup>10</sup>	<b>D</b>	<b>2</b>	<sup>1</sup>	<sup>10</sup>	<b>B</b>	<b>A</b>	<b>E</b>	<sup>6</sup>	<sup>2</sup>	<sup>3</sup>	<sup>9</sup>	
<b>8</b>	<sup>9</sup>	<sup>11</sup>	<sup>10</sup>	<b>7</b>	<b>9</b>	<sup>12</sup>	<sup>13</sup>	<sup>11</sup>	<b>E</b>	<sup>7</sup>	<sup>12</sup>	<sup>10</sup>	<b>2</b>	<sup>12</sup>	<sup>6</sup>
<b>E</b>	<sup>2</sup>	<sup>12</sup>	<sup>12</sup>	<sup>11</sup>	<sup>10</sup>	<b>B</b>	<sup>1</sup>	<b>1</b>	<b>D</b>	<b>7</b>	<b>0</b>	<b>4</b>	<sup>1</sup>	<sup>7</sup>	
<b>4</b>	<sup>1</sup>	<b>5</b>	<b>0</b>	<sup>8</sup>	<sup>5</sup>	<sup>9</sup>	<b>6</b>	<b>E</b>	<sup>2</sup>	<sup>1</sup>	<b>1</b>	<sup>2</sup>	<b>C</b>	<b>A</b>	
<sup>9</sup>	<b>9</b>	<b>C</b>	<b>B</b>	<sup>13</sup>	<sup>1</sup>	<b>3</b>	<b>A</b>	<sup>12</sup>	<sup>8</sup>	<b>8</b>	<sup>11</sup>	<sup>11</sup>	<sup>9</sup>	<sup>12</sup>	
<sup>9</sup>	<sup>12</sup>	<sup>5</sup>	<b>A</b>	<b>5</b>	<b>1</b>	<sup>14</sup>	<sup>13</sup>	<b>7</b>	<sup>1</sup>	<sup>8</sup>	<b>B</b>	<b>E</b>	<sup>6</sup>	<b>9</b>	
<sup>1</sup>	<b>2</b>	<b>4</b>	<sup>11</sup>	<b>E</b>	<b>8</b>	<b>6</b>	<sup>1</sup>	<sup>11</sup>	<sup>3</sup>	<b>3</b>	<sup>7</sup>	<sup>3</sup>	<sup>4</sup>	<sup>4</sup>	<sup>11</sup>
<sup>2</sup>	<sup>13</sup>	<b>1</b>	<b>7</b>	<sup>1</sup>	<sup>4</sup>	<sup>14</sup>	<b>3</b>	<b>2</b>	<b>5</b>	<b>0</b>	<sup>5</sup>	<sup>12</sup>	<sup>8</sup>	<sup>11</sup>	
<sup>2</sup>	<b>8</b>	<sup>1</sup>	<sup>10</sup>	<b>1</b>	<b>B</b>	<sup>14</sup>	<b>5</b>	<sup>15</sup>	<sup>7</sup>	<b>C</b>	<sup>1</sup>	<b>A</b>	<b>E</b>	<sup>9</sup>	
<b>B</b>	<b>6</b>	<sup>11</sup>	<b>5</b>	<sup>11</sup>	<sup>3</sup>	<sup>5</sup>	<b>0</b>	<b>9</b>	<b>7</b>	<sup>8</sup>	<sup>6</sup>	<b>8</b>	<sup>5</sup>	<sup>10</sup>	
<b>3</b>	<sup>14</sup>	<b>9</b>	<sup>13</sup>	<sup>12</sup>	<b>0</b>	<sup>16</sup>	<sup>2</sup>	<sup>15</sup>	<sup>4</sup>	<sup>6</sup>	<b>D</b>	<sup>13</sup>	<b>7</b>	<b>5</b>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			<sup>13</sup>			

Challenging

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There are 16 steps required to solve the puzzle above with a total of 125 empty locations that must be determined, out of a total puzzle size of 225.

All 16 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 19 independent moves.

- \* The only spot for A in the 1st row is (3, 1).
- \* The only spot for 0 in the 5th row is (7, 5).
- \* The only spot for 5 in the 7th row is (14, 7).
- \* The only spot for 7 in the 11th row is (8, 11).
- \* The only spot for 9 in the 13th row is (12, 13).
- \* The only spot for E in the 4th column is (4, 2).
- \* The only spot for 9 in the 1st 3x5 rectangle is (1, 4).
- \* The only spot for 5 in the 2nd 3x5 rectangle is (6, 2).
- \* The only spot for 0 in the 2nd 3x5 rectangle is (5, 1).
- \* The only spot for 0 in the 4th 3x5 rectangle is (10, 4).
- \* The only spot for D in the 4th 3x5 rectangle is (11, 3).
- \* The only spot for 7 in the 6th 3x5 rectangle is (2, 8).
- \* The only spot for E in the 7th 3x5 rectangle is (6, 9).
- \* The only spot for 9 in the 8th 3x5 rectangle is (8, 7).
- \* The only spot for C in the 9th 3x5 rectangle is (10, 10).
- \* The only spot for 9 in the 9th 3x5 rectangle is (11, 8).
- \* The only spot for 7 in the 11th 3x5 rectangle is (3, 13).
- \* The only spot for 5 in the 11th 3x5 rectangle is (1, 11).
- \* The only spot for 9 in the 12th 3x5 rectangle is (5, 12).

Step 2: There are 9 independent moves.

- \* The only spot for 5 in the 4th row is (11, 4).
- \* The only spot for A in the 7th row is (2, 7).
- \* The only spot for B in the 8th row is (13, 8).
- \* The only spot for A in the 1st column is (1, 12).
- \* The only spot for 7 in the 3rd 3x5 rectangle is (7, 4).
- \* The only spot for 5 in the 5th 3x5 rectangle is (13, 5).
- \* The only spot for 3 in the 9th 3x5 rectangle is (10, 8).
- \* The only spot for 0 in the 11th 3x5 rectangle is (1, 13).
- \* The only spot for B in the 13th 3x5 rectangle is (8, 15).

Step 3: There are 5 independent moves.

- \* The only spot for B in the 11th column is (11, 1).
- \* The only spot for 9 in the 13th column is (13, 11).
- \* The only spot for 9 in the 5th 3x5 rectangle is (14, 5).
- \* The only spot for A in the 12th 3x5 rectangle is (6, 14).
- \* The only spot for B in the 14th 3x5 rectangle is (10, 11).

Step 4: There are 5 independent moves.

- \* The only spot for 1 in the 11th row is (15, 11).
- \* The only spot for 4 in the 6th column is (6, 12).
- \* The only spot for 2 in the 4th 3x5 rectangle is (12, 1).
- \* The only spot for 1 in the 14th 3x5 rectangle is (10, 15).
- \* The only spot for 0 in the 15th 3x5 rectangle is (14, 11).

Step 5: There are 6 independent moves.

- \* The only spot for 0 in the 10th row is (3, 10).
- \* The only spot for D in the 6th column is (6, 8).

- \* The only spot for 8 in the 10th column is (10, 3).
- \* The only spot for 4 in the 14th column is (14, 14).
- \* The only spot for 1 in the 13th 3x5 rectangle is (7, 14).
- \* The only spot for 8 in the 14th 3x5 rectangle is (12, 12).

Step 6: There are 4 independent moves.

- \* The only spot for 3 in the 14th column is (14, 10).
- \* The only spot for 6 in the 4th 3x5 rectangle is (12, 5).
- \* The only spot for 4 in the 14th 3x5 rectangle is (11, 15).
- \* The only spot for E in the 14th 3x5 rectangle is (12, 14).

Step 7: There are 6 independent moves.

- \* The only spot for E in the 3rd column is (3, 3).
- \* The only spot for A in the 11th column is (11, 6).
- \* The only spot for 8 in the 14th column is (14, 4).
- \* The only spot for 8 in the 10th 3x5 rectangle is (15, 7).
- \* The only spot for 6 in the 14th 3x5 rectangle is (10, 13).
- \* The only spot for A in the 14th 3x5 rectangle is (12, 11).

Step 8: There are 9 independent moves.

- \* The only spot for 8 in the 1st row is (4, 1).
- \* The only spot for B in the 4th row is (3, 4).
- \* The only spot for 2 in the 10th column is (10, 9).
- \* The only spot for B in the 14th column is (14, 12).
- \* The only spot for 6 in the 1st 3x5 rectangle is (1, 3).
- \* The only spot for B in the 5th 3x5 rectangle is (15, 2).
- \* The only spot for 8 in the 7th 3x5 rectangle is (5, 8).
- \* The only spot for 6 in the 9th 3x5 rectangle is (11, 10).
- \* The only spot for 2 in the 14th 3x5 rectangle is (11, 14).

Step 9: There are 12 independent moves.

- \* The only spot for 2 in the 4th row is (8, 4).
- \* The only spot for 2 in the 8th row is (7, 8).
- \* The only spot for 2 in the 1st column is (1, 10).
- \* The only spot for 1 in the 1st column is (1, 9).
- \* The only spot for D in the 14th column is (14, 9).
- \* The only spot for 1 in the 1st 3x5 rectangle is (2, 3).
- \* The only spot for 2 in the 1st 3x5 rectangle is (3, 2).
- \* The only spot for B in the 2nd 3x5 rectangle is (5, 3).
- \* The only spot for 6 in the 2nd 3x5 rectangle is (6, 1).
- \* The only spot for 4 in the 5th 3x5 rectangle is (15, 5).
- \* The only spot for B in the 6th 3x5 rectangle is (2, 6).
- \* The only spot for 2 in the 15th 3x5 rectangle is (15, 13).

Step 10: There are 10 independent moves.

- \* The only spot for 1 in the 4th row is (4, 4).
- \* The only spot for 3 in the 13th row is (4, 13).
- \* The only spot for 4 in the 4th column is (4, 6).
- \* The only spot for C in the 6th column is (6, 7).

- \* The only spot for 8 in the 1st 3x5 rectangle is (3, 5).
- \* The only spot for C in the 2nd 3x5 rectangle is (4, 5).
- \* The only spot for 4 in the 2nd 3x5 rectangle is (5, 2).
- \* The only spot for 1 in the 3rd 3x5 rectangle is (8, 5).
- \* The only spot for 1 in the 10th 3x5 rectangle is (13, 6).
- \* The only spot for 3 in the 15th 3x5 rectangle is (15, 14).

Step 11: There are 10 independent moves.

- \* The only spot for 0 in the 6th row is (9, 6).
- \* The only spot for 3 in the 6th row is (3, 6).
- \* The only spot for C in the 11th row is (9, 11).
- \* The only spot for C in the 14th row is (5, 14).
- \* The only spot for D in the 14th row is (3, 14).
- \* The only spot for 3 in the 7th 3x5 rectangle is (5, 7).
- \* The only spot for 4 in the 9th 3x5 rectangle is (12, 9).
- \* The only spot for 0 in the 10th 3x5 rectangle is (13, 9).
- \* The only spot for D in the 12th 3x5 rectangle is (4, 11).
- \* The only spot for D in the 15th 3x5 rectangle is (15, 12).

Step 12: There are 13 independent moves.

- \* The only spot for 6 in the 6th row is (15, 6).
- \* The only spot for 6 in the 12th row is (13, 12).
- \* The only spot for 2 in the 5th column is (5, 15).
- \* The only spot for C in the 7th column is (7, 6).
- \* The only spot for 7 in the 13th column is (13, 1).
- \* The only spot for C in the 15th column is (15, 1).
- \* The only spot for C in the 3rd 3x5 rectangle is (8, 3).
- \* The only spot for D in the 6th 3x5 rectangle is (2, 10).
- \* The only spot for 6 in the 6th 3x5 rectangle is (3, 7).
- \* The only spot for 2 in the 7th 3x5 rectangle is (4, 7).
- \* The only spot for 5 in the 8th 3x5 rectangle is (9, 9).
- \* The only spot for 5 in the 9th 3x5 rectangle is (12, 6).
- \* The only spot for 7 in the 10th 3x5 rectangle is (15, 9).

Step 13: There are 7 independent moves.

- \* The only spot for C in the 12th row is (2, 12).
- \* The only spot for 4 in the 8th column is (8, 10).
- \* The only spot for 4 in the 3rd 3x5 rectangle is (9, 3).
- \* The only spot for 6 in the 7th 3x5 rectangle is (5, 9).
- \* The only spot for D in the 8th 3x5 rectangle is (8, 6).
- \* The only spot for 6 in the 12th 3x5 rectangle is (4, 15).
- \* The only spot for C in the 15th 3x5 rectangle is (13, 15).

Step 14: There are 5 independent moves.

- \* The only spot for E in the 12th row is (7, 12).
- \* The only spot for 8 in the 8th column is (8, 2).
- \* The only spot for 8 in the 8th 3x5 rectangle is (7, 10).
- \* The only spot for E in the 11th 3x5 rectangle is (2, 15).
- \* The only spot for 4 in the 13th 3x5 rectangle is (7, 13).

Step 15: There are 3 independent moves.

- \* The only spot for D in the 7th column is (7, 2).
- \* The only spot for 8 in the 13th 3x5 rectangle is (9, 15).
- \* The only spot for D in the 13th 3x5 rectangle is (9, 13).

Step 16: There are 2 independent moves.

- \* The only spot for A in the 3rd 3x5 rectangle is (9, 2).
- \* The only spot for A in the 13th 3x5 rectangle is (7, 15).

## Solution for Puzzle 37

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

D	5	A	8	0	6	9	E	3	4	B	2	7	1	C
C	0	2	E	4	5	D	8	A	9	1	7	3	6	B
6	1	E	9	B	7	5	C	4	8	D	3	2	A	0
9	4	B	1	A	3	7	2	6	0	5	C	D	8	E
7	3	8	C	D	2	0	1	B	A	E	6	5	9	4
8	B	3	4	7	9	C	D	0	E	A	5	1	2	6
E	A	6	2	3	C	B	9	1	D	7	0	4	5	8
4	7	5	0	8	D	2	6	E	3	9	1	B	C	A
1	9	C	B	6	E	3	A	5	2	8	4	0	D	7
2	D	0	A	5	1	8	4	7	C	6	B	E	3	9
5	2	4	D	E	8	6	7	C	B	3	A	9	0	1
A	C	1	7	9	4	E	3	2	5	0	8	6	B	D
0	8	7	3	1	B	4	5	D	6	C	9	A	E	2
B	6	D	5	C	A	1	0	9	7	2	E	8	4	3
3	E	9	6	2	0	A	B	8	1	4	D	C	7	5

Challenging

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## Sudoku-15up Puzzle 38, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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8		4	C	1		7	0		6				9	
0					6			E	2	7	1			3
D		7	5				4			8			C	1
			9							4	A	6		
6	5			B			C						7	E
		8	3	2	5	C		0	7	D				
		B	4		C			7		E			3	
		A				4	D	8					2	7
4	D				1			B	9	6	3	C		
	C	E		0			6		4				5	9
	3	0			2	B			E	5				8
E	4						1		8		D		6	2
	8				B	3					6	E		C
	B	D	E			9	2		3		4	0		
			1	5		E					9	A	B	

Challenging

Diff: 20 / 9952.311D.6455.9879.9555

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 20 steps required to solve the puzzle above with a total of 124 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 38

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

124/225

8		4	C	1		7	0		6	<sup>2</sup>	<sup>2</sup>		9	
0	<sup>3</sup>	<sup>1</sup>			6		<sup>2</sup>	E	2	7	1			3
D		7	5	<sup>2</sup>		<sup>1</sup>	4	<sup>2</sup>		8	<sup>3</sup>		C	1
<sup>1</sup>			9				<sup>1</sup>		<sup>1</sup>	4	A	6		
6	5	<sup>2</sup>	<sup>1</sup>	B	<sup>2</sup>	<sup>3</sup>	C		<sup>2</sup>	<sup>1</sup>		7	E	
		8	3	2	5	C		0	7	D				
		B	4		C			7		E			3	
<sup>1</sup>		A				4	D	8	<sup>3</sup>		<sup>2</sup>		2	7
4	D				1			B	9	6	3	C		
<sup>1</sup>	C	E		0			6	<sup>1</sup>	4			5		9
	3	0			2	B			E	5	<sup>1</sup>	<sup>2</sup>		8
E	4					<sup>1</sup>	1		8	<sup>1</sup>	D	<sup>1</sup>	6	2
	8		<sup>2</sup>		B	3	<sup>2</sup>				6	E		C
	B	D	E			9	2		3		4	0	<sup>3</sup>	
	<sup>1</sup>	<sup>1</sup>	1	5	<sup>1</sup>	E	<sup>1</sup>				9	A	B	

Challenging

Diff: 20 / 9952.311D.6455.9879.9555

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There are 20 steps required to solve the puzzle above with a total of 124 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 38

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

124/225

<b>8</b>	<sup>10</sup>	<b>4</b>	<b>C</b>	<b>1</b>	<sup>11</sup>	<b>7</b>	<b>0</b>	<sup>9</sup>	<b>6</b>	<sup>2</sup>	<sup>2</sup>	<sup>12</sup>	<b>9</b>	<sup>9</sup>	<sup>1</sup>
<b>0</b>	<sup>3</sup>	<sup>1</sup>	<sup>17</sup>	<sup>18</sup>	<b>6</b>	<sup>15</sup>	<sup>2</sup>	<b>E</b>	<b>2</b>	<b>7</b>	<b>1</b>	<sup>12</sup>	<sup>16</sup>	<b>3</b>	
<b>D</b>	<sup>6</sup>	<b>7</b>	<b>5</b>	<sup>2</sup>	<sup>5</sup>	<sup>1</sup>	<b>4</b>	<sup>2</sup>	<sup>4</sup>	<b>8</b>	<sup>3</sup>	<sup>7</sup>	<b>C</b>	<b>1</b>	
<sup>1</sup>	<sup>11</sup>	<sup>11</sup>	<b>9</b>	<sup>15</sup>	<sup>14</sup>	<sup>16</sup>	<sup>1</sup>	<sup>10</sup>	<sup>1</sup>	<b>4</b>	<b>A</b>	<b>6</b>	<sup>16</sup>	<sup>14</sup>	
<b>6</b>	<b>5</b>	<sup>2</sup>	<sup>1</sup>	<b>B</b>	<sup>2</sup>	<sup>3</sup>	<b>C</b>	<sup>4</sup>	<sup>2</sup>	<sup>1</sup>	<sup>5</sup>	<b>7</b>	<b>E</b>	<sup>5</sup>	
<sup>14</sup>	<sup>11</sup>	<b>8</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>C</b>	<sup>13</sup>	<b>0</b>	<b>7</b>	<b>D</b>	<sup>8</sup>	<sup>11</sup>	<sup>9</sup>	<sup>12</sup>	<sup>6</sup>
<sup>16</sup>	<sup>10</sup>	<b>B</b>	<b>4</b>	<sup>13</sup>	<b>C</b>	<sup>17</sup>	<sup>14</sup>	<b>7</b>	<sup>17</sup>	<b>E</b>	<sup>15</sup>	<sup>13</sup>	<b>3</b>	<sup>12</sup>	
<sup>1</sup>	<sup>10</sup>	<b>A</b>	<sup>13</sup>	<sup>12</sup>	<sup>13</sup>	<b>4</b>	<b>D</b>	<b>8</b>	<sup>3</sup>	<sup>9</sup>	<sup>2</sup>	<sup>9</sup>	<b>2</b>	<b>7</b>	
<b>4</b>	<b>D</b>	<sup>16</sup>	<sup>16</sup>	<sup>17</sup>	<b>1</b>	<sup>17</sup>	<sup>15</sup>	<b>B</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>C</b>	<sup>14</sup>	<sup>13</sup>	
<sup>1</sup>	<b>C</b>	<b>E</b>	<sup>9</sup>	<b>0</b>	<sup>16</sup>	<sup>16</sup>	<b>6</b>	<sup>1</sup>	<b>4</b>	<sup>17</sup>	<sup>14</sup>	<b>5</b>	<sup>13</sup>	<b>9</b>	
<sup>20</sup>	<b>3</b>	<b>0</b>	<sup>14</sup>	<sup>18</sup>	<b>2</b>	<b>B</b>	<sup>8</sup>	<sup>19</sup>	<b>E</b>	<b>5</b>	<sup>1</sup>	<sup>2</sup>	<sup>19</sup>	<b>8</b>	<sup>11</sup>
<b>E</b>	<b>4</b>	<sup>17</sup>	<sup>17</sup>	<sup>16</sup>	<sup>15</sup>	<sup>1</sup>	<b>1</b>	<sup>15</sup>	<b>8</b>	<sup>1</sup>	<b>D</b>	<sup>1</sup>	<b>6</b>	<b>2</b>	
<sup>19</sup>	<b>8</b>	<sup>16</sup>	<sup>2</sup>	<sup>17</sup>	<b>B</b>	<b>3</b>	<sup>2</sup>	<sup>14</sup>	<sup>18</sup>	<sup>20</sup>	<b>6</b>	<b>E</b>	<sup>18</sup>	<b>C</b>	
<sup>18</sup>	<b>B</b>	<b>D</b>	<b>E</b>	<sup>19</sup>	<sup>15</sup>	<b>9</b>	<b>2</b>	<sup>20</sup>	<b>3</b>	<sup>19</sup>	<b>4</b>	<b>0</b>	<sup>3</sup>	<sup>8</sup>	
<sup>20</sup>	<sup>1</sup>	<sup>1</sup>	<b>1</b>	<b>5</b>	<sup>1</sup>	<b>E</b>	<sup>1</sup>	<sup>13</sup>	<sup>8</sup>	<sup>20</sup>	<b>9</b>	<b>A</b>	<b>B</b>	<sup>13</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>		<sup>10</sup>		<sup>13</sup>					

Challenging

Diff: 20 / 9952.311D.6455.9879.9555

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There are 20 steps required to solve the puzzle above with a total of 124 empty locations that must be determined, out of a total puzzle size of 225.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 18 independent moves.

- \* The only spot for C in the 2nd row is (3, 2).
- \* The only spot for 3 in the 8th row is (1, 8).
- \* The only spot for 3 in the 15th row is (6, 15).
- \* The only spot for 7 in the 2nd column is (2, 15).
- \* The only spot for 6 in the 3rd column is (3, 15).
- \* The only spot for 6 in the 7th column is (7, 3).
- \* The only spot for 3 in the 8th column is (8, 4).
- \* The only spot for B in the 1st 3x5 rectangle is (1, 4).
- \* The only spot for 2 in the 2nd 3x5 rectangle is (4, 5).
- \* The only spot for 9 in the 4th 3x5 rectangle is (11, 5).
- \* The only spot for C in the 4th 3x5 rectangle is (10, 4).
- \* The only spot for 7 in the 6th 3x5 rectangle is (1, 10).
- \* The only spot for 3 in the 8th 3x5 rectangle is (9, 10).
- \* The only spot for 8 in the 13th 3x5 rectangle is (8, 15).
- \* The only spot for 0 in the 13th 3x5 rectangle is (7, 12).
- \* The only spot for B in the 14th 3x5 rectangle is (11, 12).
- \* The only spot for 7 in the 14th 3x5 rectangle is (12, 11).
- \* The only spot for 3 in the 15th 3x5 rectangle is (13, 12).

Step 2: There are 12 independent moves.

- \* The only spot for 4 in the 6th column is (6, 5).
- \* The only spot for 9 in the 9th column is (9, 3).
- \* The only spot for C in the 12th column is (12, 8).
- \* The only spot for 3 in the 1st 3x5 rectangle is (3, 5).
- \* The only spot for 3 in the 2nd 3x5 rectangle is (5, 3).
- \* The only spot for B in the 3rd 3x5 rectangle is (8, 2).
- \* The only spot for D in the 4th 3x5 rectangle is (10, 5).
- \* The only spot for 5 in the 4th 3x5 rectangle is (12, 1).
- \* The only spot for 3 in the 4th 3x5 rectangle is (11, 1).
- \* The only spot for 0 in the 12th 3x5 rectangle is (4, 13).
- \* The only spot for 7 in the 13th 3x5 rectangle is (8, 13).
- \* The only spot for 9 in the 15th 3x5 rectangle is (13, 11).

Step 3: There are 5 independent moves.

- \* The only spot for 8 in the 5th row is (7, 5).
- \* The only spot for 5 in the 8th row is (10, 8).
- \* The only spot for 9 in the 1st 3x5 rectangle is (2, 2).
- \* The only spot for E in the 4th 3x5 rectangle is (12, 3).
- \* The only spot for 7 in the 15th 3x5 rectangle is (14, 14).

Step 4: There are 2 independent moves.

- \* The only spot for 1 in the 5th row is (9, 5).
- \* The only spot for B in the 4th 3x5 rectangle is (10, 3).

Step 5: There are 3 independent moves.

- \* The only spot for 0 in the 3rd row is (6, 3).
- \* The only spot for A in the 5th row is (15, 5).
- \* The only spot for 0 in the 4th 3x5 rectangle is (12, 5).

Step 6: There is 1 independent move.

- \* The only spot for A in the 3rd row is (2, 3).

Step 7: There is 1 independent move.

- \* The only spot for 2 in the 3rd row is (13, 3).

Step 8: There are 4 independent moves.

- \* 0 must be placed at (10, 15) because it is the only value left that is not already in the 15th row, the 10th column or the 14th 3x5 rectangle.
- \* 5 must be placed at (15, 14) because it is the only value left that is not already in the 14th row, the 15th column or the 15th 3x5 rectangle.
- \* A must be placed at (8, 11) because it is the only value left that is not already in the 11th row, the 8th column or the 13th 3x5 rectangle.
- \* B must be placed at (12, 6) because it is the only value left that is not already in the 6th row, the 12th column or the 9th 3x5 rectangle.

Step 9: There are 6 independent moves.

- \* The only spot for A in the 6th row is (14, 6).
- \* The only spot for B in the 10th row is (4, 10).
- \* The only spot for A in the 9th column is (9, 1).
- \* The only spot for B in the 15th column is (15, 1).
- \* The only spot for 0 in the 9th 3x5 rectangle is (11, 8).
- \* The only spot for B in the 10th 3x5 rectangle is (13, 8).

Step 10: There are 4 independent moves.

- \* The only spot for 2 in the 1st row is (2, 1).
- \* The only spot for 1 in the 8th row is (2, 8).
- \* The only spot for 2 in the 9th column is (9, 4).
- \* The only spot for 0 in the 6th 3x5 rectangle is (2, 7).

Step 11: There are 5 independent moves.

- \* The only spot for E in the 1st row is (6, 1).
- \* The only spot for 1 in the 6th row is (13, 6).
- \* The only spot for 1 in the 1st 3x5 rectangle is (3, 4).
- \* The only spot for E in the 1st 3x5 rectangle is (2, 4).
- \* The only spot for 6 in the 6th 3x5 rectangle is (2, 6).

Step 12: There are 5 independent moves.

- \* The only spot for D in the 1st row is (13, 1).
- \* The only spot for E in the 8th row is (5, 8).
- \* The only spot for 4 in the 13th column is (13, 2).
- \* The only spot for 6 in the 10th 3x5 rectangle is (15, 7).
- \* The only spot for 4 in the 10th 3x5 rectangle is (15, 6).

Step 13: There are 9 independent moves.

- \* The only spot for E in the 6th row is (8, 6).
- \* The only spot for D in the 7th row is (5, 7).
- \* The only spot for 9 in the 8th row is (6, 8).
- \* The only spot for 4 in the 15th row is (9, 15).
- \* The only spot for 8 in the 13th column is (13, 7).
- \* The only spot for D in the 15th column is (15, 15).
- \* The only spot for 6 in the 7th 3x5 rectangle is (4, 8).

- \* The only spot for D in the 10th 3x5 rectangle is (14, 10).
- \* The only spot for E in the 10th 3x5 rectangle is (15, 9).

Step 14: There are 8 independent moves.

- \* The only spot for 9 in the 6th row is (1, 6).
- \* The only spot for D in the 13th row is (9, 13).
- \* The only spot for D in the 6th column is (6, 4).
- \* The only spot for 0 in the 15th column is (15, 4).
- \* The only spot for 9 in the 8th 3x5 rectangle is (8, 7).
- \* The only spot for 8 in the 9th 3x5 rectangle is (12, 10).
- \* The only spot for 0 in the 10th 3x5 rectangle is (14, 9).
- \* The only spot for D in the 12th 3x5 rectangle is (4, 11).

Step 15: There are 7 independent moves.

- \* The only spot for 8 in the 6th column is (6, 14).
- \* The only spot for 7 in the 6th column is (6, 12).
- \* The only spot for 5 in the 8th column is (8, 9).
- \* The only spot for 2 in the 12th column is (12, 7).
- \* The only spot for 7 in the 2nd 3x5 rectangle is (5, 4).
- \* The only spot for D in the 3rd 3x5 rectangle is (7, 2).
- \* The only spot for 5 in the 13th 3x5 rectangle is (9, 12).

Step 16: There are 10 independent moves.

- \* The only spot for 5 in the 2nd row is (14, 2).
- \* The only spot for 8 in the 4th row is (14, 4).
- \* The only spot for 2 in the 10th row is (7, 10).
- \* The only spot for C in the 12th row is (5, 12).
- \* The only spot for 5 in the 3rd column is (3, 13).
- \* The only spot for A in the 6th column is (6, 10).
- \* The only spot for 5 in the 3rd 3x5 rectangle is (7, 4).
- \* The only spot for 2 in the 6th 3x5 rectangle is (3, 9).
- \* The only spot for 5 in the 6th 3x5 rectangle is (1, 7).
- \* The only spot for 7 in the 7th 3x5 rectangle is (4, 9).

Step 17: There are 9 independent moves.

- \* The only spot for A in the 9th row is (7, 9).
- \* The only spot for 1 in the 10th row is (11, 10).
- \* The only spot for A in the 12th row is (4, 12).
- \* The only spot for 8 in the 4th column is (4, 2).
- \* The only spot for 8 in the 7th 3x5 rectangle is (5, 9).
- \* The only spot for 1 in the 8th 3x5 rectangle is (7, 7).
- \* The only spot for A in the 9th 3x5 rectangle is (10, 7).
- \* The only spot for 9 in the 11th 3x5 rectangle is (3, 12).
- \* The only spot for 9 in the 12th 3x5 rectangle is (5, 13).

Step 18: There are 5 independent moves.

- \* The only spot for 4 in the 13th row is (14, 13).
- \* The only spot for 1 in the 14th row is (1, 14).
- \* The only spot for A in the 2nd 3x5 rectangle is (5, 2).

- \* The only spot for 4 in the 12th 3x5 rectangle is (5, 11).
- \* The only spot for 1 in the 14th 3x5 rectangle is (10, 13).

Step 19: There are 5 independent moves.

- \* The only spot for 6 in the 11th row is (9, 11).
- \* The only spot for A in the 14th row is (11, 14).
- \* The only spot for A in the 11th 3x5 rectangle is (1, 13).
- \* The only spot for 6 in the 12th 3x5 rectangle is (5, 14).
- \* The only spot for 1 in the 15th 3x5 rectangle is (14, 11).

Step 20: There are 5 independent moves.

- \* The only spot for C in the 11th row is (1, 11).
- \* The only spot for 2 in the 13th row is (11, 13).
- \* The only spot for 2 in the 11th 3x5 rectangle is (1, 15).
- \* The only spot for C in the 13th 3x5 rectangle is (9, 14).
- \* The only spot for C in the 14th 3x5 rectangle is (11, 15).

## Solution for Puzzle 38

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

8	2	4	C	1	E	7	0	A	6	3	5	D	9	B
0	9	C	8	A	6	D	B	E	2	7	1	4	5	3
D	A	7	5	3	0	6	4	9	B	8	E	2	C	1
B	E	1	9	7	D	5	3	2	C	4	A	6	8	0
6	5	3	2	B	4	8	C	1	D	9	0	7	E	A
9	6	8	3	2	5	C	E	0	7	D	B	1	A	4
5	0	B	4	D	C	1	9	7	A	E	2	8	3	6
3	1	A	6	E	9	4	D	8	5	0	C	B	2	7
4	D	2	7	8	1	A	5	B	9	6	3	C	0	E
7	C	E	B	0	A	2	6	3	4	1	8	5	D	9
C	3	0	D	4	2	B	A	6	E	5	7	9	1	8
E	4	9	A	C	7	0	1	5	8	B	D	3	6	2
A	8	5	0	9	B	3	7	D	1	2	6	E	4	C
1	B	D	E	6	8	9	2	C	3	A	4	0	7	5
2	7	6	1	5	3	E	8	4	0	C	9	A	B	D

Challenging

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## Chapter 22

# Two Tournament Sudoku-15up Puzzles

There are two puzzles in this section ranging in difficulty from twenty-eight to twenty-nine. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 39** (138/225) DiffKey 28 / 9753.4234.A112.1258.7459.9963.5991

**Puzzle 40** (132/225) DiffKey 29 / 9.84B2.31A2.2441.3146.4235.4689.9992

## Sudoku-15up Puzzle 39, Tournament/28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

138/225

<b>E</b>			<b>9</b>		<b>C</b>				<b>2</b>		<b>1</b>	<b>3</b>		<b>0</b>
<b>6</b>			<b>8</b>	<b>0</b>		<b>5</b>			<b>B</b>			<b>7</b>		
	<b>1</b>						<b>D</b>		<b>4</b>				<b>5</b>	<b>B</b>
<b>5</b>			<b>6</b>			<b>A</b>	<b>1</b>		<b>D</b>	<b>9</b>			<b>4</b>	
	<b>D</b>	<b>3</b>			<b>E</b>	<b>9</b>		<b>B</b>			<b>A</b>			
					<b>B</b>	<b>4</b>	<b>8</b>	<b>9</b>				<b>C</b>	<b>6</b>	
		<b>2</b>	<b>0</b>		<b>1</b>				<b>7</b>	<b>A</b>				<b>4</b>
		<b>D</b>				<b>6</b>				<b>1</b>	<b>9</b>		<b>7</b>	<b>3</b>
		<b>6</b>						<b>D</b>	<b>E</b>	<b>0</b>	<b>C</b>			
			<b>C</b>		<b>3</b>		<b>5</b>	<b>1</b>				<b>B</b>		<b>2</b>
				<b>1</b>						<b>4</b>	<b>E</b>		<b>B</b>	
<b>C</b>	<b>4</b>		<b>B</b>	<b>D</b>			<b>3</b>					<b>1</b>		
					<b>4</b>		<b>0</b>	<b>6</b>				<b>E</b>	<b>3</b>	
<b>D</b>		<b>8</b>		<b>E</b>	<b>9</b>							<b>4</b>		
<b>B</b>	<b>6</b>	<b>1</b>		<b>8</b>				<b>A</b>		<b>3</b>	<b>7</b>			

Tournament

Diff: 28 / 9753.4234.A112.1258.7459.9963.5991

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 28 steps required to solve the puzzle above with a total of 138 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 39

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>E</b>			<b>9</b>		<b>C</b>				<b>2</b>		<b>1</b>	<b>3</b>	<sup>1</sup>	<b>0</b>
<b>6</b>			<b>8</b>	<b>0</b>	<sup>1</sup>	<b>5</b>			<b>B</b>			<b>7</b>		
	<b>1</b>						<b>D</b>		<b>4</b>				<b>5</b>	<b>B</b>
<b>5</b>			<b>6</b>			<b>A</b>	<b>1</b>		<b>D</b>	<b>9</b>			<b>4</b>	
	<b>D</b>	<b>3</b>	<sup>1</sup>		<b>E</b>	<b>9</b>		<b>B</b>			<b>A</b>			
			<sup>1</sup>		<b>B</b>	<b>4</b>	<b>8</b>	<b>9</b>	<sup>1</sup>			<b>C</b>	<b>6</b>	
	<sup>3</sup>	<b>2</b>	<b>0</b>	<sup>2</sup>	<b>1</b>				<b>7</b>	<b>A</b>	<sup>1</sup>	<sup>2</sup>		<b>4</b>
		<b>D</b>	<sup>2</sup>			<b>6</b>				<b>1</b>	<b>9</b>		<b>7</b>	<b>3</b>
		<b>6</b>	<sup>3</sup>					<b>D</b>	<b>E</b>	<b>0</b>	<b>C</b>			
			<b>C</b>		<b>3</b>		<b>5</b>	<b>1</b>	<sup>3</sup>	<sup>2</sup>	<sup>1</sup>	<b>B</b>		<b>2</b>
				<b>1</b>		<sup>3</sup>	<sup>2</sup>			<b>4</b>	<b>E</b>		<b>B</b>	
<b>C</b>	<b>4</b>	<sup>1</sup>	<b>B</b>	<b>D</b>			<b>3</b>					<b>1</b>		
				<sup>1</sup>	<b>4</b>		<b>0</b>	<b>6</b>			<sup>2</sup>	<b>E</b>	<b>3</b>	
<b>D</b>		<b>8</b>		<b>E</b>	<b>9</b>							<b>4</b>		
<b>B</b>	<b>6</b>	<b>1</b>		<b>8</b>		<sup>2</sup>	<sup>1</sup>	<b>A</b>		<b>3</b>	<b>7</b>			<sup>3</sup>

Tournament

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There are 28 steps required to solve the puzzle above with a total of 138 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.



## Deductive Steps to Solve Puzzle 39

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<b>E</b>	<sup>8</sup>	<sup>7</sup>	<b>9</b>	<sup>6</sup>	<b>C</b>	<sup>18</sup>	<sup>20</sup>	<sup>8</sup>	<b>2</b>	<sup>21</sup>	<b>1</b>	<b>3</b>	<sup>1</sup>	<b>0</b>	<sup>1</sup>
<b>6</b>	<sup>18</sup>	<sup>8</sup>	<b>8</b>	<b>0</b>	<sup>1</sup>	<b>5</b>	<sup>19</sup>	<sup>20</sup>	<b>B</b>	<sup>18</sup>	<sup>9</sup>	<b>7</b>	<sup>16</sup>	<sup>17</sup>	
<sup>20</sup>	<b>1</b>	<sup>21</sup>	<sup>27</sup>	<sup>8</sup>	<sup>27</sup>	<sup>17</sup>	<b>D</b>	<sup>15</sup>	<b>4</b>	<sup>16</sup>	<sup>19</sup>	<sup>18</sup>	<b>5</b>	<b>B</b>	
<b>5</b>	<sup>22</sup>	<sup>12</sup>	<b>6</b>	<sup>7</sup>	<sup>22</sup>	<b>A</b>	<b>1</b>	<sup>10</sup>	<b>D</b>	<b>9</b>	<sup>23</sup>	<sup>20</sup>	<b>4</b>	<sup>11</sup>	
<sup>23</sup>	<b>D</b>	<b>3</b>	<sup>1</sup>	<sup>5</sup>	<b>E</b>	<b>9</b>	<sup>21</sup>	<b>B</b>	<sup>22</sup>	<sup>21</sup>	<b>A</b>	<sup>19</sup>	<sup>21</sup>	<sup>22</sup>	
<sup>16</sup>	<sup>12</sup>	<sup>17</sup>	<sup>1</sup>	<sup>17</sup>	<b>B</b>	<b>4</b>	<b>8</b>	<b>9</b>	<sup>1</sup>	<sup>26</sup>	<sup>25</sup>	<b>C</b>	<b>6</b>	<sup>15</sup>	<sup>6</sup>
<sup>15</sup>	<sup>3</sup>	<b>2</b>	<b>0</b>	<sup>2</sup>	<b>1</b>	<sup>16</sup>	<sup>20</sup>	<sup>21</sup>	<b>7</b>	<b>A</b>	<sup>1</sup>	<sup>2</sup>	<sup>14</sup>	<b>4</b>	
<sup>4</sup>	<sup>4</sup>	<b>D</b>	<sup>2</sup>	<sup>15</sup>	<sup>7</sup>	<b>6</b>	<sup>5</sup>	<sup>16</sup>	<sup>4</sup>	<b>1</b>	<b>9</b>	<sup>14</sup>	<b>7</b>	<b>3</b>	
<sup>16</sup>	<sup>5</sup>	<b>6</b>	<sup>3</sup>	<sup>17</sup>	<sup>5</sup>	<sup>16</sup>	<sup>6</sup>	<b>D</b>	<b>E</b>	<b>0</b>	<b>C</b>	<sup>20</sup>	<sup>17</sup>	<sup>19</sup>	
<sup>22</sup>	<sup>21</sup>	<sup>20</sup>	<b>C</b>	<sup>16</sup>	<b>3</b>	<sup>15</sup>	<b>5</b>	<b>1</b>	<sup>3</sup>	<sup>2</sup>	<sup>1</sup>	<b>B</b>	<sup>13</sup>	<b>2</b>	
<sup>22</sup>	<sup>25</sup>	<sup>20</sup>	<sup>26</sup>	<b>1</b>	<sup>27</sup>	<sup>3</sup>	<sup>2</sup>	<sup>22</sup>	<sup>23</sup>	<b>4</b>	<b>E</b>	<sup>17</sup>	<b>B</b>	<sup>27</sup>	<sup>11</sup>
<b>C</b>	<b>4</b>	<sup>1</sup>	<b>B</b>	<b>D</b>	<sup>26</sup>	<sup>27</sup>	<b>3</b>	<sup>28</sup>	<sup>25</sup>	<sup>26</sup>	<sup>21</sup>	<b>1</b>	<sup>23</sup>	<sup>27</sup>	
<sup>20</sup>	<sup>27</sup>	<sup>19</sup>	<sup>26</sup>	<sup>1</sup>	<b>4</b>	<sup>25</sup>	<b>0</b>	<b>6</b>	<sup>26</sup>	<sup>24</sup>	<sup>2</sup>	<b>E</b>	<b>3</b>	<sup>22</sup>	
<b>D</b>	<sup>26</sup>	<b>8</b>	<sup>27</sup>	<b>E</b>	<b>9</b>	<sup>26</sup>	<sup>21</sup>	<sup>27</sup>	<sup>26</sup>	<sup>25</sup>	<sup>26</sup>	<b>4</b>	<sup>24</sup>	<sup>26</sup>	
<b>B</b>	<b>6</b>	<b>1</b>	<sup>23</sup>	<b>8</b>	<sup>24</sup>	<sup>2</sup>	<sup>1</sup>	<b>A</b>	<sup>23</sup>	<b>3</b>	<b>7</b>	<sup>21</sup>	<sup>22</sup>	<sup>3</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			<sup>13</sup>			

Tournament

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There are 28 steps required to solve the puzzle above with a total of 138 empty locations that must be determined, out of a total puzzle size of 225.

All 28 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 10 independent moves.

- \* The only spot for D in the 1st row is (14, 1).
- \* The only spot for 3 in the 10th column is (10, 6).
- \* The only spot for 1 in the 2nd 3x5 rectangle is (4, 5).
- \* The only spot for D in the 2nd 3x5 rectangle is (6, 2).
- \* The only spot for D in the 7th 3x5 rectangle is (4, 6).
- \* The only spot for 4 in the 9th 3x5 rectangle is (12, 10).
- \* The only spot for B in the 9th 3x5 rectangle is (12, 7).
- \* The only spot for E in the 11th 3x5 rectangle is (3, 12).
- \* The only spot for C in the 12th 3x5 rectangle is (5, 13).
- \* The only spot for 4 in the 13th 3x5 rectangle is (8, 15).

Step 2: There are 7 independent moves.

- \* The only spot for 6 in the 7th row is (5, 7).
- \* The only spot for D in the 12th column is (12, 13).
- \* The only spot for E in the 7th 3x5 rectangle is (4, 8).
- \* The only spot for D in the 9th 3x5 rectangle is (11, 10).
- \* The only spot for D in the 10th 3x5 rectangle is (13, 7).
- \* The only spot for E in the 13th 3x5 rectangle is (7, 15).
- \* The only spot for 9 in the 13th 3x5 rectangle is (8, 11).

Step 3: There are 5 independent moves.

- \* The only spot for 5 in the 7th row is (2, 7).
- \* The only spot for D in the 15th row is (15, 15).
- \* The only spot for 4 in the 4th column is (4, 9).
- \* The only spot for 6 in the 9th 3x5 rectangle is (10, 10).
- \* The only spot for D in the 13th 3x5 rectangle is (7, 11).

Step 4: There are 3 independent moves.

- \* The only spot for C in the 6th 3x5 rectangle is (2, 8).
- \* The only spot for 4 in the 6th 3x5 rectangle is (1, 8).
- \* The only spot for 8 in the 9th 3x5 rectangle is (10, 8).

Step 5: There are 4 independent moves.

- \* The only spot for 4 in the 5th row is (5, 5).
- \* The only spot for B in the 8th row is (8, 8).
- \* The only spot for B in the 6th 3x5 rectangle is (2, 9).
- \* The only spot for 8 in the 7th 3x5 rectangle is (6, 9).

Step 6: There are 2 independent moves.

- \* The only spot for 5 in the 2nd 3x5 rectangle is (5, 1).
- \* The only spot for A in the 8th 3x5 rectangle is (8, 9).

Step 7: There are 3 independent moves.

- \* The only spot for B in the 1st row is (3, 1).
- \* The only spot for B in the 2nd 3x5 rectangle is (5, 4).
- \* The only spot for 5 in the 7th 3x5 rectangle is (6, 8).

Step 8: There are 4 independent moves.

- \* The only spot for 4 in the 1st row is (9, 1).
- \* The only spot for A in the 1st row is (2, 1).

- \* The only spot for 3 in the 5th column is (5, 3).
- \* The only spot for 4 in the 1st 3x5 rectangle is (3, 2).

Step 9: There is 1 independent move.

- \* 3 must be placed at (12, 2) because it is the only value left that is not already in the 2nd row, the 12th column or the 4th 3x5 rectangle.

Step 10: There is 1 independent move.

- \* The only spot for 3 in the 3rd 3x5 rectangle is (9, 4).

Step 11: There is 1 independent move.

- \* The only spot for E in the 4th row is (15, 4).

Step 12: There are 2 independent moves.

- \* The only spot for C in the 4th row is (3, 4).
- \* The only spot for E in the 6th row is (2, 6).

Step 13: There is 1 independent move.

- \* The only spot for E in the 10th row is (14, 10).

Step 14: There are 2 independent moves.

- \* The only spot for 0 in the 10th 3x5 rectangle is (13, 8).
- \* The only spot for 8 in the 10th 3x5 rectangle is (14, 7).

Step 15: There are 5 independent moves.

- \* The only spot for 9 in the 7th row is (1, 7).
- \* The only spot for A in the 8th row is (5, 8).
- \* The only spot for 0 in the 9th column is (9, 3).
- \* The only spot for 0 in the 8th 3x5 rectangle is (7, 10).
- \* The only spot for A in the 10th 3x5 rectangle is (15, 6).

Step 16: There are 8 independent moves.

- \* The only spot for A in the 2nd row is (14, 2).
- \* The only spot for E in the 3rd row is (11, 3).
- \* The only spot for 1 in the 6th row is (1, 6).
- \* The only spot for 3 in the 7th row is (7, 7).
- \* The only spot for 2 in the 8th row is (9, 8).
- \* The only spot for 9 in the 10th row is (5, 10).
- \* The only spot for 3 in the 6th 3x5 rectangle is (1, 9).
- \* The only spot for 7 in the 8th 3x5 rectangle is (7, 9).

Step 17: There are 7 independent moves.

- \* The only spot for C in the 3rd row is (7, 3).
- \* The only spot for 2 in the 9th row is (5, 9).
- \* The only spot for 1 in the 14th column is (14, 9).
- \* The only spot for 1 in the 5th 3x5 rectangle is (15, 2).
- \* The only spot for 0 in the 6th 3x5 rectangle is (3, 6).
- \* The only spot for 7 in the 7th 3x5 rectangle is (5, 6).
- \* The only spot for A in the 15th 3x5 rectangle is (13, 11).

Step 18: There are 4 independent moves.

- \* The only spot for C in the 2nd row is (11, 2).
- \* The only spot for 9 in the 2nd row is (2, 2).
- \* The only spot for 8 in the 3rd 3x5 rectangle is (7, 1).

- \* The only spot for 9 in the 5th 3x5 rectangle is (13, 3).

Step 19: There are 5 independent moves.

- \* The only spot for 2 in the 2nd row is (8, 2).
- \* The only spot for 6 in the 3rd row is (12, 3).
- \* The only spot for 6 in the 13th column is (13, 5).
- \* The only spot for 9 in the 10th 3x5 rectangle is (15, 9).
- \* The only spot for 9 in the 11th 3x5 rectangle is (3, 13).

Step 20: There are 9 independent moves.

- \* The only spot for 8 in the 3rd row is (1, 3).
- \* The only spot for A in the 3rd column is (3, 10).
- \* The only spot for E in the 8th column is (8, 7).
- \* The only spot for 8 in the 13th column is (13, 4).
- \* The only spot for E in the 3rd 3x5 rectangle is (9, 2).
- \* The only spot for 6 in the 3rd 3x5 rectangle is (8, 1).
- \* The only spot for 5 in the 10th 3x5 rectangle is (13, 9).
- \* The only spot for A in the 11th 3x5 rectangle is (1, 13).
- \* The only spot for 5 in the 11th 3x5 rectangle is (3, 11).

Step 21: There are 10 independent moves.

- \* The only spot for 7 in the 1st row is (11, 1).
- \* The only spot for 7 in the 3rd column is (3, 3).
- \* The only spot for C in the 8th column is (8, 14).
- \* The only spot for 8 in the 12th column is (12, 12).
- \* The only spot for 2 in the 13th column is (13, 15).
- \* The only spot for 7 in the 3rd 3x5 rectangle is (8, 5).
- \* The only spot for 8 in the 4th 3x5 rectangle is (11, 5).
- \* The only spot for 2 in the 5th 3x5 rectangle is (14, 5).
- \* The only spot for 8 in the 6th 3x5 rectangle is (2, 10).
- \* The only spot for C in the 8th 3x5 rectangle is (9, 7).

Step 22: There are 9 independent moves.

- \* The only spot for 8 in the 13th row is (15, 13).
- \* The only spot for 2 in the 1st column is (1, 11).
- \* The only spot for C in the 14th column is (14, 15).
- \* The only spot for 2 in the 1st 3x5 rectangle is (2, 4).
- \* The only spot for 7 in the 2nd 3x5 rectangle is (6, 4).
- \* The only spot for 5 in the 4th 3x5 rectangle is (10, 5).
- \* The only spot for C in the 5th 3x5 rectangle is (15, 5).
- \* The only spot for 7 in the 6th 3x5 rectangle is (1, 10).
- \* The only spot for 8 in the 13th 3x5 rectangle is (9, 11).

Step 23: There are 6 independent moves.

- \* The only spot for 9 in the 15th row is (10, 15).
- \* The only spot for 5 in the 15th row is (4, 15).
- \* The only spot for 0 in the 1st 3x5 rectangle is (1, 5).
- \* The only spot for 0 in the 4th 3x5 rectangle is (12, 4).
- \* The only spot for C in the 14th 3x5 rectangle is (10, 11).

- \* The only spot for 9 in the 15th 3x5 rectangle is (14, 12).

Step 24: There are 3 independent moves.

- \* The only spot for 5 in the 13th row is (11, 13).
- \* The only spot for 0 in the 15th row is (6, 15).
- \* The only spot for 0 in the 15th 3x5 rectangle is (14, 14).

Step 25: There are 5 independent moves.

- \* The only spot for B in the 13th row is (7, 13).
- \* The only spot for 5 in the 9th 3x5 rectangle is (12, 6).
- \* The only spot for 0 in the 11th 3x5 rectangle is (2, 11).
- \* The only spot for B in the 14th 3x5 rectangle is (11, 14).
- \* The only spot for 0 in the 14th 3x5 rectangle is (10, 12).

Step 26: There are 11 independent moves.

- \* The only spot for 3 in the 11th row is (4, 11).
- \* The only spot for A in the 12th row is (6, 12).
- \* The only spot for 1 in the 13th row is (10, 13).
- \* The only spot for 2 in the 13th row is (4, 13).
- \* The only spot for 6 in the 14th row is (15, 14).
- \* The only spot for 2 in the 12th column is (12, 14).
- \* The only spot for 2 in the 9th 3x5 rectangle is (11, 6).
- \* The only spot for 3 in the 11th 3x5 rectangle is (2, 14).
- \* The only spot for 1 in the 13th 3x5 rectangle is (7, 14).
- \* The only spot for A in the 14th 3x5 rectangle is (10, 14).
- \* The only spot for 6 in the 14th 3x5 rectangle is (11, 12).

Step 27: There are 9 independent moves.

- \* The only spot for 7 in the 11th row is (15, 11).
- \* The only spot for 5 in the 14th row is (9, 14).
- \* The only spot for 2 in the 2nd 3x5 rectangle is (6, 3).
- \* The only spot for A in the 2nd 3x5 rectangle is (4, 3).
- \* The only spot for 7 in the 11th 3x5 rectangle is (2, 13).
- \* The only spot for 7 in the 12th 3x5 rectangle is (4, 14).
- \* The only spot for 6 in the 12th 3x5 rectangle is (6, 11).
- \* The only spot for 2 in the 13th 3x5 rectangle is (7, 12).
- \* The only spot for 5 in the 15th 3x5 rectangle is (15, 12).

Step 28: There is 1 independent move.

- \* The only spot for 7 in the 13th 3x5 rectangle is (9, 12).

## Solution for Puzzle 39

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

E	A	B	9	5	C	8	6	4	2	7	1	3	D	0
6	9	4	8	0	D	5	2	E	B	C	3	7	A	1
8	1	7	A	3	2	C	D	0	4	E	6	9	5	B
5	2	C	6	B	7	A	1	3	D	9	0	8	4	E
0	D	3	1	4	E	9	7	B	5	8	A	6	2	C
1	E	0	D	7	B	4	8	9	3	2	5	C	6	A
9	5	2	0	6	1	3	E	C	7	A	B	D	8	4
4	C	D	E	A	5	6	B	2	8	1	9	0	7	3
3	B	6	4	2	8	7	A	D	E	0	C	5	1	9
7	8	A	C	9	3	0	5	1	6	D	4	B	E	2
2	0	5	3	1	6	D	9	8	C	4	E	A	B	7
C	4	E	B	D	A	2	3	7	0	6	8	1	9	5
A	7	9	2	C	4	B	0	6	1	5	D	E	3	8
D	3	8	7	E	9	1	C	5	A	B	2	4	0	6
B	6	1	5	8	0	E	4	A	9	3	7	2	C	D

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## Sudoku-15up Puzzle 40, Tournament/29

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				5					C	2	6		4	E
		C	4	6	0		5	B						
				2		E		C	5	0	D	8		
7	9	1	A				0	D				C		
E	6	5					9		8			7		0
			C		3	9	E	1		4		D		
0		8								A	7			
									2	8	C	E	6	1
		7	8	0	5	B							C	
	D		1	A			8	5			3			
1	2					7		E	4			B	5	
3			6	4		5					E			
		A		B		3	2					6	E	
	5			9	C		1			6			7	4
D		E	5		7	C			9					

Tournament

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 29 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 40

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<sup>2</sup>	<sup>1</sup>		5					C	2	6		4	E
<sup>1</sup>		C	4	6	0		5	B						
				2		E		C	5	0	D	8		<sup>2</sup>
7	9	1	A			<sup>2</sup>	0	D			<sup>3</sup>	C	<sup>3</sup>	<sup>1</sup>
E	6	5		<sup>1</sup>			9		8			7		0
			C	<sup>2</sup>	3	9	E	1		4	<sup>1</sup>	D		
0		8	<sup>2</sup>				<sup>1</sup>			A	7	<sup>1</sup>		
<sup>1</sup>									2	8	C	E	6	1
		7	8	0	5	B							C	
<sup>1</sup>	D		1	A			8	5			3			<sup>1</sup>
1	2	<sup>1</sup>			<sup>3</sup>	7		E	4	<sup>3</sup>		B	5	<sup>2</sup>
3			6	4	<sup>2</sup>	5					E			
		A		B		3	2			<sup>1</sup>		6	E	
	5		<sup>1</sup>	9	C		1			6			7	4
D		E	5	<sup>2</sup>	7	C			9					

Tournament

Diff: 29 / 9.84B2.31A2.2441.3146.4235.4689.9992

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 29 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.



## Deductive Steps to Solve Puzzle 40

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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23	2	1	28	5	28	25	27	28	C	2	6	23	4	E	<sup>1</sup>
1	25	C	4	6	0	24	5	B	16	17	17	28	27	25	
24	22	25	27	2	26	E	28	C	5	0	D	8	26	2	
7	9	1	A	10	9	2	0	D	11	12	3	C	3	1	
E	6	5	27	1	12	25	9	26	8	18	18	7	23	0	
19	22	21	C	2	3	9	E	1	18	4	1	D	21	20	<sup>6</sup>
0	10	8	2	8	21	5	1	20	19	A	7	1	22	23	
1	24	25	28	4	27	27	28	29	2	8	C	E	6	1	
23	9	7	8	0	5	B	26	27	20	6	16	28	C	29	
1	D	21	1	A	18	26	8	5	17	17	3	26	27	1	
1	2	1	12	11	3	7	4	E	4	3	11	B	5	2	<sup>11</sup>
3	17	24	6	4	2	5	14	26	14	16	E	26	25	24	
24	16	A	12	B	11	3	2	24	15	1	14	6	E	17	
22	5	25	1	9	C	26	1	25	5	6	7	6	7	4	
D	23	E	5	2	7	C	21	24	9	6	13	27	28	28	
1			4			7			10			13			

Tournament

Diff: 29 / 9.84B2.31A2.2441.3146.4235.4689.9992

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 29 steps required to solve the puzzle above with a total of 132 empty locations that must be determined, out of a total puzzle size of 225.

All 29 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 5 in the 8th row is (1, 8).
- \* The only spot for 7 in the 10th row is (15, 10).
- \* The only spot for C in the 10th row is (1, 10).
- \* The only spot for 5 in the 11th column is (11, 13).
- \* The only spot for 5 in the 13th column is (13, 7).
- \* The only spot for 2 in the 1st 3x5 rectangle is (1, 2).
- \* The only spot for D in the 1st 3x5 rectangle is (3, 1).
- \* The only spot for C in the 2nd 3x5 rectangle is (5, 5).
- \* The only spot for 5 in the 5th 3x5 rectangle is (15, 4).
- \* The only spot for C in the 8th 3x5 rectangle is (8, 7).
- \* The only spot for 5 in the 9th 3x5 rectangle is (12, 6).
- \* The only spot for 6 in the 11th 3x5 rectangle is (3, 11).
- \* The only spot for E in the 12th 3x5 rectangle is (4, 14).

Step 2: There are 8 independent moves.

- \* The only spot for 6 in the 4th row is (7, 4).
- \* The only spot for 7 in the 6th row is (5, 6).
- \* The only spot for 9 in the 11th row is (15, 11).
- \* The only spot for 2 in the 4th column is (4, 7).
- \* The only spot for 1 in the 5th column is (5, 15).
- \* The only spot for 0 in the 1st 3x5 rectangle is (2, 1).
- \* The only spot for 6 in the 5th 3x5 rectangle is (15, 3).
- \* The only spot for 2 in the 12th 3x5 rectangle is (6, 12).

Step 3: There are 4 independent moves.

- \* The only spot for 2 in the 4th row is (14, 4).
- \* The only spot for 4 in the 4th row is (12, 4).
- \* The only spot for C in the 11th row is (11, 11).
- \* The only spot for A in the 12th 3x5 rectangle is (6, 11).

Step 4: There are 2 independent moves.

- \* D must be placed at (8, 11) because it is the only value left that is not already in the 11th row, the 8th column or the 13th 3x5 rectangle.
- \* D must be placed at (5, 8) because it is the only value left that is not already in the 8th row, the 5th column or the 7th 3x5 rectangle.

Step 5: There are 2 independent moves.

- \* The only spot for D in the 14th row is (10, 14).
- \* The only spot for D in the 8th 3x5 rectangle is (7, 7).

Step 6: There are 3 independent moves.

- \* The only spot for 3 in the 14th row is (13, 14).
- \* The only spot for D in the 9th 3x5 rectangle is (11, 9).
- \* The only spot for 3 in the 14th 3x5 rectangle is (11, 15).

Step 7: There is 1 independent move.

- \* The only spot for 2 in the 14th row is (12, 14).

Step 8: There is 1 independent move.

- \* E must be placed at (5, 7) because it is the only value left that is not already in the 7th row, the 5th column or the 7th 3x5 rectangle.

Step 9: There are 2 independent moves.

- \* The only spot for E in the 2nd 3x5 rectangle is (6, 4).
- \* The only spot for E in the 6th 3x5 rectangle is (2, 9).

Step 10: There are 2 independent moves.

- \* The only spot for 8 in the 4th row is (5, 4).
- \* The only spot for 1 in the 6th 3x5 rectangle is (2, 7).

Step 11: There are 4 independent moves.

- \* The only spot for 3 in the 4th row is (10, 4).
- \* The only spot for 8 in the 11th row is (12, 11).
- \* The only spot for 3 in the 5th column is (5, 11).
- \* The only spot for 8 in the 12th 3x5 rectangle is (6, 13).

Step 12: There are 4 independent moves.

- \* The only spot for B in the 4th row is (11, 4).
- \* The only spot for 0 in the 11th row is (4, 11).
- \* The only spot for D in the 6th column is (6, 5).
- \* The only spot for D in the 12th 3x5 rectangle is (4, 13).

Step 13: There is 1 independent move.

- \* The only spot for B in the 12th column is (12, 15).

Step 14: There are 3 independent moves.

- \* The only spot for 0 in the 12th column is (12, 13).
- \* The only spot for B in the 13th 3x5 rectangle is (8, 12).
- \* The only spot for A in the 14th 3x5 rectangle is (10, 12).

Step 15: There is 1 independent move.

- \* The only spot for 1 in the 13th row is (10, 13).

Step 16: There are 4 independent moves.

- \* The only spot for 7 in the 13th row is (2, 13).
- \* The only spot for 7 in the 10th column is (10, 2).
- \* The only spot for 1 in the 9th 3x5 rectangle is (12, 9).
- \* The only spot for 7 in the 14th 3x5 rectangle is (11, 12).

Step 17: There are 6 independent moves.

- \* The only spot for C in the 13th row is (15, 13).
- \* The only spot for E in the 10th column is (10, 10).
- \* The only spot for 9 in the 12th column is (12, 2).
- \* The only spot for E in the 4th 3x5 rectangle is (11, 2).
- \* The only spot for 9 in the 9th 3x5 rectangle is (11, 10).
- \* The only spot for C in the 11th 3x5 rectangle is (2, 12).

Step 18: There are 4 independent moves.

- \* The only spot for 6 in the 10th row is (6, 10).
- \* The only spot for A in the 4th 3x5 rectangle is (12, 5).
- \* The only spot for 1 in the 4th 3x5 rectangle is (11, 5).
- \* The only spot for 0 in the 9th 3x5 rectangle is (10, 6).

Step 19: There are 2 independent moves.

- \* The only spot for 6 in the 6th row is (1, 6).
- \* The only spot for B in the 9th 3x5 rectangle is (10, 7).

Step 20: There are 3 independent moves.

- \* The only spot for 6 in the 7th row is (9, 7).
- \* The only spot for B in the 15th column is (15, 6).
- \* The only spot for 6 in the 9th 3x5 rectangle is (10, 9).

Step 21: There are 5 independent moves.

- \* The only spot for 2 in the 6th row is (3, 6).
- \* The only spot for 4 in the 7th row is (6, 7).
- \* The only spot for B in the 10th row is (3, 10).
- \* The only spot for 8 in the 10th 3x5 rectangle is (14, 6).
- \* The only spot for 6 in the 13th 3x5 rectangle is (8, 15).

Step 22: There are 4 independent moves.

- \* The only spot for A in the 6th row is (2, 6).
- \* The only spot for 9 in the 7th row is (14, 7).
- \* The only spot for B in the 2nd column is (2, 3).
- \* The only spot for B in the 11th 3x5 rectangle is (1, 14).

Step 23: There are 6 independent moves.

- \* The only spot for 3 in the 7th row is (15, 7).
- \* The only spot for 9 in the 9th row is (1, 9).
- \* The only spot for 8 in the 1st column is (1, 1).
- \* The only spot for B in the 5th 3x5 rectangle is (14, 5).
- \* The only spot for 9 in the 5th 3x5 rectangle is (13, 1).
- \* The only spot for 8 in the 11th 3x5 rectangle is (2, 15).

Step 24: There are 8 independent moves.

- \* The only spot for 9 in the 13th row is (9, 13).
- \* The only spot for 4 in the 15th row is (9, 15).
- \* The only spot for 4 in the 2nd column is (2, 8).
- \* The only spot for A in the 1st 3x5 rectangle is (1, 3).
- \* The only spot for 8 in the 3rd 3x5 rectangle is (7, 2).
- \* The only spot for 4 in the 11th 3x5 rectangle is (1, 13).
- \* The only spot for 9 in the 11th 3x5 rectangle is (3, 12).
- \* The only spot for 8 in the 15th 3x5 rectangle is (15, 12).

Step 25: There are 9 independent moves.

- \* The only spot for 4 in the 5th row is (7, 5).
- \* The only spot for 3 in the 2nd column is (2, 2).
- \* The only spot for D in the 15th column is (15, 2).
- \* The only spot for 4 in the 1st 3x5 rectangle is (3, 3).
- \* The only spot for 1 in the 3rd 3x5 rectangle is (7, 1).
- \* The only spot for 3 in the 6th 3x5 rectangle is (3, 8).
- \* The only spot for 0 in the 11th 3x5 rectangle is (3, 14).
- \* The only spot for 8 in the 13th 3x5 rectangle is (9, 14).
- \* The only spot for D in the 15th 3x5 rectangle is (14, 12).

Step 26: There are 9 independent moves.

- \* The only spot for 4 in the 10th row is (13, 10).
- \* The only spot for 2 in the 7th column is (7, 10).

- \* The only spot for 1 in the 2nd 3x5 rectangle is (6, 3).
- \* The only spot for 2 in the 3rd 3x5 rectangle is (9, 5).
- \* The only spot for 3 in the 5th 3x5 rectangle is (14, 3).
- \* The only spot for 4 in the 8th 3x5 rectangle is (8, 9).
- \* The only spot for A in the 13th 3x5 rectangle is (7, 14).
- \* The only spot for 0 in the 13th 3x5 rectangle is (9, 12).
- \* The only spot for 1 in the 15th 3x5 rectangle is (13, 12).

Step 27: There are 9 independent moves.

- \* The only spot for 3 in the 5th row is (4, 5).
- \* The only spot for 9 in the 6th column is (6, 8).
- \* The only spot for 3 in the 8th column is (8, 1).
- \* The only spot for 0 in the 13th column is (13, 15).
- \* The only spot for 9 in the 2nd 3x5 rectangle is (4, 3).
- \* The only spot for 1 in the 5th 3x5 rectangle is (14, 2).
- \* The only spot for 3 in the 8th 3x5 rectangle is (9, 9).
- \* The only spot for 0 in the 8th 3x5 rectangle is (7, 8).
- \* The only spot for 0 in the 10th 3x5 rectangle is (14, 10).

Step 28: There are 10 independent moves.

- \* The only spot for 7 in the 3rd row is (8, 3).
- \* The only spot for B in the 6th column is (6, 1).
- \* The only spot for A in the 8th column is (8, 8).
- \* The only spot for 2 in the 13th column is (13, 9).
- \* The only spot for A in the 14th column is (14, 15).
- \* The only spot for 7 in the 2nd 3x5 rectangle is (4, 1).
- \* The only spot for A in the 3rd 3x5 rectangle is (9, 1).
- \* The only spot for A in the 5th 3x5 rectangle is (13, 2).
- \* The only spot for B in the 7th 3x5 rectangle is (4, 8).
- \* The only spot for 2 in the 15th 3x5 rectangle is (15, 15).

Step 29: There are 2 independent moves.

- \* The only spot for 7 in the 8th 3x5 rectangle is (9, 8).
- \* The only spot for A in the 10th 3x5 rectangle is (15, 9).

## Solution for Puzzle 40

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

8	0	D	7	5	B	1	3	A	C	2	6	9	4	E
2	3	C	4	6	0	8	5	B	7	E	9	A	1	D
A	B	4	9	2	1	E	7	C	5	0	D	8	3	6
7	9	1	A	8	E	6	0	D	3	B	4	C	2	5
E	6	5	3	C	D	4	9	2	8	1	A	7	B	0
6	A	2	C	7	3	9	E	1	0	4	5	D	8	B
0	1	8	2	E	4	D	C	6	B	A	7	5	9	3
5	4	3	B	D	9	0	A	7	2	8	C	E	6	1
9	E	7	8	0	5	B	4	3	6	D	1	2	C	A
C	D	B	1	A	6	2	8	5	E	9	3	4	0	7
1	2	6	0	3	A	7	D	E	4	C	8	B	5	9
3	C	9	6	4	2	5	B	0	A	7	E	1	D	8
4	7	A	D	B	8	3	2	9	1	5	0	6	E	C
B	5	0	E	9	C	A	1	8	D	6	2	3	7	4
D	8	E	5	1	7	C	6	4	9	3	B	0	A	2

Tournament

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## Chapter 23

# Two TournamentPlus Sudoku-15up Puzzles

There are two puzzles in this section ranging in difficulty from forty-three to forty-four. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 41** (134/225) DiffKey 43 / 911.21B2.AAAB.4455.211B.2332.2321.1231.2243.5994+

**Puzzle 42** (131/225) DiffKey 44 / 9571.C433.2333.1B23.2332.CB22.3512.3132.2232+

## Sudoku-15up Puzzle 41, TournamentPlus/43

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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5				4				1		B		A	3	
E		3		0					A				5	4
	6			E		3	A			2	9		C	
	7	B			D			9	6					
	A		5	3	6		C			1				D
6			1			0		C		8				
D		E			0			5		9	2			7
2	5	8					1				6			C
				6	9		B	3				5		8
			2				4		7		C		9	6
	2	1					5	6					4	
B			3		E					4		8	7	5
			6			7			9			C	D	
7	D	5		2	4						0			
	4		D	9		E	8		3	6				

TournamentPlus

Diff: 43 / 911.21B2.AAAB.4455.211B.2332.2321.1231.2243+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 43 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.



## First Three Steps to Solve Puzzle 41

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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5				4				1		B		A	3	
E		3		0					A			<sup>1</sup>	5	4
	6			E		3	A		<sup>1</sup>	2	9		C	
	7	B			D	<sup>1</sup>		9	6		<sup>3</sup>			
	A		5	3	6	<sup>2</sup>	C			1				D
6			1			0		C		8				
D		E			0			5		9	2			7
2	5	8				<sup>1</sup>	1				6			C
				6	9		B	3				5		8
			2				4		7		C		9	6
	2	1	<sup>1</sup>				5	6					4	
B		<sup>1</sup>	3		E				<sup>1</sup>	4		8	7	5
	<sup>1</sup>		6			7		<sup>1</sup>	9			C	D	
7	D	5		2	4						0		<sup>1</sup>	
	4		D	9		E	8		3	6				

TournamentPlus

Diff: 43 / 911.21B2.AAAB.4455.211B.2332.2321.1231.2243+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 43 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 41

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>5</b>	<sup>22</sup>	<sup>15</sup>	<sup>25</sup>	<b>4</b>	<sup>21</sup>	<sup>7</sup>	<sup>23</sup>	<b>1</b>	<sup>20</sup>	<b>B</b>	<sup>24</sup>	<b>A</b>	<b>3</b>	<sup>13</sup>	<sup>1</sup>
<b>E</b>	<sup>21</sup>	<b>3</b>	<sup>12</sup>	<b>0</b>	<sup>20</sup>	<sup>37</sup>	<sup>37</sup>	<sup>35</sup>	<b>A</b>	<sup>37</sup>	<sup>36</sup>	<sup>1</sup>	<b>5</b>	<b>4</b>	
<sup>23</sup>	<b>6</b>	<sup>14</sup>	<sup>38</sup>	<b>E</b>	<sup>38</sup>	<b>3</b>	<b>A</b>	<sup>15</sup>	<sup>1</sup>	<b>2</b>	<b>9</b>	<sup>26</sup>	<b>C</b>	<sup>29</sup>	
<sup>15</sup>	<b>7</b>	<b>B</b>	<sup>30</sup>	<sup>29</sup>	<b>D</b>	<sup>1</sup>	<sup>24</sup>	<b>9</b>	<b>6</b>	<sup>4</sup>	<sup>3</sup>	<sup>27</sup>	<sup>26</sup>	<sup>28</sup>	
<sup>12</sup>	<b>A</b>	<sup>16</sup>	<b>5</b>	<b>3</b>	<b>6</b>	<sup>2</sup>	<b>C</b>	<sup>36</sup>	<sup>21</sup>	<b>1</b>	<sup>37</sup>	<sup>30</sup>	<sup>25</sup>	<b>D</b>	
<b>6</b>	<sup>19</sup>	<sup>12</sup>	<b>1</b>	<sup>38</sup>	<sup>38</sup>	<b>0</b>	<sup>37</sup>	<b>C</b>	<sup>41</sup>	<b>8</b>	<sup>4</sup>	<sup>42</sup>	<sup>39</sup>	<sup>25</sup>	<sup>6</sup>
<b>D</b>	<sup>41</sup>	<b>E</b>	<sup>42</sup>	<sup>36</sup>	<b>0</b>	<sup>34</sup>	<sup>6</sup>	<b>5</b>	<sup>43</sup>	<b>9</b>	<b>2</b>	<sup>42</sup>	<sup>42</sup>	<b>7</b>	
<b>2</b>	<b>5</b>	<b>8</b>	<sup>43</sup>	<sup>40</sup>	<sup>39</sup>	<sup>1</sup>	<b>1</b>	<sup>37</sup>	<sup>42</sup>	<sup>43</sup>	<b>6</b>	<sup>40</sup>	<sup>41</sup>	<b>C</b>	
<sup>14</sup>	<sup>42</sup>	<sup>13</sup>	<sup>43</sup>	<b>6</b>	<b>9</b>	<sup>36</sup>	<b>B</b>	<b>3</b>	<sup>38</sup>	<sup>42</sup>	<sup>7</sup>	<b>5</b>	<sup>37</sup>	<b>8</b>	
<sup>22</sup>	<sup>41</sup>	<sup>9</sup>	<b>2</b>	<sup>39</sup>	<sup>40</sup>	<sup>35</sup>	<b>4</b>	<sup>18</sup>	<b>7</b>	<sup>5</sup>	<b>C</b>	<sup>40</sup>	<b>9</b>	<b>6</b>	
<sup>14</sup>	<b>2</b>	<b>1</b>	<sup>1</sup>	<sup>32</sup>	<sup>38</sup>	<sup>35</sup>	<b>5</b>	<b>6</b>	<sup>39</sup>	<sup>38</sup>	<sup>37</sup>	<sup>13</sup>	<b>4</b>	<sup>16</sup>	<sup>11</sup>
<b>B</b>	<sup>11</sup>	<sup>1</sup>	<b>3</b>	<sup>31</sup>	<b>E</b>	<sup>32</sup>	<sup>34</sup>	<sup>22</sup>	<sup>1</sup>	<b>4</b>	<sup>33</sup>	<b>8</b>	<b>7</b>	<b>5</b>	
<sup>15</sup>	<sup>1</sup>	<sup>8</sup>	<b>6</b>	<sup>37</sup>	<sup>34</sup>	<b>7</b>	<sup>13</sup>	<sup>1</sup>	<b>9</b>	<sup>6</sup>	<sup>36</sup>	<b>C</b>	<b>D</b>	<sup>14</sup>	
<b>7</b>	<b>D</b>	<b>5</b>	<sup>37</sup>	<b>2</b>	<b>4</b>	<sup>33</sup>	<sup>12</sup>	<sup>34</sup>	<sup>38</sup>	<sup>19</sup>	<b>0</b>	<sup>17</sup>	<sup>1</sup>	<sup>15</sup>	
<sup>11</sup>	<b>4</b>	<sup>10</sup>	<b>D</b>	<b>9</b>	<sup>38</sup>	<b>E</b>	<b>8</b>	<sup>14</sup>	<b>3</b>	<b>6</b>	<sup>37</sup>	<sup>41</sup>	<sup>42</sup>	<sup>30</sup>	
<sup>1</sup>			<sup>4</sup>			<sup>7</sup>			<sup>10</sup>			<sup>13</sup>			

TournamentPlus

Diff: 43 / 911.21B2.AAAB.4455.211B.2332.2321.1231.2243+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 43 steps required to solve the puzzle above with a total of 134 empty locations that must be determined, out of a total puzzle size of 225.

All 43 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 10 independent moves.

- \* The only spot for 5 in the 3rd row is (10, 3).
- \* The only spot for 9 in the 8th row is (7, 8).
- \* The only spot for 6 in the 14th column is (14, 14).
- \* The only spot for 5 in the 3rd 3x5 rectangle is (7, 4).
- \* The only spot for 6 in the 5th 3x5 rectangle is (13, 2).
- \* The only spot for E in the 11th 3x5 rectangle is (2, 13).
- \* The only spot for 6 in the 11th 3x5 rectangle is (3, 12).
- \* The only spot for 0 in the 12th 3x5 rectangle is (4, 11).
- \* The only spot for 4 in the 13th 3x5 rectangle is (9, 13).
- \* The only spot for 2 in the 14th 3x5 rectangle is (10, 12).

Step 2: There is 1 independent move.

- \* The only spot for 4 in the 3rd 3x5 rectangle is (7, 5).

Step 3: There is 1 independent move.

- \* The only spot for 4 in the 4th 3x5 rectangle is (12, 4).

Step 4: There are 2 independent moves.

- \* The only spot for 3 in the 12th column is (12, 6).
- \* The only spot for 3 in the 4th 3x5 rectangle is (11, 4).

Step 5: There is 1 independent move.

- \* The only spot for 5 in the 9th 3x5 rectangle is (11, 10).

Step 6: There are 2 independent moves.

- \* A must be placed at (11, 13) because it is the only value left that is not already in the 13th row, the 11th column or the 14th 3x5 rectangle.
- \* 6 must be placed at (8, 7) because it is the only value left that is not already in the 7th row, the 8th column or the 8th 3x5 rectangle.

Step 7: There are 2 independent moves.

- \* The only spot for 6 in the 3rd 3x5 rectangle is (7, 1).
- \* The only spot for A in the 9th 3x5 rectangle is (12, 9).

Step 8: There is 1 independent move.

- \* 0 must be placed at (3, 13) because it is the only value left that is not already in the 13th row, the 3rd column or the 11th 3x5 rectangle.

Step 9: There is 1 independent move.

- \* A must be placed at (3, 10) because it is the only value left that is not already in the 10th row, the 3rd column or the 6th 3x5 rectangle.

Step 10: There is 1 independent move.

- \* C must be placed at (3, 15) because it is the only value left that is not already in the 15th row, the 3rd column or the 11th 3x5 rectangle.

Step 11: There are 2 independent moves.

- \* A must be placed at (1, 15) because it is the only value left that is not already in the 15th row, the 1st column or the 11th 3x5 rectangle.
- \* 9 must be placed at (2, 12) because it is the only value left that is not already in the 12th row, the 2nd column or the 11th 3x5 rectangle.

Step 12: There are 4 independent moves.

- \* The only spot for 9 in the 2nd row is (4, 2).

- \* The only spot for 9 in the 1st column is (1, 5).
- \* The only spot for 9 in the 6th 3x5 rectangle is (3, 6).
- \* The only spot for 9 in the 13th 3x5 rectangle is (8, 14).

Step 13: There are 4 independent moves.

- \* The only spot for 9 in the 13th column is (13, 11).
- \* The only spot for 9 in the 5th 3x5 rectangle is (15, 1).
- \* The only spot for 7 in the 6th 3x5 rectangle is (3, 9).
- \* The only spot for 3 in the 13th 3x5 rectangle is (8, 13).

Step 14: There are 5 independent moves.

- \* The only spot for 2 in the 13th row is (15, 13).
- \* The only spot for 4 in the 3rd column is (3, 3).
- \* The only spot for 4 in the 6th 3x5 rectangle is (1, 9).
- \* The only spot for 3 in the 11th 3x5 rectangle is (1, 11).
- \* The only spot for 2 in the 13th 3x5 rectangle is (9, 15).

Step 15: There are 5 independent moves.

- \* The only spot for D in the 3rd row is (9, 3).
- \* The only spot for C in the 1st column is (1, 4).
- \* The only spot for 3 in the 15th column is (15, 14).
- \* The only spot for D in the 1st 3x5 rectangle is (3, 1).
- \* The only spot for 8 in the 11th 3x5 rectangle is (1, 13).

Step 16: There are 2 independent moves.

- \* The only spot for 2 in the 1st 3x5 rectangle is (3, 5).
- \* The only spot for A in the 15th 3x5 rectangle is (15, 11).

Step 17: There is 1 independent move.

- \* The only spot for E in the 15th 3x5 rectangle is (13, 14).

Step 18: There is 1 independent move.

- \* The only spot for E in the 10th row is (9, 10).

Step 19: There are 2 independent moves.

- \* C must be placed at (11, 14) because it is the only value left that is not already in the 14th row, the 11th column or the 14th 3x5 rectangle.
- \* B must be placed at (2, 6) because it is the only value left that is not already in the 6th row, the 2nd column or the 6th 3x5 rectangle.

Step 20: There are 2 independent moves.

- \* The only spot for C in the 2nd row is (6, 2).
- \* The only spot for C in the 4th 3x5 rectangle is (10, 1).

Step 21: There are 3 independent moves.

- \* The only spot for 1 in the 2nd row is (2, 2).
- \* The only spot for 2 in the 2nd 3x5 rectangle is (6, 1).
- \* The only spot for 0 in the 4th 3x5 rectangle is (10, 5).

Step 22: There are 3 independent moves.

- \* The only spot for 0 in the 9th column is (9, 12).
- \* The only spot for 8 in the 1st 3x5 rectangle is (2, 1).
- \* The only spot for 1 in the 6th 3x5 rectangle is (1, 10).

Step 23: There are 2 independent moves.

- \* The only spot for 0 in the 1st row is (8, 1).
  - \* The only spot for 0 in the 1st 3x5 rectangle is (1, 3).
- Step 24: There are 2 independent moves.
- \* The only spot for E in the 1st row is (12, 1).
  - \* The only spot for E in the 3rd 3x5 rectangle is (8, 4).
- Step 25: There are 3 independent moves.
- \* The only spot for 7 in the 1st row is (4, 1).
  - \* The only spot for E in the 15th column is (15, 6).
  - \* The only spot for E in the 5th 3x5 rectangle is (14, 5).
- Step 26: There are 2 independent moves.
- \* The only spot for 7 in the 3rd row is (13, 3).
  - \* The only spot for 8 in the 5th 3x5 rectangle is (14, 4).
- Step 27: There is 1 independent move.
- \* The only spot for 2 in the 5th 3x5 rectangle is (13, 4).
- Step 28: There is 1 independent move.
- \* The only spot for 0 in the 5th 3x5 rectangle is (15, 4).
- Step 29: There are 2 independent moves.
- \* The only spot for 1 in the 4th row is (5, 4).
  - \* The only spot for 1 in the 5th 3x5 rectangle is (15, 3).
- Step 30: There are 3 independent moves.
- \* The only spot for B in the 15th column is (15, 15).
  - \* The only spot for A in the 2nd 3x5 rectangle is (4, 4).
  - \* The only spot for B in the 5th 3x5 rectangle is (13, 5).
- Step 31: There is 1 independent move.
- \* The only spot for A in the 12th 3x5 rectangle is (5, 12).
- Step 32: There are 2 independent moves.
- \* The only spot for C in the 12th row is (7, 12).
  - \* The only spot for C in the 12th 3x5 rectangle is (5, 11).
- Step 33: There are 2 independent moves.
- \* The only spot for 1 in the 12th row is (12, 12).
  - \* The only spot for 1 in the 13th 3x5 rectangle is (7, 14).
- Step 34: There are 4 independent moves.
- \* The only spot for D in the 12th row is (8, 12).
  - \* The only spot for 1 in the 13th row is (6, 13).
  - \* The only spot for A in the 7th column is (7, 7).
  - \* The only spot for A in the 13th 3x5 rectangle is (9, 14).
- Step 35: There are 3 independent moves.
- \* The only spot for B in the 9th column is (9, 2).
  - \* The only spot for 8 in the 8th 3x5 rectangle is (7, 10).
  - \* The only spot for B in the 13th 3x5 rectangle is (7, 11).
- Step 36: There are 5 independent moves.
- \* The only spot for 8 in the 2nd row is (12, 2).
  - \* The only spot for 8 in the 5th column is (5, 7).
  - \* The only spot for B in the 12th column is (12, 13).

- \* The only spot for 8 in the 3rd 3x5 rectangle is (9, 5).
- \* The only spot for D in the 8th 3x5 rectangle is (7, 9).

Step 37: There are 11 independent moves.

- \* The only spot for 7 in the 5th row is (12, 5).
- \* The only spot for 2 in the 9th row is (14, 9).
- \* The only spot for 5 in the 13th row is (5, 13).
- \* The only spot for 2 in the 7th column is (7, 2).
- \* The only spot for 7 in the 9th column is (9, 8).
- \* The only spot for D in the 12th column is (12, 11).
- \* The only spot for 7 in the 3rd 3x5 rectangle is (8, 2).
- \* The only spot for D in the 4th 3x5 rectangle is (11, 2).
- \* The only spot for 2 in the 8th 3x5 rectangle is (8, 6).
- \* The only spot for B in the 12th 3x5 rectangle is (4, 14).
- \* The only spot for 5 in the 14th 3x5 rectangle is (12, 15).

Step 38: There are 9 independent moves.

- \* The only spot for 1 in the 9th row is (10, 9).
- \* The only spot for 8 in the 14th row is (10, 14).
- \* The only spot for 7 in the 15th row is (6, 15).
- \* The only spot for 8 in the 4th column is (4, 3).
- \* The only spot for 7 in the 5th column is (5, 6).
- \* The only spot for B in the 2nd 3x5 rectangle is (6, 3).
- \* The only spot for 5 in the 7th 3x5 rectangle is (6, 6).
- \* The only spot for 8 in the 12th 3x5 rectangle is (6, 11).
- \* The only spot for 7 in the 14th 3x5 rectangle is (11, 11).

Step 39: There are 4 independent moves.

- \* The only spot for A in the 6th row is (14, 6).
- \* The only spot for B in the 10th row is (5, 10).
- \* The only spot for A in the 7th 3x5 rectangle is (6, 8).
- \* The only spot for E in the 14th 3x5 rectangle is (10, 11).

Step 40: There are 4 independent moves.

- \* The only spot for 3 in the 8th row is (13, 8).
- \* The only spot for D in the 10th row is (13, 10).
- \* The only spot for 3 in the 7th 3x5 rectangle is (6, 10).
- \* The only spot for D in the 7th 3x5 rectangle is (5, 8).

Step 41: There are 5 independent moves.

- \* The only spot for 0 in the 10th row is (2, 10).
- \* The only spot for 0 in the 13th column is (13, 15).
- \* The only spot for 3 in the 6th 3x5 rectangle is (2, 7).
- \* The only spot for D in the 9th 3x5 rectangle is (10, 6).
- \* The only spot for 0 in the 10th 3x5 rectangle is (14, 8).

Step 42: There are 8 independent moves.

- \* The only spot for 4 in the 6th row is (13, 6).
- \* The only spot for C in the 7th row is (4, 7).
- \* The only spot for B in the 8th row is (10, 8).

- \* The only spot for 1 in the 13th column is (13, 7).
- \* The only spot for C in the 6th 3x5 rectangle is (2, 9).
- \* The only spot for 0 in the 9th 3x5 rectangle is (11, 9).
- \* The only spot for B in the 10th 3x5 rectangle is (14, 7).
- \* The only spot for 1 in the 15th 3x5 rectangle is (14, 15).

Step 43: There are 4 independent moves.

- \* The only spot for E in the 9th row is (4, 9).
- \* The only spot for 4 in the 7th 3x5 rectangle is (4, 8).
- \* The only spot for E in the 9th 3x5 rectangle is (11, 8).
- \* The only spot for 4 in the 9th 3x5 rectangle is (10, 7).

## Solution for Puzzle 41

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

5	8	D	7	4	2	6	0	1	C	B	E	A	3	9
E	1	3	9	0	C	2	7	B	A	D	8	6	5	4
0	6	4	8	E	B	3	A	D	5	2	9	7	C	1
C	7	B	A	1	D	5	E	9	6	3	4	2	8	0
9	A	2	5	3	6	4	C	8	0	1	7	B	E	D
6	B	9	1	7	5	0	2	C	D	8	3	4	A	E
D	3	E	C	8	0	A	6	5	4	9	2	1	B	7
2	5	8	4	D	A	9	1	7	B	E	6	3	0	C
4	C	7	E	6	9	D	B	3	1	0	A	5	2	8
1	0	A	2	B	3	8	4	E	7	5	C	D	9	6
3	2	1	0	C	8	B	5	6	E	7	D	9	4	A
B	9	6	3	A	E	C	D	0	2	4	1	8	7	5
8	E	0	6	5	1	7	3	4	9	A	B	C	D	2
7	D	5	B	2	4	1	9	A	8	C	0	E	6	3
A	4	C	D	9	7	E	8	2	3	6	5	0	1	B

TournamentPlus

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## Sudoku-15up Puzzle 42, TournamentPlus/44

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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				A	8		D		9					C
			D	6		B	C			3	4		9	
2	3					E								8
C	5			7				8	E	A			B	
	8	D	E		C	2			B				A	
1	B				7		A			0	D			E
		3				C	6	2	1	5		0		
		C		8	9				6	4			D	
7	6		2					B			9	4		
		E	3		0	9		D					6	
E		B		D	3	A				C				
8			1								5	B	0	A
D				4				1	0		E	3		6
	1	5	A					9	2			7		
	0			9	5	D	B	C						4

TournamentPlus

Diff: 44 / 9571.C433.2333.1B23.2332.CB22.3512.3132+

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, and each 3x5 rectangle.

There are 44 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 42

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>1</sup>			<sup>3</sup>	A	8		D		9					C
			D	6		B	C		<sup>1</sup>	3	4		9	
2	3					E			<sup>2</sup>	<sup>3</sup>	<sup>3</sup>			8
C	5			7				8	E	A		<sup>2</sup>	B	
	8	D	E	<sup>1</sup>	C	2			B				A	
1	B		<sup>1</sup>		7		A			0	D			E
	<sup>1</sup>	3	<sup>3</sup>	<sup>3</sup>	<sup>2</sup>	C	6	2	1	5		0		
		C		8	9				6	4			D	
7	6		2		<sup>1</sup>			B		<sup>1</sup>	9	4		
		E	3		0	9		D					6	
E		B		D	3	A				C				
8	<sup>2</sup>		1	<sup>1</sup>					<sup>3</sup>		5	B	0	A
D			<sup>2</sup>	4				1	0		E	3		6
	1	5	A					9	2			7	<sup>3</sup>	<sup>1</sup>
	0			9	5	D	B	C						4

TournamentPlus

Diff: 44 / 9571.C433.2333.1B23.2332.CB22.3512.3132+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 44 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 42

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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1	42	42	3	A	8	41	D	34	9	22	40	43	28	C	1
43	43	41	D	6	31	B	C	37	1	3	4	42	9	41	
2	3	35	36	6	32	E	36	9	2	3	3	35	29	8	
C	5	34	35	7	30	40	41	8	E	A	41	2	B	31	
41	8	D	E	1	C	2	6	42	B	21	39	38	A	40	
1	B	20	1	12	7	42	A	43	10	0	D	6	15	E	6
5	1	3	3	3	2	C	6	2	1	5	26	0	26	25	
22	14	C	5	8	9	44	42	43	6	4	11	8	D	29	
7	6	21	2	10	1	23	29	B	9	1	9	4	27	28	
42	43	E	3	11	0	9	26	D	12	25	23	7	6	24	
E	16	B	18	D	3	A	24	25	4	C	21	16	19	6	11
8	2	13	1	1	33	43	43	44	3	8	5	B	0	A	
D	7	8	2	4	5	19	16	1	0	18	E	3	20	6	
12	1	5	A	7	32	33	31	9	2	26	26	7	3	1	
14	0	15	17	9	5	D	B	C	11	19	10	17	18	4	
1			4			7		10			13				

TournamentPlus

Diff: 44 / 9571.C433.2333.1B23.2332.CB22.3512.3132+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 44 steps required to solve the puzzle above with a total of 131 empty locations that must be determined, out of a total puzzle size of 225.

All 44 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 9 independent moves.

- \* The only spot for D in the 9th row is (6, 9).
- \* The only spot for 2 in the 5th column is (5, 12).
- \* The only spot for B in the 1st 3x5 rectangle is (1, 1).
- \* The only spot for 3 in the 2nd 3x5 rectangle is (5, 5).
- \* The only spot for 8 in the 4th 3x5 rectangle is (10, 2).
- \* The only spot for D in the 6th 3x5 rectangle is (2, 7).
- \* The only spot for 6 in the 7th 3x5 rectangle is (4, 6).
- \* The only spot for E in the 9th 3x5 rectangle is (11, 9).
- \* The only spot for D in the 15th 3x5 rectangle is (15, 14).

Step 2: There are 5 independent moves.

- \* The only spot for D in the 4th row is (13, 4).
- \* The only spot for C in the 12th row is (2, 12).
- \* The only spot for C in the 4th column is (4, 13).
- \* The only spot for 5 in the 4th 3x5 rectangle is (10, 3).
- \* The only spot for A in the 7th 3x5 rectangle is (6, 7).

Step 3: There are 7 independent moves.

- \* The only spot for D in the 10th column is (10, 12).
- \* The only spot for 5 in the 2nd 3x5 rectangle is (4, 1).
- \* The only spot for C in the 4th 3x5 rectangle is (12, 3).
- \* The only spot for D in the 4th 3x5 rectangle is (11, 3).
- \* The only spot for E in the 7th 3x5 rectangle is (5, 7).
- \* The only spot for 4 in the 7th 3x5 rectangle is (4, 7).
- \* The only spot for C in the 15th 3x5 rectangle is (14, 14).

Step 4: There is 1 independent move.

- \* The only spot for 4 in the 14th 3x5 rectangle is (10, 11).

Step 5: There are 3 independent moves.

- \* B must be placed at (6, 13) because it is the only value left that is not already in the 13th row, the 6th column or the 12th 3x5 rectangle.
- \* B must be placed at (4, 8) because it is the only value left that is not already in the 8th row, the 4th column or the 7th 3x5 rectangle.
- \* 9 must be placed at (1, 7) because it is the only value left that is not already in the 7th row, the 1st column or the 6th 3x5 rectangle.

Step 6: There are 4 independent moves.

- \* The only spot for 9 in the 5th row is (8, 5).
- \* The only spot for 9 in the 15th column is (15, 11).
- \* The only spot for B in the 2nd 3x5 rectangle is (5, 3).
- \* The only spot for 9 in the 10th 3x5 rectangle is (13, 6).

Step 7: There are 3 independent moves.

- \* The only spot for 9 in the 2nd column is (2, 13).
- \* The only spot for 0 in the 5th column is (5, 14).
- \* The only spot for C in the 10th 3x5 rectangle is (13, 10).

Step 8: There are 3 independent moves.

- \* The only spot for A in the 13th row is (3, 13).
- \* The only spot for A in the 10th 3x5 rectangle is (13, 8).

- \* The only spot for 9 in the 14th 3x5 rectangle is (11, 12).

Step 9: There are 2 independent moves.

- \* The only spot for A in the 3rd row is (9, 3).
- \* The only spot for A in the 9th row is (10, 9).

Step 10: There are 3 independent moves.

- \* The only spot for C in the 9th row is (5, 9).
- \* The only spot for C in the 9th 3x5 rectangle is (10, 6).
- \* The only spot for A in the 14th 3x5 rectangle is (12, 15).

Step 11: There are 3 independent moves.

- \* The only spot for 3 in the 10th column is (10, 15).
- \* The only spot for 1 in the 7th 3x5 rectangle is (5, 10).
- \* The only spot for 3 in the 9th 3x5 rectangle is (12, 8).

Step 12: There are 3 independent moves.

- \* The only spot for 7 in the 10th column is (10, 10).
- \* The only spot for 5 in the 7th 3x5 rectangle is (5, 6).
- \* The only spot for 3 in the 11th 3x5 rectangle is (1, 14).

Step 13: There is 1 independent move.

- \* The only spot for 4 in the 11th 3x5 rectangle is (3, 12).

Step 14: There are 2 independent moves.

- \* 6 must be placed at (1, 15) because it is the only value left that is not already in the 15th row, the 1st column or the 11th 3x5 rectangle.
- \* 2 must be placed at (2, 8) because it is the only value left that is not already in the 8th row, the 2nd column or the 6th 3x5 rectangle.

Step 15: There are 2 independent moves.

- \* The only spot for 2 in the 6th row is (14, 6).
- \* The only spot for 2 in the 11th 3x5 rectangle is (3, 15).

Step 16: There are 3 independent moves.

- \* The only spot for 2 in the 13th row is (8, 13).
- \* The only spot for 7 in the 11th 3x5 rectangle is (2, 11).
- \* The only spot for 2 in the 15th 3x5 rectangle is (13, 11).

Step 17: There are 2 independent moves.

- \* The only spot for 8 in the 13th column is (13, 15).
- \* The only spot for 7 in the 12th 3x5 rectangle is (4, 15).

Step 18: There are 3 independent moves.

- \* The only spot for 8 in the 12th 3x5 rectangle is (4, 11).
- \* The only spot for 7 in the 14th 3x5 rectangle is (11, 13).
- \* The only spot for E in the 15th 3x5 rectangle is (14, 15).

Step 19: There are 3 independent moves.

- \* The only spot for 8 in the 13th row is (7, 13).
- \* The only spot for 1 in the 15th row is (11, 15).
- \* The only spot for 1 in the 15th 3x5 rectangle is (14, 11).

Step 20: There are 2 independent moves.

- \* The only spot for 8 in the 6th row is (3, 6).
- \* The only spot for 5 in the 15th 3x5 rectangle is (14, 13).

Step 21: There are 3 independent moves.

- \* 6 must be placed at (12, 11) because it is the only value left that is not already in the 11th row, the 12th column or the 14th 3x5 rectangle.
- \* 0 must be placed at (3, 9) because it is the only value left that is not already in the 9th row, the 3rd column or the 6th 3x5 rectangle.
- \* 6 must be placed at (11, 5) because it is the only value left that is not already in the 5th row, the 11th column or the 4th 3x5 rectangle.

Step 22: There are 2 independent moves.

- \* 5 must be placed at (1, 8) because it is the only value left that is not already in the 8th row, the 1st column or the 6th 3x5 rectangle.
- \* 2 must be placed at (11, 1) because it is the only value left that is not already in the 1st row, the 11th column or the 4th 3x5 rectangle.

Step 23: There are 2 independent moves.

- \* The only spot for 5 in the 7th column is (7, 9).
- \* The only spot for 2 in the 9th 3x5 rectangle is (12, 10).

Step 24: There are 2 independent moves.

- \* The only spot for 5 in the 8th column is (8, 11).
- \* The only spot for 5 in the 10th 3x5 rectangle is (15, 10).

Step 25: There are 3 independent moves.

- \* The only spot for B in the 10th row is (11, 10).
- \* The only spot for B in the 10th 3x5 rectangle is (15, 7).
- \* The only spot for 0 in the 13th 3x5 rectangle is (9, 11).

Step 26: There are 5 independent moves.

- \* The only spot for 7 in the 7th row is (14, 7).
- \* The only spot for 8 in the 10th row is (8, 10).
- \* The only spot for 8 in the 11th column is (11, 14).
- \* The only spot for 8 in the 9th 3x5 rectangle is (12, 7).
- \* The only spot for B in the 14th 3x5 rectangle is (12, 14).

Step 27: There is 1 independent move.

- \* The only spot for 8 in the 10th 3x5 rectangle is (14, 9).

Step 28: There are 2 independent moves.

- \* The only spot for 3 in the 14th column is (14, 1).
- \* The only spot for 3 in the 10th 3x5 rectangle is (15, 9).

Step 29: There are 3 independent moves.

- \* The only spot for 1 in the 9th row is (8, 9).
- \* The only spot for 4 in the 5th 3x5 rectangle is (14, 3).
- \* The only spot for 1 in the 10th 3x5 rectangle is (15, 8).

Step 30: There is 1 independent move.

- \* The only spot for 4 in the 2nd 3x5 rectangle is (6, 4).

Step 31: There are 3 independent moves.

- \* The only spot for 2 in the 4th row is (15, 4).
- \* The only spot for 4 in the 8th column is (8, 14).
- \* The only spot for 2 in the 2nd 3x5 rectangle is (6, 2).

Step 32: There are 2 independent moves.

- \* The only spot for E in the 14th row is (6, 14).
- \* The only spot for 1 in the 2nd 3x5 rectangle is (6, 3).

Step 33: There are 2 independent moves.

- \* The only spot for 6 in the 14th row is (7, 14).
- \* The only spot for 6 in the 12th 3x5 rectangle is (6, 12).

Step 34: There are 2 independent moves.

- \* The only spot for 6 in the 4th row is (3, 4).
- \* The only spot for 6 in the 3rd 3x5 rectangle is (9, 1).

Step 35: There are 3 independent moves.

- \* The only spot for 9 in the 4th row is (4, 4).
- \* The only spot for 9 in the 1st 3x5 rectangle is (3, 3).
- \* The only spot for 6 in the 5th 3x5 rectangle is (13, 3).

Step 36: There are 2 independent moves.

- \* The only spot for 7 in the 3rd row is (8, 3).
- \* The only spot for 0 in the 2nd 3x5 rectangle is (4, 3).

Step 37: There is 1 independent move.

- \* 5 must be placed at (9, 2) because it is the only value left that is not already in the 2nd row, the 9th column or the 3rd 3x5 rectangle.

Step 38: There is 1 independent move.

- \* The only spot for 5 in the 5th 3x5 rectangle is (13, 5).

Step 39: There is 1 independent move.

- \* The only spot for 1 in the 5th row is (12, 5).

Step 40: There are 3 independent moves.

- \* The only spot for 1 in the 4th row is (7, 4).
- \* The only spot for 7 in the 5th row is (15, 5).
- \* The only spot for 7 in the 4th 3x5 rectangle is (12, 1).

Step 41: There are 6 independent moves.

- \* The only spot for 0 in the 1st row is (7, 1).
- \* The only spot for 0 in the 5th row is (1, 5).
- \* The only spot for 7 in the 1st 3x5 rectangle is (3, 2).
- \* The only spot for 3 in the 3rd 3x5 rectangle is (8, 4).
- \* The only spot for 0 in the 4th 3x5 rectangle is (12, 4).
- \* The only spot for 0 in the 5th 3x5 rectangle is (15, 2).

Step 42: There are 7 independent moves.

- \* The only spot for 1 in the 2nd row is (13, 2).
- \* The only spot for 4 in the 1st column is (1, 10).
- \* The only spot for 4 in the 7th column is (7, 6).
- \* The only spot for 1 in the 1st 3x5 rectangle is (3, 1).
- \* The only spot for 4 in the 1st 3x5 rectangle is (2, 1).
- \* The only spot for 4 in the 3rd 3x5 rectangle is (9, 5).
- \* The only spot for 0 in the 8th 3x5 rectangle is (8, 8).

Step 43: There are 8 independent moves.

- \* The only spot for A in the 1st column is (1, 2).
- \* The only spot for 3 in the 7th column is (7, 12).

- \* The only spot for E in the 8th column is (8, 12).
- \* The only spot for E in the 1st 3x5 rectangle is (2, 2).
- \* The only spot for E in the 5th 3x5 rectangle is (13, 1).
- \* The only spot for A in the 6th 3x5 rectangle is (2, 10).
- \* The only spot for E in the 8th 3x5 rectangle is (9, 8).
- \* The only spot for 3 in the 8th 3x5 rectangle is (9, 6).

Step 44: There are 2 independent moves.

- \* The only spot for 7 in the 8th 3x5 rectangle is (7, 8).
- \* The only spot for 7 in the 13th 3x5 rectangle is (9, 12).



## Solution for Puzzle 42

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

B	4	1	5	A	8	0	D	6	9	2	7	E	3	C
A	E	7	D	6	2	B	C	5	8	3	4	1	9	0
2	3	9	0	B	1	E	7	A	5	D	C	6	4	8
C	5	6	9	7	4	1	3	8	E	A	0	D	B	2
0	8	D	E	3	C	2	9	4	B	6	1	5	A	7
1	B	8	6	5	7	4	A	3	C	0	D	9	2	E
9	D	3	4	E	A	C	6	2	1	5	8	0	7	B
5	2	C	B	8	9	7	0	E	6	4	3	A	D	1
7	6	0	2	C	D	5	1	B	A	E	9	4	8	3
4	A	E	3	1	0	9	8	D	7	B	2	C	6	5
E	7	B	8	D	3	A	5	0	4	C	6	2	1	9
8	C	4	1	2	6	3	E	7	D	9	5	B	0	A
D	9	A	C	4	B	8	2	1	0	7	E	3	5	6
3	1	5	A	0	E	6	4	9	2	8	B	7	C	D
6	0	2	7	9	5	D	B	C	3	1	A	8	E	4

TournamentPlus

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## Chapter 24

# Two Challenging HyperSudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from eighteen to twenty. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 43** (141/225) DiffKey 18 / 99.9977.5445.5479.9942

**Puzzle 44** (129/225) DiffKey 20 / 9975.3235.3343.3578.9994

## HyperSudoku-15 Puzzle 43, Challenging/18

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

141/225

		7				B					E			
E		B			6		A					7		3
	A	6	5						9	8				B
	3					4								
	7	D	E		9		C		1					0
B			8		A							D	7	4
8				0				9	D		5			
		5			C			2	4			A	8	
			7				0	E		1	3	C		
1	9	8		A					B			4		
			4	E	1				C		7		5	8
			B			8	9			0				1
6	5			C		0		7				E		2
0	8						1	C		B			3	
4			A		E	2					9		1	

Challenging

Diff: 18 / 99.9977.5445.5479.9942

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 18 steps required to solve the puzzle above with a total of 141 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 43

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		7			<sup>3</sup>	B					E	<sup>2</sup>		
E		B		<sup>3</sup>	6		A				<sup>1</sup>	7		3
	A	6	5		<sup>3</sup>				9	8	<sup>3</sup>			B
	3	<sup>3</sup>				4			<sup>1</sup>			<sup>1</sup>		<sup>3</sup>
	7	D	E	<sup>1</sup>	9		C		1			<sup>2</sup>		0
B		<sup>1</sup>	8		A				<sup>2</sup>			D	7	4
8				0	<sup>2</sup>			9	D		5			
		5			C			2	4		<sup>1</sup>	A	8	
			7		<sup>2</sup>		0	E	<sup>2</sup>	1	3	C	<sup>3</sup>	
1	9	8		A					B			4		
			4	E	1			<sup>2</sup>	C	<sup>1</sup>	7	<sup>1</sup>	5	8
<sup>1</sup>			B	<sup>1</sup>		8	9	<sup>1</sup>	<sup>3</sup>	0		<sup>2</sup>		1
6	5	<sup>1</sup>	<sup>2</sup>	C	<sup>3</sup>	0	<sup>1</sup>	7		<sup>2</sup>	<sup>1</sup>	E		2
0	8	<sup>1</sup>			<sup>2</sup>	<sup>1</sup>	1	C		B		<sup>3</sup>	3	
4			A		E	2				9	<sup>1</sup>	1		

Challenging

Diff: 18 / 99.9977.5445.5479.9942

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There are 18 steps required to solve the puzzle above with a total of 141 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 43

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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15	16	7	12	4	3	B	4	13	4	11	E	2	7	10	<sup>1</sup>
E	4	B	13	3	6	14	A	6	5	4	1	7	15	3	
14	A	6	5	10	3	15	13	13	9	8	3	5	14	B	
5	3	3	14	15	11	4	7	16	1	8	15	1	4	3	<sup>4</sup>
4	7	D	E	1	9	16	C	15	1	11	16	2	6	0	
B	15	1	8	11	A	13	12	14	2	12	15	D	7	4	
8	16	6	15	0	2	15	16	9	D	5	5	4	4	17	<sup>7</sup>
17	17	5	11	10	C	16	16	2	4	8	1	A	8	18	
16	18	5	7	14	2	6	0	E	2	1	3	C	3	17	
1	9	8	15	A	4	14	15	16	B	13	13	4	5	6	<sup>10</sup>
9	4	8	4	E	1	16	15	2	C	1	7	1	5	8	
1	14	7	B	1	12	8	9	1	3	0	14	2	6	1	
6	5	1	2	C	3	0	1	7	5	2	1	E	4	2	<sup>13</sup>
0	8	1	15	15	2	1	1	C	7	B	10	3	3	9	
4	10	9	A	9	E	2	15	16	6	7	9	1	1	8	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

Challenging

Diff: 18 / 99.9977.5445.5479.9942

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 18 steps required to solve the puzzle above with a total of 141 empty locations that must be determined, out of a total puzzle size of 225.

All 18 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 17 independent moves.

- \* The only spot for 9 in the 6th row is (3, 6).
- \* The only spot for B in the 13th row is (8, 13).
- \* The only spot for 5 in the 5th column is (5, 12).
- \* The only spot for 7 in the 10th column is (10, 4).
- \* The only spot for 8 in the 12th column is (12, 13).
- \* The only spot for 1 in the 12th column is (12, 2).
- \* The only spot for 4 in the 4th 5x3 rectangle is (5, 5).
- \* The only spot for 1 in the 6th 5x3 rectangle is (13, 4).
- \* The only spot for 0 in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 7 in the 10th 5x3 rectangle is (1, 12).
- \* The only spot for 4 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for B in the 12th 5x3 rectangle is (13, 11).
- \* The only spot for E in the 13th 5x3 rectangle is (3, 14).
- \* The only spot for 1 in the 13th 5x3 rectangle is (3, 13).
- \* The only spot for 9 in the 14th 5x3 rectangle is (7, 14).
- \* The only spot for 0 in the 15th 5x3 rectangle is (13, 15).
- \* The only spot for 9 in the 4th 3x5 inner rectangle is (11, 11).

Step 2: There are 11 independent moves.

- \* The only spot for A in the 9th column is (9, 11).
- \* The only spot for 9 in the 13th column is (13, 1).
- \* The only spot for 8 in the 6th 5x3 rectangle is (13, 5).
- \* The only spot for B in the 8th 5x3 rectangle is (6, 7).
- \* The only spot for 3 in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for 9 in the 13th 5x3 rectangle is (4, 13).
- \* The only spot for 4 in the 14th 5x3 rectangle is (6, 14).
- \* The only spot for 0 in the 2nd 3x5 inner rectangle is (10, 6).
- \* The only spot for 8 in the 3rd 3x5 inner rectangle is (6, 9).
- \* The only spot for 4 in the 4th 3x5 inner rectangle is (11, 13).
- \* The only spot for 5 in the 4th 3x5 inner rectangle is (10, 9).

Step 3: There are 10 independent moves.

- \* The only spot for 3 in the 13th row is (6, 13).
- \* The only spot for 5 in the 6th column is (6, 1).
- \* The only spot for E in the 10th column is (10, 12).
- \* The only spot for 5 in the 13th column is (13, 14).
- \* The only spot for 9 in the 1st 5x3 rectangle is (5, 2).
- \* The only spot for 0 in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for 5 in the 6th 5x3 rectangle is (15, 4).
- \* The only spot for B in the 9th 5x3 rectangle is (14, 9).
- \* The only spot for 7 in the 1st 3x5 inner rectangle is (6, 3).
- \* The only spot for 4 in the 2nd 3x5 inner rectangle is (12, 3).

Step 4: There are 12 independent moves.

- \* The only spot for 4 in the 2nd row is (2, 2).
- \* The only spot for 0 in the 11th row is (2, 11).
- \* The only spot for D in the 13th row is (14, 13).

- \* The only spot for 0 in the 6th column is (6, 10).
- \* The only spot for 3 in the 10th column is (10, 1).
- \* The only spot for 6 in the 13th column is (13, 7).
- \* The only spot for 8 in the 1st 5x3 rectangle is (5, 1).
- \* The only spot for 4 in the 2nd 5x3 rectangle is (8, 1).
- \* The only spot for 5 in the 3rd 5x3 rectangle is (11, 2).
- \* The only spot for 5 in the 4th 5x3 rectangle is (1, 5).
- \* The only spot for 9 in the 6th 5x3 rectangle is (14, 4).
- \* The only spot for 4 in the 9th 5x3 rectangle is (14, 7).

Step 5: There are 7 independent moves.

- \* The only spot for A in the 13th row is (10, 13).
- \* The only spot for 2 in the 10th column is (10, 2).
- \* The only spot for 2 in the 13th column is (13, 3).
- \* The only spot for E in the 14th column is (14, 10).
- \* The only spot for A in the 4th 5x3 rectangle is (1, 4).
- \* The only spot for 4 in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for 2 in the 9th 5x3 rectangle is (11, 7).

Step 6: There are 7 independent moves.

- \* The only spot for A in the 9th row is (7, 9).
- \* The only spot for C in the 10th row is (15, 10).
- \* The only spot for 8 in the 10th column is (10, 15).
- \* The only spot for 8 in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for 2 in the 6th 5x3 rectangle is (14, 5).
- \* The only spot for A in the 7th 5x3 rectangle is (3, 7).
- \* The only spot for A in the 12th 5x3 rectangle is (14, 12).

Step 7: There are 5 independent moves.

- \* The only spot for C in the 3rd column is (3, 12).
- \* The only spot for 6 in the 10th column is (10, 14).
- \* The only spot for 6 in the 14th column is (14, 1).
- \* The only spot for 8 in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for C in the 15th 5x3 rectangle is (11, 15).

Step 8: There are 4 independent moves.

- \* The only spot for E in the 4th row is (11, 4).
- \* The only spot for 2 in the 3rd column is (3, 11).
- \* The only spot for 7 in the 11th column is (11, 8).
- \* The only spot for 6 in the 15th 5x3 rectangle is (15, 15).

Step 9: There are 4 independent moves.

- \* The only spot for 7 in the 15th row is (5, 15).
- \* The only spot for 3 in the 3rd column is (3, 15).
- \* The only spot for 3 in the 10th 5x3 rectangle is (1, 11).
- \* The only spot for 7 in the 15th 5x3 rectangle is (15, 14).

Step 10: There are 5 independent moves.

- \* The only spot for B in the 5th column is (5, 8).
- \* The only spot for A in the 15th column is (15, 1).

- \* The only spot for 3 in the 1st 5x3 rectangle is (5, 3).
- \* The only spot for B in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for A in the 15th 5x3 rectangle is (12, 14).

Step 11: There are 5 independent moves.

- \* The only spot for 1 in the 5th column is (5, 6).
- \* The only spot for D in the 3rd 5x3 rectangle is (11, 1).
- \* The only spot for 3 in the 7th 5x3 rectangle is (4, 8).
- \* The only spot for D in the 1st 3x5 inner rectangle is (6, 4).
- \* The only spot for A in the 2nd 3x5 inner rectangle is (11, 5).

Step 12: There are 4 independent moves.

- \* The only spot for 1 in the 4th column is (4, 1).
- \* The only spot for 2 in the 6th column is (6, 12).
- \* The only spot for 2 in the 5th 5x3 rectangle is (8, 6).
- \* The only spot for 3 in the 2nd 3x5 inner rectangle is (11, 6).

Step 13: There are 7 independent moves.

- \* The only spot for 0 in the 1st row is (9, 1).
- \* The only spot for E in the 8th column is (8, 3).
- \* The only spot for 1 in the 9th column is (9, 3).
- \* The only spot for 6 in the 11th column is (11, 10).
- \* The only spot for 0 in the 1st 5x3 rectangle is (4, 2).
- \* The only spot for E in the 5th 5x3 rectangle is (7, 6).
- \* The only spot for 2 in the 4th 3x5 inner rectangle is (12, 10).

Step 14: There are 9 independent moves.

- \* The only spot for D in the 2nd row is (7, 2).
- \* The only spot for 6 in the 4th column is (4, 4).
- \* The only spot for 5 in the 7th column is (7, 10).
- \* The only spot for D in the 1st 5x3 rectangle is (1, 3).
- \* The only spot for 0 in the 3rd 5x3 rectangle is (14, 3).
- \* The only spot for 5 in the 5th 5x3 rectangle is (9, 6).
- \* The only spot for 6 in the 10th 5x3 rectangle is (2, 12).
- \* The only spot for 6 in the 3rd 3x5 inner rectangle is (5, 9).
- \* The only spot for D in the 4th 3x5 inner rectangle is (12, 12).

Step 15: There are 16 independent moves.

- \* The only spot for C in the 4th row is (12, 4).
- \* The only spot for 6 in the 6th row is (12, 6).
- \* The only spot for D in the 11th row is (8, 11).
- \* The only spot for C in the 1st column is (1, 1).
- \* The only spot for 2 in the 4th column is (4, 14).
- \* The only spot for D in the 5th column is (5, 14).
- \* The only spot for 7 in the 7th column is (7, 7).
- \* The only spot for 6 in the 9th column is (9, 5).
- \* The only spot for C in the 2nd 5x3 rectangle is (7, 3).
- \* The only spot for C in the 3rd 5x3 rectangle is (14, 2).
- \* The only spot for C in the 4th 5x3 rectangle is (2, 6).



- \* The only spot for 7 in the 11th 5x3 rectangle is (8, 10).
- \* The only spot for 5 in the 14th 5x3 rectangle is (8, 15).
- \* The only spot for C in the 1st 3x5 inner rectangle is (4, 7).
- \* The only spot for 2 in the 1st 3x5 inner rectangle is (5, 4).
- \* The only spot for D in the 3rd 3x5 inner rectangle is (4, 10).

Step 16: There are 12 independent moves.

- \* The only spot for 1 in the 7th row is (2, 7).
- \* The only spot for 2 in the 1st column is (1, 9).
- \* The only spot for 6 in the 8th column is (8, 8).
- \* The only spot for 2 in the 1st 5x3 rectangle is (2, 1).
- \* The only spot for 3 in the 5th 5x3 rectangle is (7, 5).
- \* The only spot for B in the 5th 5x3 rectangle is (9, 4).
- \* The only spot for 1 in the 8th 5x3 rectangle is (7, 8).
- \* The only spot for 3 in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for 6 in the 11th 5x3 rectangle is (7, 11).
- \* The only spot for 3 in the 11th 5x3 rectangle is (9, 10).
- \* The only spot for D in the 14th 5x3 rectangle is (9, 15).
- \* The only spot for B in the 2nd 3x5 inner rectangle is (12, 5).

Step 17: There are 4 independent moves.

- \* The only spot for E in the 7th row is (15, 7).
- \* The only spot for 9 in the 9th row is (15, 9).
- \* The only spot for E in the 7th 5x3 rectangle is (2, 8).
- \* The only spot for 9 in the 7th 5x3 rectangle is (1, 8).

Step 18: There are 2 independent moves.

- \* The only spot for D in the 7th 5x3 rectangle is (2, 9).
- \* The only spot for D in the 9th 5x3 rectangle is (15, 8).

## Solution for Puzzle 43

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

C	2	7	1	8	5	B	4	0	3	D	E	9	6	A
E	4	B	0	9	6	D	A	8	2	5	1	7	C	3
D	A	6	5	3	7	C	E	1	9	8	4	2	0	B
A	3	0	6	2	D	4	8	B	7	E	C	1	9	5
5	7	D	E	4	9	3	C	6	1	A	B	8	2	0
B	C	9	8	1	A	E	2	5	0	3	6	D	7	4
8	1	A	C	0	B	7	3	9	D	2	5	6	4	E
9	E	5	3	B	C	1	6	2	4	7	0	A	8	D
2	D	4	7	6	8	A	0	E	5	1	3	C	B	9
1	9	8	D	A	0	5	7	3	B	6	2	4	E	C
3	0	2	4	E	1	6	D	A	C	9	7	B	5	8
7	6	C	B	5	2	8	9	4	E	0	D	3	A	1
6	5	1	9	C	3	0	B	7	A	4	8	E	D	2
0	8	E	2	D	4	9	1	C	6	B	A	5	3	7
4	B	3	A	7	E	2	5	D	8	C	9	0	1	6

Challenging

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## HyperSudoku-15 Puzzle 44, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	6	9			5		D			1	3	E		
B	3		E					6	4		A	8		
			1		3			A			4		9	6
2	1			8		3						9		
3					4	5	2	E	8		7		1	
	5	E	B		D							4	8	3
7	B	0			E				9		5			
9				1		B	5			8				
6				C	0				A		B		2	9
		1		E				3	5	4			A	
		6				8	4	2				C		D
8		B	2	4			E					5	3	
	9		6		8		B	4		2				A
							9		C				7	1
1	2	5	C	3		E		D				B		

Challenging

Diff: 20 / 9975.3235.3343.3578.9994

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 20 steps required to solve the puzzle above with a total of 129 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 44

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	6	9			5		D		<sup>3</sup>	1	3	E		
B	3		E					6	4	<sup>2</sup>	A	8		
			1	<sup>1</sup>	3			A	<sup>1</sup>	<sup>2</sup>	4		9	6
2	1	<sup>1</sup>		8	<sup>1</sup>	3		<sup>3</sup>				9	<sup>3</sup>	<sup>2</sup>
3					4	5	2	E	8		7		1	<sup>3</sup>
	5	E	B		D				<sup>1</sup>		<sup>1</sup>	4	8	3
7	B	0		<sup>2</sup>	E				9	<sup>1</sup>	5			
9		<sup>2</sup>		1		B	5			8				<sup>3</sup>
6			<sup>1</sup>	C	0		<sup>2</sup>		A		B		2	9
		1		E				3	5	4	<sup>1</sup>		A	
<sup>2</sup>		6	<sup>1</sup>			8	4	2				C		D
8		B	2	4			E					5	3	
<sup>2</sup>	9		6		8	<sup>2</sup>	B	4	<sup>1</sup>	2	<sup>1</sup>	<sup>3</sup>	<sup>1</sup>	A
				<sup>1</sup>			9	<sup>1</sup>	C			<sup>2</sup>	7	1
1	2	5	C	3		E		D				B	<sup>3</sup>	<sup>2</sup>

Challenging

Diff: 20 / 9975.3235.3343.3578.9994

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There are 20 steps required to solve the puzzle above with a total of 129 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 44

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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13	6	9	14	19	5	20	D	15	3	1	3	E	17	19	<sup>1</sup>
B	3	19	E	18	14	19	8	6	4	2	A	8	7	20	
17	15	19	1	1	3	17	18	A	1	2	4	18	9	6	
2	1	1	12	8	1	3	18	3	10	17	18	9	3	2	<sup>4</sup>
3	16	17	14	13	4	5	2	E	8	18	7	11	1	3	
18	5	E	B	11	D	15	17	16	1	18	1	4	8	3	
7	B	0	8	2	E	6	16	18	9	1	5	7	17	4	<sup>7</sup>
9	10	2	9	1	16	B	5	17	4	8	18	8	18	3	
6	4	5	1	C	0	5	2	7	A	8	B	6	2	9	
16	17	1	13	E	4	18	17	3	5	4	1	19	A	19	<sup>10</sup>
2	18	6	1	12	18	8	4	2	11	19	20	C	4	D	
8	15	B	2	4	17	12	E	14	5	19	18	5	3	16	
2	9	9	6	8	8	2	B	4	1	2	1	3	1	A	<sup>13</sup>
14	15	16	15	1	15	16	9	1	C	18	19	2	7	1	
1	2	5	C	3	11	E	10	D	9	20	19	B	3	2	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

Challenging

Diff: 20 / 9975.3235.3343.3578.9994

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There are 20 steps required to solve the puzzle above with a total of 129 empty locations that must be determined, out of a total puzzle size of 225.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 15 independent moves.

- \* The only spot for 5 in the 13th row is (14, 13).
- \* The only spot for E in the 2nd 5x3 rectangle is (10, 3).
- \* The only spot for 4 in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for 2 in the 6th 5x3 rectangle is (12, 6).
- \* The only spot for 5 in the 7th 5x3 rectangle is (4, 9).
- \* The only spot for 3 in the 10th 5x3 rectangle is (4, 11).
- \* The only spot for B in the 13th 5x3 rectangle is (5, 14).
- \* The only spot for 5 in the 14th 5x3 rectangle is (9, 14).
- \* The only spot for 3 in the 14th 5x3 rectangle is (10, 13).
- \* The only spot for C in the 1st 3x5 inner rectangle is (6, 4).
- \* The only spot for 5 in the 1st 3x5 inner rectangle is (5, 3).
- \* The only spot for 3 in the 2nd 3x5 inner rectangle is (11, 7).
- \* The only spot for 1 in the 2nd 3x5 inner rectangle is (10, 6).
- \* The only spot for C in the 4th 3x5 inner rectangle is (12, 13).
- \* The only spot for 8 in the 4th 3x5 inner rectangle is (12, 10).

Step 2: There are 11 independent moves.

- \* The only spot for B in the 3rd row is (11, 3).
- \* The only spot for 3 in the 8th row is (3, 8).
- \* The only spot for E in the 13th row is (1, 13).
- \* The only spot for 5 in the 11th column is (11, 2).
- \* The only spot for 5 in the 6th 5x3 rectangle is (15, 4).
- \* The only spot for 3 in the 8th 5x3 rectangle is (8, 9).
- \* The only spot for 5 in the 10th 5x3 rectangle is (1, 11).
- \* The only spot for 1 in the 14th 5x3 rectangle is (7, 13).
- \* The only spot for 8 in the 15th 5x3 rectangle is (15, 15).
- \* The only spot for 3 in the 15th 5x3 rectangle is (13, 14).
- \* The only spot for 2 in the 1st 3x5 inner rectangle is (5, 7).

Step 3: There are 7 independent moves.

- \* The only spot for B in the 5th row is (15, 5).
- \* The only spot for 0 in the 13th row is (13, 13).
- \* The only spot for B in the 10th column is (10, 1).
- \* The only spot for E in the 15th column is (15, 8).
- \* The only spot for B in the 5th 5x3 rectangle is (9, 4).
- \* The only spot for E in the 6th 5x3 rectangle is (14, 4).
- \* The only spot for 4 in the 15th 5x3 rectangle is (14, 15).

Step 4: There are 5 independent moves.

- \* The only spot for B in the 10th row is (6, 10).
- \* The only spot for 2 in the 10th column is (10, 8).
- \* The only spot for E in the 7th 5x3 rectangle is (2, 9).
- \* The only spot for 4 in the 9th 5x3 rectangle is (15, 7).
- \* The only spot for B in the 12th 5x3 rectangle is (14, 11).

Step 5: There are 3 independent moves.

- \* The only spot for D in the 10th column is (10, 12).
- \* The only spot for 8 in the 7th 5x3 rectangle is (3, 9).

- \* The only spot for 4 in the 8th 5x3 rectangle is (7, 9).

Step 6: There are 2 independent moves.

- \* The only spot for D in the 9th row is (13, 9).
- \* The only spot for D in the 8th 5x3 rectangle is (7, 7).

Step 7: There are 3 independent moves.

- \* The only spot for 1 in the 9th row is (9, 9).
- \* The only spot for D in the 3rd 5x3 rectangle is (14, 2).
- \* The only spot for 1 in the 9th 5x3 rectangle is (13, 7).

Step 8: There are 5 independent moves.

- \* The only spot for A in the 7th row is (4, 7).
- \* The only spot for 7 in the 9th row is (11, 9).
- \* The only spot for D in the 5th column is (5, 13).
- \* The only spot for 1 in the 8th column is (8, 2).
- \* The only spot for A in the 9th 5x3 rectangle is (13, 8).

Step 9: There are 3 independent moves.

- \* The only spot for D in the 4th column is (4, 8).
- \* The only spot for 7 in the 10th column is (10, 15).
- \* The only spot for 7 in the 13th 5x3 rectangle is (3, 13).

Step 10: There are 3 independent moves.

- \* The only spot for 0 in the 15th row is (8, 15).
- \* The only spot for 6 in the 10th column is (10, 4).
- \* The only spot for 4 in the 7th 5x3 rectangle is (2, 8).

Step 11: There are 4 independent moves.

- \* The only spot for 6 in the 6th row is (5, 6).
- \* The only spot for A in the 15th row is (6, 15).
- \* The only spot for 0 in the 10th column is (10, 11).
- \* The only spot for 6 in the 6th 5x3 rectangle is (13, 5).

Step 12: There are 3 independent moves.

- \* The only spot for A in the 11th 5x3 rectangle is (7, 12).
- \* The only spot for 7 in the 1st 3x5 inner rectangle is (4, 4).
- \* The only spot for A in the 3rd 3x5 inner rectangle is (5, 11).

Step 13: There are 3 independent moves.

- \* The only spot for 9 in the 5th column is (5, 5).
- \* The only spot for A in the 1st 5x3 rectangle is (1, 1).
- \* The only spot for 9 in the 10th 5x3 rectangle is (4, 10).

Step 14: There are 5 independent moves.

- \* The only spot for 4 in the 1st column is (1, 14).
- \* The only spot for 9 in the 6th column is (6, 2).
- \* The only spot for 4 in the 1st 5x3 rectangle is (4, 1).
- \* The only spot for 9 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for 0 in the 1st 3x5 inner rectangle is (4, 5).

Step 15: There are 7 independent moves.

- \* The only spot for 8 in the 1st row is (9, 1).
- \* The only spot for C in the 12th row is (2, 12).

- \* The only spot for 8 in the 4th column is (4, 14).
- \* The only spot for 2 in the 6th column is (6, 14).
- \* The only spot for 8 in the 1st 5x3 rectangle is (2, 3).
- \* The only spot for 9 in the 5th 5x3 rectangle is (7, 6).
- \* The only spot for 0 in the 13th 5x3 rectangle is (2, 14).

Step 16: There are 8 independent moves.

- \* The only spot for 0 in the 12th row is (15, 12).
- \* The only spot for A in the 2nd column is (2, 5).
- \* The only spot for 6 in the 6th column is (6, 8).
- \* The only spot for 0 in the 5th 5x3 rectangle is (9, 6).
- \* The only spot for 8 in the 8th 5x3 rectangle is (8, 7).
- \* The only spot for 0 in the 10th 5x3 rectangle is (1, 10).
- \* The only spot for A in the 13th 5x3 rectangle is (3, 14).
- \* The only spot for 6 in the 14th 5x3 rectangle is (7, 14).

Step 17: There are 11 independent moves.

- \* The only spot for 0 in the 3rd row is (7, 3).
- \* The only spot for 7 in the 12th row is (6, 12).
- \* The only spot for D in the 1st column is (1, 3).
- \* The only spot for 0 in the 11th column is (11, 4).
- \* The only spot for 0 in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for D in the 4th 5x3 rectangle is (3, 5).
- \* The only spot for 7 in the 5th 5x3 rectangle is (8, 6).
- \* The only spot for 7 in the 8th 5x3 rectangle is (9, 8).
- \* The only spot for 6 in the 9th 5x3 rectangle is (14, 7).
- \* The only spot for D in the 10th 5x3 rectangle is (2, 10).
- \* The only spot for 6 in the 11th 5x3 rectangle is (8, 10).

Step 18: There are 16 independent moves.

- \* The only spot for 7 in the 3rd row is (13, 3).
- \* The only spot for C in the 5th row is (11, 5).
- \* The only spot for 1 in the 12th row is (12, 12).
- \* The only spot for C in the 8th column is (8, 3).
- \* The only spot for D in the 11th column is (11, 14).
- \* The only spot for 0 in the 1st 5x3 rectangle is (5, 2).
- \* The only spot for C in the 4th 5x3 rectangle is (1, 6).
- \* The only spot for A in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for C in the 8th 5x3 rectangle is (9, 7).
- \* The only spot for C in the 9th 5x3 rectangle is (14, 8).
- \* The only spot for 0 in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 7 in the 10th 5x3 rectangle is (2, 11).
- \* The only spot for C in the 11th 5x3 rectangle is (7, 10).
- \* The only spot for A in the 2nd 3x5 inner rectangle is (11, 6).
- \* The only spot for D in the 2nd 3x5 inner rectangle is (12, 4).
- \* The only spot for 1 in the 3rd 3x5 inner rectangle is (6, 11).

Step 19: There are 11 independent moves.

- \* The only spot for C in the 1st row is (15, 1).



- \* The only spot for 7 in the 2nd row is (7, 2).
- \* The only spot for 2 in the 3rd row is (3, 3).
- \* The only spot for E in the 11th column is (11, 11).
- \* The only spot for 6 in the 12th column is (12, 15).
- \* The only spot for 2 in the 13th column is (13, 10).
- \* The only spot for C in the 1st 5x3 rectangle is (3, 2).
- \* The only spot for 7 in the 1st 5x3 rectangle is (5, 1).
- \* The only spot for 7 in the 12th 5x3 rectangle is (15, 10).
- \* The only spot for E in the 15th 5x3 rectangle is (12, 14).
- \* The only spot for 6 in the 4th 3x5 inner rectangle is (11, 12).

Step 20: There are 4 independent moves.

- \* The only spot for 2 in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (15, 2).
- \* The only spot for 9 in the 15th 5x3 rectangle is (11, 15).
- \* The only spot for 9 in the 4th 3x5 inner rectangle is (12, 11).

## Solution for Puzzle 44

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A	6	9	4	7	5	2	D	8	B	1	3	E	0	C
B	3	C	E	0	9	7	1	6	4	5	A	8	D	2
D	8	2	1	5	3	0	C	A	E	B	4	7	9	6
2	1	4	7	8	C	3	A	B	6	0	D	9	E	5
3	A	D	0	9	4	5	2	E	8	C	7	6	1	B
C	5	E	B	6	D	9	7	0	1	A	2	4	8	3
7	B	0	A	2	E	D	8	C	9	3	5	1	6	4
9	4	3	D	1	6	B	5	7	2	8	0	A	C	E
6	E	8	5	C	0	4	3	1	A	7	B	D	2	9
0	D	1	9	E	B	C	6	3	5	4	8	2	A	7
5	7	6	3	A	1	8	4	2	0	E	9	C	B	D
8	C	B	2	4	7	A	E	9	D	6	1	5	3	0
E	9	7	6	D	8	1	B	4	3	2	C	0	5	A
4	0	A	8	B	2	6	9	5	C	D	E	3	7	1
1	2	5	C	3	A	E	0	D	7	9	6	B	4	8

Challenging

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## Chapter 25

# Two Tournament HyperSudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-two to twenty-eight. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 45** (135/225) DiffKey 22 / 96.3337.9575.6796.7877.5742

**Puzzle 46** (142/225) DiffKey 28 / 9954.1A24.5634.4356.1135.4639.9992

## HyperSudoku-15 Puzzle 45, Tournament/22

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8		4		B	6						A		D	
		0			D			A	4	3			8	
			9		8				1		0	6	5	
9						E			3		B	7		1
3		E		7					8					4
C	0		5				9			A			3	
	7		B				0	5				4	A	
5	9			4	A				6	0	D			
		6		0	3	4	D					8	7	
				1	B	2	4		A			5		6
	5		C					0			4			
B							8	7			1		2	0
	3	1	E	2				8				D		5
	B					D	3	4		E	8			
		A				5		6		9		3		

Tournament

Diff: 22 / 96.3337.9575.6796.7877.5742

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 22 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 45

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8		4		B	6	<sup>2</sup>			<sup>2</sup>	<sup>1</sup>	A		D	
		0		<sup>1</sup>	D			A	4	3			8	
			9		8				1	<sup>1</sup>	0	6	5	
9	<sup>2</sup>	<sup>3</sup>				E			3		B	7		1
3		E		7					8					4
C	0	<sup>1</sup>	5		<sup>1</sup>		9		<sup>2</sup>	A			3	<sup>1</sup>
	7		B				0	5				4	A	
5	9			4	A				6	0	D			
		6		0	3	4	D					8	7	
<sup>1</sup>				1	B	2	4		A		<sup>1</sup>	5		6
	5		C					0			4			<sup>2</sup>
B			<sup>1</sup>		<sup>1</sup>		8	7	<sup>3</sup>		1		2	0
	3	1	E	2				8	<sup>1</sup>			D		5
	B	<sup>1</sup>		<sup>2</sup>		D	3	4		E	8			<sup>3</sup>
		A				5		6		9		3		

Tournament

Diff: 22 / 96.3337.9575.6796.7877.5742

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There are 22 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 45

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>8</b>	<sup>16</sup>	<b>4</b>	<sup>5</sup>	<b>B</b>	<b>6</b>	<sup>2</sup>	<sup>20</sup>	<sup>7</sup>	<sup>2</sup>	<sup>1</sup>	<b>A</b>	<sup>16</sup>	<b>D</b>	<sup>19</sup>	<sup>1</sup>
<sup>15</sup>	<sup>15</sup>	<b>0</b>	<sup>14</sup>	<sup>1</sup>	<b>D</b>	<sup>20</sup>	<sup>19</sup>	<b>A</b>	<b>4</b>	<b>3</b>	<sup>17</sup>	<sup>14</sup>	<b>8</b>	<sup>18</sup>	
<sup>11</sup>	<sup>10</sup>	<sup>16</sup>	<b>9</b>	<sup>7</sup>	<b>8</b>	<sup>19</sup>	<sup>18</sup>	<sup>6</sup>	<b>1</b>	<sup>1</sup>	<b>0</b>	<b>6</b>	<b>5</b>	<sup>20</sup>	
<b>9</b>	<sup>2</sup>	<sup>3</sup>	<sup>19</sup>	<sup>8</sup>	<sup>17</sup>	<b>E</b>	<sup>22</sup>	<sup>20</sup>	<b>3</b>	<sup>21</sup>	<b>B</b>	<b>7</b>	<sup>18</sup>	<b>1</b>	<sup>4</sup>
<b>3</b>	<sup>14</sup>	<b>E</b>	<sup>20</sup>	<b>7</b>	<sup>18</sup>	<sup>7</sup>	<sup>21</sup>	<sup>21</sup>	<b>8</b>	<sup>22</sup>	<sup>16</sup>	<sup>15</sup>	<sup>19</sup>	<b>4</b>	
<b>C</b>	<b>0</b>	<sup>1</sup>	<b>5</b>	<sup>9</sup>	<sup>1</sup>	<sup>12</sup>	<b>9</b>	<sup>12</sup>	<sup>2</sup>	<b>A</b>	<sup>12</sup>	<sup>13</sup>	<b>3</b>	<sup>1</sup>	
<sup>13</sup>	<b>7</b>	<sup>9</sup>	<b>B</b>	<sup>6</sup>	<sup>13</sup>	<sup>4</sup>	<b>0</b>	<b>5</b>	<sup>17</sup>	<sup>15</sup>	<sup>18</sup>	<b>4</b>	<b>A</b>	<sup>17</sup>	<sup>7</sup>
<b>5</b>	<b>9</b>	<sup>16</sup>	<sup>4</sup>	<b>4</b>	<b>A</b>	<sup>20</sup>	<sup>20</sup>	<sup>21</sup>	<b>6</b>	<b>0</b>	<b>D</b>	<sup>13</sup>	<sup>12</sup>	<sup>7</sup>	
<sup>15</sup>	<sup>15</sup>	<b>6</b>	<sup>7</sup>	<b>0</b>	<b>3</b>	<b>4</b>	<b>D</b>	<sup>13</sup>	<sup>18</sup>	<sup>16</sup>	<sup>17</sup>	<b>8</b>	<b>7</b>	<sup>14</sup>	
<sup>1</sup>	<sup>10</sup>	<sup>7</sup>	<sup>4</sup>	<b>1</b>	<b>B</b>	<b>2</b>	<b>4</b>	<sup>9</sup>	<b>A</b>	<sup>6</sup>	<sup>1</sup>	<b>5</b>	<sup>8</sup>	<b>6</b>	<sup>10</sup>
<sup>10</sup>	<b>5</b>	<sup>9</sup>	<b>C</b>	<sup>5</sup>	<sup>6</sup>	<sup>11</sup>	<sup>12</sup>	<b>0</b>	<sup>13</sup>	<sup>7</sup>	<b>4</b>	<sup>11</sup>	<sup>12</sup>	<sup>2</sup>	
<b>B</b>	<sup>11</sup>	<sup>8</sup>	<sup>1</sup>	<sup>6</sup>	<sup>1</sup>	<sup>9</sup>	<b>8</b>	<b>7</b>	<sup>3</sup>	<sup>12</sup>	<b>1</b>	<sup>11</sup>	<b>2</b>	<b>0</b>	
<sup>9</sup>	<b>3</b>	<b>1</b>	<b>E</b>	<b>2</b>	<sup>5</sup>	<sup>6</sup>	<sup>7</sup>	<b>8</b>	<sup>1</sup>	<sup>13</sup>	<sup>14</sup>	<b>D</b>	<sup>13</sup>	<b>5</b>	<sup>13</sup>
<sup>16</sup>	<b>B</b>	<sup>1</sup>	<sup>15</sup>	<sup>2</sup>	<sup>18</sup>	<b>D</b>	<b>3</b>	<b>4</b>	<sup>17</sup>	<b>E</b>	<b>8</b>	<sup>14</sup>	<sup>13</sup>	<sup>3</sup>	
<sup>8</sup>	<sup>6</sup>	<b>A</b>	<sup>10</sup>	<sup>7</sup>	<sup>8</sup>	<b>5</b>	<sup>10</sup>	<b>6</b>	<sup>11</sup>	<b>9</b>	<sup>16</sup>	<b>3</b>	<sup>9</sup>	<sup>17</sup>	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

Tournament

Diff: 22 / 96.3337.9575.6796.7877.5742

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There are 22 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 225.

All 22 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 12 independent moves.

- \* The only spot for 4 in the 6th row is (6, 6).
- \* The only spot for 5 in the 3rd column is (3, 14).
- \* The only spot for 1 in the 11th column is (11, 1).
- \* The only spot for 5 in the 1st 5x3 rectangle is (5, 2).
- \* The only spot for B in the 4th 5x3 rectangle is (3, 6).
- \* The only spot for 8 in the 6th 5x3 rectangle is (15, 6).
- \* The only spot for 0 in the 10th 5x3 rectangle is (1, 10).
- \* The only spot for 4 in the 2nd 3x5 inner rectangle is (11, 3).
- \* The only spot for 5 in the 3rd 3x5 inner rectangle is (6, 12).
- \* The only spot for 4 in the 3rd 3x5 inner rectangle is (4, 12).
- \* The only spot for 0 in the 4th 3x5 inner rectangle is (10, 13).
- \* The only spot for 3 in the 4th 3x5 inner rectangle is (12, 10).

Step 2: There are 6 independent moves.

- \* The only spot for 5 in the 10th column is (10, 1).
- \* The only spot for D in the 15th column is (15, 11).
- \* The only spot for 0 in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for 4 in the 4th 5x3 rectangle is (2, 4).
- \* The only spot for 9 in the 13th 5x3 rectangle is (5, 14).
- \* The only spot for 7 in the 2nd 3x5 inner rectangle is (10, 6).

Step 3: There are 3 independent moves.

- \* The only spot for A in the 15th column is (15, 14).
- \* The only spot for 8 in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for D in the 4th 3x5 inner rectangle is (10, 12).

Step 4: There are 3 independent moves.

- \* The only spot for 8 in the 7th row is (7, 7).
- \* The only spot for 8 in the 7th 5x3 rectangle is (4, 8).
- \* The only spot for D in the 3rd 3x5 inner rectangle is (4, 10).

Step 5: There are 3 independent moves.

- \* The only spot for 3 in the 4th column is (4, 1).
- \* The only spot for 7 in the 3rd 3x5 inner rectangle is (6, 13).
- \* The only spot for 8 in the 3rd 3x5 inner rectangle is (5, 11).

Step 6: There are 7 independent moves.

- \* The only spot for 3 in the 9th column is (9, 3).
- \* The only spot for 8 in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for 9 in the 14th 5x3 rectangle is (7, 13).
- \* The only spot for 3 in the 1st 3x5 inner rectangle is (5, 7).
- \* The only spot for 6 in the 3rd 3x5 inner rectangle is (5, 12).
- \* The only spot for 9 in the 3rd 3x5 inner rectangle is (6, 11).
- \* The only spot for 8 in the 4th 3x5 inner rectangle is (11, 10).

Step 7: There are 9 independent moves.

- \* The only spot for 7 in the 10th row is (3, 10).
- \* The only spot for E in the 5th column is (5, 3).
- \* The only spot for A in the 7th column is (7, 5).

- \* The only spot for 9 in the 2nd 5x3 rectangle is (9, 1).
- \* The only spot for 3 in the 9th 5x3 rectangle is (15, 8).
- \* The only spot for C in the 13th 5x3 rectangle is (5, 15).
- \* The only spot for A in the 14th 5x3 rectangle is (8, 13).
- \* The only spot for A in the 3rd 3x5 inner rectangle is (4, 9).
- \* The only spot for 7 in the 4th 3x5 inner rectangle is (11, 11).

Step 8: There are 5 independent moves.

- \* The only spot for 9 in the 10th row is (14, 10).
- \* The only spot for E in the 6th column is (6, 15).
- \* The only spot for 9 in the 10th 5x3 rectangle is (3, 12).
- \* The only spot for D in the 13th 5x3 rectangle is (1, 15).
- \* The only spot for A in the 1st 3x5 inner rectangle is (5, 4).

Step 9: There are 7 independent moves.

- \* The only spot for C in the 10th row is (9, 10).
- \* The only spot for 3 in the 12th row is (7, 12).
- \* The only spot for 4 in the 15th row is (14, 15).
- \* The only spot for D in the 7th 5x3 rectangle is (3, 7).
- \* The only spot for 3 in the 10th 5x3 rectangle is (3, 11).
- \* The only spot for 4 in the 13th 5x3 rectangle is (1, 13).
- \* The only spot for D in the 1st 3x5 inner rectangle is (5, 6).

Step 10: There are 5 independent moves.

- \* The only spot for E in the 10th row is (2, 10).
- \* The only spot for 1 in the 15th row is (8, 15).
- \* The only spot for 0 in the 15th row is (4, 15).
- \* The only spot for D in the 1st 5x3 rectangle is (2, 3).
- \* The only spot for 2 in the 10th 5x3 rectangle is (1, 11).

Step 11: There are 6 independent moves.

- \* The only spot for A in the 11th row is (13, 11).
- \* The only spot for E in the 12th row is (13, 12).
- \* The only spot for A in the 1st 5x3 rectangle is (1, 3).
- \* The only spot for A in the 10th 5x3 rectangle is (2, 12).
- \* The only spot for 1 in the 11th 5x3 rectangle is (7, 11).
- \* The only spot for B in the 14th 5x3 rectangle is (10, 15).

Step 12: There are 7 independent moves.

- \* The only spot for 1 in the 6th row is (9, 6).
- \* The only spot for 6 in the 7th column is (7, 6).
- \* The only spot for E in the 14th column is (14, 8).
- \* The only spot for E in the 6th 5x3 rectangle is (12, 6).
- \* The only spot for 6 in the 11th 5x3 rectangle is (8, 11).
- \* The only spot for C in the 12th 5x3 rectangle is (11, 12).
- \* The only spot for B in the 12th 5x3 rectangle is (14, 11).

Step 13: There are 9 independent moves.

- \* The only spot for 2 in the 6th row is (13, 6).
- \* The only spot for E in the 7th row is (1, 7).



- \* The only spot for C in the 13th row is (14, 13).
- \* The only spot for E in the 9th column is (9, 9).
- \* The only spot for 1 in the 14th column is (14, 14).
- \* The only spot for 1 in the 8th 5x3 rectangle is (6, 7).
- \* The only spot for 1 in the 9th 5x3 rectangle is (13, 8).
- \* The only spot for E in the 11th 5x3 rectangle is (10, 11).
- \* The only spot for B in the 15th 5x3 rectangle is (11, 13).

Step 14: There are 6 independent moves.

- \* The only spot for 1 in the 4th column is (4, 2).
- \* The only spot for B in the 13th column is (13, 2).
- \* The only spot for 1 in the 4th 5x3 rectangle is (2, 5).
- \* The only spot for B in the 9th 5x3 rectangle is (15, 9).
- \* The only spot for 0 in the 15th 5x3 rectangle is (13, 14).
- \* The only spot for 6 in the 4th 3x5 inner rectangle is (12, 13).

Step 15: There are 7 independent moves.

- \* The only spot for C in the 9th row is (2, 9).
- \* The only spot for 6 in the 2nd column is (2, 2).
- \* The only spot for 7 in the 4th column is (4, 14).
- \* The only spot for 9 in the 13th column is (13, 5).
- \* The only spot for 7 in the 1st 5x3 rectangle is (1, 2).
- \* The only spot for 1 in the 7th 5x3 rectangle is (1, 9).
- \* The only spot for 6 in the 9th 5x3 rectangle is (11, 7).

Step 16: There are 8 independent moves.

- \* The only spot for 2 in the 2nd column is (2, 1).
- \* The only spot for 2 in the 11th column is (11, 9).
- \* The only spot for 7 in the 12th column is (12, 15).
- \* The only spot for C in the 13th column is (13, 1).
- \* The only spot for C in the 1st 5x3 rectangle is (3, 3).
- \* The only spot for C in the 6th 5x3 rectangle is (12, 5).
- \* The only spot for 2 in the 7th 5x3 rectangle is (3, 8).
- \* The only spot for 6 in the 13th 5x3 rectangle is (1, 14).

Step 17: There are 7 independent moves.

- \* The only spot for C in the 10th column is (10, 14).
- \* The only spot for 2 in the 12th column is (12, 2).
- \* The only spot for C in the 9th 5x3 rectangle is (15, 7).
- \* The only spot for 2 in the 15th 5x3 rectangle is (15, 15).
- \* The only spot for C in the 1st 3x5 inner rectangle is (6, 4).
- \* The only spot for 2 in the 2nd 3x5 inner rectangle is (10, 7).
- \* The only spot for 5 in the 4th 3x5 inner rectangle is (12, 9).

Step 18: There are 7 independent moves.

- \* The only spot for 0 in the 4th row is (14, 4).
- \* The only spot for 2 in the 2nd 5x3 rectangle is (8, 3).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (15, 2).
- \* The only spot for 2 in the 14th 5x3 rectangle is (6, 14).

- \* The only spot for 0 in the 1st 3x5 inner rectangle is (6, 5).
- \* The only spot for 9 in the 2nd 3x5 inner rectangle is (12, 7).
- \* The only spot for 9 in the 4th 3x5 inner rectangle is (10, 9).

Step 19: There are 5 independent moves.

- \* The only spot for E in the 2nd row is (8, 2).
- \* The only spot for 6 in the 4th row is (4, 4).
- \* The only spot for B in the 2nd 5x3 rectangle is (7, 3).
- \* The only spot for E in the 3rd 5x3 rectangle is (15, 1).
- \* The only spot for 6 in the 6th 5x3 rectangle is (14, 5).

Step 20: There are 7 independent moves.

- \* The only spot for 2 in the 4th row is (9, 4).
- \* The only spot for 7 in the 7th column is (7, 8).
- \* The only spot for C in the 8th column is (8, 8).
- \* The only spot for C in the 2nd 5x3 rectangle is (7, 2).
- \* The only spot for 7 in the 2nd 5x3 rectangle is (8, 1).
- \* The only spot for 7 in the 3rd 5x3 rectangle is (15, 3).
- \* The only spot for 2 in the 1st 3x5 inner rectangle is (4, 5).

Step 21: There are 4 independent moves.

- \* The only spot for D in the 4th row is (11, 4).
- \* The only spot for B in the 8th column is (8, 5).
- \* The only spot for D in the 5th 5x3 rectangle is (9, 5).
- \* The only spot for B in the 8th 5x3 rectangle is (9, 8).

Step 22: There are 2 independent moves.

- \* The only spot for 5 in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for 5 in the 2nd 3x5 inner rectangle is (11, 5).

## Solution for Puzzle 45

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

8	2	4	3	B	6	0	7	9	5	1	A	C	D	E
7	6	0	1	5	D	C	E	A	4	3	2	B	8	9
A	D	C	9	E	8	B	2	3	1	4	0	6	5	7
9	4	8	6	A	C	E	5	2	3	D	B	7	0	1
3	1	E	2	7	0	A	B	D	8	5	C	9	6	4
C	0	B	5	D	4	6	9	1	7	A	E	2	3	8
E	7	D	B	3	1	8	0	5	2	6	9	4	A	C
5	9	2	8	4	A	7	C	B	6	0	D	1	E	3
1	C	6	A	0	3	4	D	E	9	2	5	8	7	B
0	E	7	D	1	B	2	4	C	A	8	3	5	9	6
2	5	3	C	8	9	1	6	0	E	7	4	A	B	D
B	A	9	4	6	5	3	8	7	D	C	1	E	2	0
4	3	1	E	2	7	9	A	8	0	B	6	D	C	5
6	B	5	7	9	2	D	3	4	C	E	8	0	1	A
D	8	A	0	C	E	5	1	6	B	9	7	3	4	2

Tournament

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## HyperSudoku-15 Puzzle 46, Tournament/28

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	2				4		E		C		B			
	7	4	C		6			9		A				2
9	A						B			4				C
	3	E	B						5			2	8	
				4		A	9	3	0		E	7		
					2	6					1	0		4
7	E	0	9				4	6						
		B			7	C		8				3		A
				C					9			D	2	7
E							1		8				A	
1	C					E	3			B				0
		2	4	3		5	C						9	
				2		3		7		C		8	D	
	0		3	5							2			
C		7						D				1		E

Tournament

Diff: 28 / 9954.1A24.5634.4356.1135.4639.9992

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 28 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 46

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	2				4		E	<sup>1</sup>	C		B	<sup>2</sup>		<sup>3</sup>
	7	4	C		6			9		A			<sup>3</sup>	2
9	A			<sup>2</sup>			B			4				C
	3	E	B						5		<sup>1</sup>	2	8	
<sup>1</sup>				4		A	9	3	0		E	7		
					2	6		<sup>1</sup>	<sup>2</sup>		1	0		4
7	E	0	9				4	6		<sup>3</sup>	<sup>2</sup>	<sup>2</sup>		
		B	<sup>1</sup>		7	C		8	<sup>2</sup>			3		A
				C					9	<sup>2</sup>		D	2	7
E							1		8	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	A	
1	C					E	3	<sup>2</sup>		B		<sup>2</sup>		0
		2	4	3		5	C			<sup>2</sup>		<sup>3</sup>	9	<sup>1</sup>
			<sup>1</sup>	2		3		7		C		8	D	
	0		3	5	<sup>2</sup>			<sup>3</sup>			2	<sup>1</sup>		
C		7					<sup>2</sup>	D				1		E

Tournament

Diff: 28 / 9954.1A24.5634.4356.1135.4639.9992

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There are 28 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 46

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>23</sup>	<b>2</b>	<sup>24</sup>	<sup>24</sup>	<sup>25</sup>	<b>4</b>	<sup>14</sup>	<b>E</b>	<sup>1</sup>	<b>C</b>	<sup>11</sup>	<b>B</b>	<sup>2</sup>	<sup>19</sup>	<sup>3</sup>	<sup>1</sup>
<sup>27</sup>	<b>7</b>	<b>4</b>	<b>C</b>	<sup>26</sup>	<b>6</b>	<sup>21</sup>	<sup>17</sup>	<b>9</b>	<sup>9</sup>	<b>A</b>	<sup>4</sup>	<sup>5</sup>	<sup>3</sup>	<b>2</b>	
<b>9</b>	<b>A</b>	<sup>10</sup>	<sup>18</sup>	<sup>2</sup>	<sup>24</sup>	<sup>25</sup>	<b>B</b>	<sup>22</sup>	<sup>26</sup>	<b>4</b>	<sup>13</sup>	<sup>4</sup>	<sup>20</sup>	<b>C</b>	
<sup>12</sup>	<b>3</b>	<b>E</b>	<b>B</b>	<sup>11</sup>	<sup>4</sup>	<sup>22</sup>	<sup>15</sup>	<sup>21</sup>	<b>5</b>	<sup>9</sup>	<sup>1</sup>	<b>2</b>	<b>8</b>	<sup>11</sup>	<sup>4</sup>
<sup>1</sup>	<sup>24</sup>	<sup>9</sup>	<sup>19</sup>	<b>4</b>	<sup>24</sup>	<b>A</b>	<b>9</b>	<b>3</b>	<b>0</b>	<sup>10</sup>	<b>E</b>	<b>7</b>	<sup>8</sup>	<sup>7</sup>	
<sup>25</sup>	<sup>27</sup>	<sup>26</sup>	<sup>22</sup>	<sup>20</sup>	<b>2</b>	<b>6</b>	<sup>23</sup>	<sup>1</sup>	<sup>2</sup>	<sup>8</sup>	<b>1</b>	<b>0</b>	<sup>9</sup>	<b>4</b>	
<b>7</b>	<b>E</b>	<b>0</b>	<b>9</b>	<sup>10</sup>	<sup>9</sup>	<sup>26</sup>	<b>4</b>	<b>6</b>	<sup>25</sup>	<sup>3</sup>	<sup>2</sup>	<sup>2</sup>	<sup>6</sup>	<sup>4</sup>	<sup>7</sup>
<sup>27</sup>	<sup>26</sup>	<b>B</b>	<sup>1</sup>	<sup>27</sup>	<b>7</b>	<b>C</b>	<sup>22</sup>	<b>8</b>	<sup>2</sup>	<sup>12</sup>	<sup>10</sup>	<b>3</b>	<sup>15</sup>	<b>A</b>	
<sup>10</sup>	<sup>27</sup>	<sup>26</sup>	<sup>15</sup>	<b>C</b>	<sup>16</sup>	<sup>21</sup>	<sup>16</sup>	<sup>22</sup>	<b>9</b>	<sup>2</sup>	<sup>16</sup>	<b>D</b>	<b>2</b>	<b>7</b>	
<b>E</b>	<sup>27</sup>	<sup>27</sup>	<sup>20</sup>	<sup>19</sup>	<sup>28</sup>	<sup>24</sup>	<b>1</b>	<sup>22</sup>	<b>8</b>	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	<b>A</b>	<sup>14</sup>	<sup>10</sup>
<b>1</b>	<b>C</b>	<sup>28</sup>	<sup>23</sup>	<sup>24</sup>	<sup>27</sup>	<b>E</b>	<b>3</b>	<sup>2</sup>	<sup>14</sup>	<b>B</b>	<sup>8</sup>	<sup>2</sup>	<sup>13</sup>	<b>0</b>	
<sup>26</sup>	<sup>26</sup>	<b>2</b>	<b>4</b>	<b>3</b>	<sup>27</sup>	<b>5</b>	<b>C</b>	<sup>20</sup>	<sup>13</sup>	<sup>2</sup>	<sup>12</sup>	<sup>3</sup>	<b>9</b>	<sup>1</sup>	
<sup>27</sup>	<sup>27</sup>	<sup>25</sup>	<sup>1</sup>	<b>2</b>	<sup>21</sup>	<b>3</b>	<sup>25</sup>	<b>7</b>	<sup>15</sup>	<b>C</b>	<sup>13</sup>	<b>8</b>	<b>D</b>	<sup>26</sup>	<sup>13</sup>
<sup>25</sup>	<b>0</b>	<sup>24</sup>	<b>3</b>	<b>5</b>	<sup>2</sup>	<sup>26</sup>	<sup>24</sup>	<sup>3</sup>	<sup>10</sup>	<sup>12</sup>	<b>2</b>	<sup>1</sup>	<sup>16</sup>	<sup>27</sup>	
<b>C</b>	<sup>25</sup>	<b>7</b>	<sup>16</sup>	<sup>25</sup>	<sup>20</sup>	<sup>26</sup>	<sup>2</sup>	<b>D</b>	<sup>16</sup>	<sup>7</sup>	<sup>15</sup>	<b>1</b>	<sup>8</sup>	<b>E</b>	
<sup>1</sup>					<sup>6</sup>				<sup>11</sup>						

Tournament

Diff: 28 / 9954.1A24.5634.4356.1135.4639.9992

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There are 28 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 225.

All 28 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 10 independent moves.

- \* The only spot for 2 in the 4th column is (4, 8).
- \* The only spot for A in the 13th column is (13, 14).
- \* The only spot for A in the 2nd 5x3 rectangle is (9, 1).
- \* The only spot for 2 in the 4th 5x3 rectangle is (1, 5).
- \* The only spot for E in the 5th 5x3 rectangle is (9, 6).
- \* The only spot for A in the 6th 5x3 rectangle is (12, 4).
- \* The only spot for 8 in the 12th 5x3 rectangle is (15, 12).
- \* The only spot for C in the 12th 5x3 rectangle is (13, 10).
- \* The only spot for 2 in the 12th 5x3 rectangle is (11, 10).
- \* The only spot for E in the 13th 5x3 rectangle is (4, 13).

Step 2: There are 13 independent moves.

- \* The only spot for E in the 9th row is (11, 9).
- \* The only spot for E in the 6th column is (6, 14).
- \* The only spot for 2 in the 8th column is (8, 15).
- \* The only spot for 4 in the 13th column is (13, 11).
- \* The only spot for B in the 13th column is (13, 7).
- \* The only spot for 9 in the 13th column is (13, 1).
- \* The only spot for B in the 5th 5x3 rectangle is (10, 6).
- \* The only spot for E in the 8th 5x3 rectangle is (10, 8).
- \* The only spot for 2 in the 11th 5x3 rectangle is (9, 11).
- \* The only spot for 1 in the 12th 5x3 rectangle is (11, 12).
- \* The only spot for E in the 1st 3x5 inner rectangle is (5, 3).
- \* The only spot for C in the 2nd 3x5 inner rectangle is (12, 7).
- \* The only spot for 3 in the 4th 3x5 inner rectangle is (12, 10).

Step 3: There are 5 independent moves.

- \* The only spot for E in the 14th column is (14, 2).
- \* The only spot for 3 in the 15th column is (15, 1).
- \* The only spot for 8 in the 9th 5x3 rectangle is (11, 7).
- \* The only spot for E in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for C in the 14th 5x3 rectangle is (9, 14).

Step 4: There are 4 independent moves.

- \* The only spot for C in the 4th row is (6, 4).
- \* The only spot for 6 in the 13th column is (13, 3).
- \* The only spot for 1 in the 15th column is (15, 7).
- \* The only spot for 8 in the 3rd 5x3 rectangle is (12, 2).

Step 5: There is 1 independent move.

- \* The only spot for 5 in the 13th column is (13, 2).

Step 6: There is 1 independent move.

- \* 5 must be placed at (14, 7) because it is the only value left that is not already in the 7th row, the 14th column or the 9th 5x3 rectangle.

Step 7: There are 2 independent moves.

- \* The only spot for 5 in the 11th column is (11, 15).
- \* The only spot for 5 in the 6th 5x3 rectangle is (15, 5).

Step 8: There are 4 independent moves.

- \* The only spot for 3 in the 11th column is (11, 6).
- \* The only spot for B in the 6th 5x3 rectangle is (14, 5).
- \* The only spot for 3 in the 15th 5x3 rectangle is (14, 15).
- \* The only spot for 5 in the 4th 3x5 inner rectangle is (12, 11).

Step 9: There are 5 independent moves.

- \* The only spot for C in the 5th row is (3, 5).
- \* The only spot for 3 in the 10th column is (10, 2).
- \* The only spot for C in the 6th 5x3 rectangle is (14, 6).
- \* The only spot for 3 in the 8th 5x3 rectangle is (6, 7).
- \* The only spot for 9 in the 2nd 3x5 inner rectangle is (11, 4).

Step 10: There are 6 independent moves.

- \* The only spot for A in the 7th row is (5, 7).
- \* The only spot for 3 in the 1st column is (1, 9).
- \* The only spot for 1 in the 10th column is (10, 14).
- \* The only spot for 3 in the 1st 5x3 rectangle is (3, 3).
- \* The only spot for 9 in the 9th 5x3 rectangle is (12, 8).
- \* The only spot for 6 in the 2nd 3x5 inner rectangle is (11, 5).

Step 11: There are 3 independent moves.

- \* The only spot for D in the 11th column is (11, 1).
- \* The only spot for D in the 6th 5x3 rectangle is (15, 4).
- \* The only spot for 6 in the 1st 3x5 inner rectangle is (5, 4).

Step 12: There are 4 independent moves.

- \* The only spot for 7 in the 11th column is (11, 14).
- \* The only spot for 0 in the 11th column is (11, 8).
- \* The only spot for 0 in the 4th 5x3 rectangle is (1, 4).
- \* The only spot for D in the 12th 5x3 rectangle is (12, 12).

Step 13: There are 4 independent moves.

- \* The only spot for 7 in the 12th row is (10, 12).
- \* The only spot for 7 in the 12th column is (12, 3).
- \* The only spot for 7 in the 12th 5x3 rectangle is (14, 11).
- \* The only spot for 0 in the 4th 3x5 inner rectangle is (12, 13).

Step 14: There are 3 independent moves.

- \* The only spot for 7 in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for 6 in the 11th 5x3 rectangle is (10, 11).
- \* The only spot for 6 in the 12th 5x3 rectangle is (15, 10).

Step 15: There are 5 independent moves.

- \* The only spot for 7 in the 4th row is (8, 4).
- \* The only spot for 6 in the 12th column is (12, 15).
- \* The only spot for 6 in the 9th 5x3 rectangle is (14, 8).
- \* The only spot for 6 in the 3rd 3x5 inner rectangle is (4, 9).
- \* The only spot for A in the 4th 3x5 inner rectangle is (10, 13).

Step 16: There are 6 independent moves.

- \* The only spot for A in the 8th column is (8, 9).



- \* The only spot for 4 in the 10th column is (10, 15).
- \* The only spot for A in the 13th 5x3 rectangle is (4, 15).
- \* The only spot for 4 in the 15th 5x3 rectangle is (14, 14).
- \* The only spot for 1 in the 3rd 3x5 inner rectangle is (6, 9).
- \* The only spot for 4 in the 4th 3x5 inner rectangle is (12, 9).

Step 17: There is 1 independent move.

- \* The only spot for 0 in the 8th column is (8, 2).

Step 18: There is 1 independent move.

- \* The only spot for 0 in the 1st 3x5 inner rectangle is (4, 3).

Step 19: There are 3 independent moves.

- \* The only spot for 0 in the 3rd 5x3 rectangle is (14, 1).
- \* The only spot for 0 in the 10th 5x3 rectangle is (5, 10).
- \* The only spot for 1 in the 1st 3x5 inner rectangle is (4, 5).

Step 20: There are 5 independent moves.

- \* The only spot for 7 in the 5th column is (5, 6).
- \* The only spot for 0 in the 6th column is (6, 15).
- \* The only spot for 1 in the 3rd 5x3 rectangle is (14, 3).
- \* The only spot for 0 in the 11th 5x3 rectangle is (9, 12).
- \* The only spot for 7 in the 3rd 3x5 inner rectangle is (4, 10).

Step 21: There are 4 independent moves.

- \* The only spot for 1 in the 9th column is (9, 4).
- \* The only spot for 1 in the 2nd 5x3 rectangle is (7, 2).
- \* The only spot for 0 in the 8th 5x3 rectangle is (7, 9).
- \* The only spot for 5 in the 3rd 3x5 inner rectangle is (6, 13).

Step 22: There are 6 independent moves.

- \* The only spot for 5 in the 8th column is (8, 8).
- \* The only spot for 4 in the 9th column is (9, 10).
- \* The only spot for 5 in the 2nd 5x3 rectangle is (9, 3).
- \* The only spot for 4 in the 5th 5x3 rectangle is (7, 4).
- \* The only spot for B in the 8th 5x3 rectangle is (9, 9).
- \* The only spot for 5 in the 1st 3x5 inner rectangle is (4, 6).

Step 23: There are 3 independent moves.

- \* The only spot for 5 in the 1st column is (1, 1).
- \* The only spot for D in the 4th column is (4, 11).
- \* The only spot for D in the 8th column is (8, 6).

Step 24: There are 9 independent moves.

- \* The only spot for D in the 3rd column is (3, 14).
- \* The only spot for 8 in the 4th column is (4, 1).
- \* The only spot for 8 in the 8th column is (8, 14).
- \* The only spot for 6 in the 1st 5x3 rectangle is (3, 1).
- \* The only spot for D in the 4th 5x3 rectangle is (2, 5).
- \* The only spot for 8 in the 5th 5x3 rectangle is (6, 5).
- \* The only spot for D in the 11th 5x3 rectangle is (7, 10).
- \* The only spot for D in the 1st 3x5 inner rectangle is (6, 3).

- \* The only spot for 8 in the 3rd 3x5 inner rectangle is (5, 11).

Step 25: There are 9 independent moves.

- \* The only spot for 6 in the 14th row is (1, 14).
- \* The only spot for 8 in the 1st column is (1, 6).
- \* The only spot for 1 in the 3rd column is (3, 13).
- \* The only spot for 9 in the 5th column is (5, 15).
- \* The only spot for 1 in the 1st 5x3 rectangle is (5, 1).
- \* The only spot for 8 in the 2nd 5x3 rectangle is (7, 3).
- \* The only spot for 8 in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for 6 in the 14th 5x3 rectangle is (8, 13).
- \* The only spot for D in the 2nd 3x5 inner rectangle is (10, 7).

Step 26: There are 11 independent moves.

- \* The only spot for 9 in the 13th row is (15, 13).
- \* The only spot for B in the 15th row is (7, 15).
- \* The only spot for A in the 1st column is (1, 12).
- \* The only spot for B in the 5th column is (5, 2).
- \* The only spot for A in the 4th 5x3 rectangle is (3, 6).
- \* The only spot for 8 in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for 1 in the 7th 5x3 rectangle is (2, 8).
- \* The only spot for 2 in the 8th 5x3 rectangle is (7, 7).
- \* The only spot for 6 in the 10th 5x3 rectangle is (2, 12).
- \* The only spot for 9 in the 14th 5x3 rectangle is (7, 14).
- \* The only spot for 2 in the 2nd 3x5 inner rectangle is (10, 3).

Step 27: There are 12 independent moves.

- \* The only spot for B in the 12th row is (6, 12).
- \* The only spot for B in the 1st column is (1, 13).
- \* The only spot for 4 in the 2nd column is (2, 13).
- \* The only spot for 5 in the 3rd column is (3, 10).
- \* The only spot for D in the 5th column is (5, 8).
- \* The only spot for D in the 1st 5x3 rectangle is (1, 2).
- \* The only spot for 9 in the 4th 5x3 rectangle is (2, 6).
- \* The only spot for 5 in the 7th 5x3 rectangle is (2, 9).
- \* The only spot for 4 in the 7th 5x3 rectangle is (1, 8).
- \* The only spot for B in the 10th 5x3 rectangle is (2, 10).
- \* The only spot for B in the 15th 5x3 rectangle is (15, 14).
- \* The only spot for A in the 3rd 3x5 inner rectangle is (6, 11).

Step 28: There are 2 independent moves.

- \* The only spot for 9 in the 10th 5x3 rectangle is (3, 11).
- \* The only spot for 9 in the 3rd 3x5 inner rectangle is (6, 10).

## Solution for Puzzle 46

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

5	2	6	8	1	4	7	E	A	C	D	B	9	0	3
D	7	4	C	B	6	1	0	9	3	A	8	5	E	2
9	A	3	0	E	D	8	B	5	2	4	7	6	1	C
0	3	E	B	6	C	4	7	1	5	9	A	2	8	D
2	D	C	1	4	8	A	9	3	0	6	E	7	B	5
8	9	A	5	7	2	6	D	E	B	3	1	0	C	4
7	E	0	9	A	3	2	4	6	D	8	C	B	5	1
4	1	B	2	D	7	C	5	8	E	0	9	3	6	A
3	5	8	6	C	1	0	A	B	9	E	4	D	2	7
E	B	5	7	0	9	D	1	4	8	2	3	C	A	6
1	C	9	D	8	A	E	3	2	6	B	5	4	7	0
A	6	2	4	3	B	5	C	0	7	1	D	E	9	8
B	4	1	E	2	5	3	6	7	A	C	0	8	D	9
6	0	D	3	5	E	9	8	C	1	7	2	A	4	B
C	8	7	A	9	0	B	2	D	4	5	6	1	3	E

Tournament

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## Chapter 26

# Two TournamentPlus HyperSudoku-15 Puzzles

There are two puzzles in this section ranging in difficulty from thirty-four to thirty-nine. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 47** (151/225) DiffKey 34 / 76.4241.B434.674B.1322.2221.B224.3389.9992

**Puzzle 48** (144/225) DiffKey 39 / 995.2B22.2341.1122.1A11.1113.4554.3567.8645.3684

# HyperSudoku-15 Puzzle 47, TournamentPlus/34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

151/225

			A				7	5	0			3		
	B	0					1				6	7		
	8	D								1				A
				0		2		7	3		E			4
E					5				8		9			
B		7	C			4						6		
	9		E			B	0							
7			B					2		A		4		
				4	E			1				C	2	3
	A	C		9		8	E						1	
		4			0						A	2		C
			8	1				4		D				
4	D								7	5			9	
							8	A	5	B	3			
A		8			9	0								6

TournamentPlus

Diff: 34 / 76.4241.B434.674B.1322.2221.B224.3389.9992

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 34 steps required to solve the puzzle above with a total of 151 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 47

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

151/225

			A				7	5	0			3		
	B	0					1				6	7		
	8	D							<sup>2</sup> 1					A
				0	<sup>3</sup> 2		7	3		E				4
E					5			<sup>2</sup> 8		9				
B		7	C			4	<sup>2</sup>	<sup>1</sup>				6		
	9		E			B	0							
7			B					2		A		4		
				4	E	<sup>1</sup>		1			<sup>1</sup>	C	2	3
	A	C		9	<sup>2</sup> 8	E				<sup>2</sup>	<sup>3</sup>		1	
	<sup>3</sup> 4				0					<sup>1</sup>	A	2	<sup>2</sup>	C
			8	1	<sup>1</sup>			4		D			<sup>3</sup>	
4	D								7	5		<sup>1</sup>	9	
			<sup>1</sup>				8	A	5	B	3			
A		8			9	0								6

TournamentPlus

Diff: 34 / 76.4241.B434.674B.1322.2221.B224.3389.9992

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 34 steps required to solve the puzzle above with a total of 151 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 47

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1) 151/225

30	24	25	<b>A</b>	30	31	29	<b>7</b>	<b>5</b>	<b>0</b>	13	32	<b>3</b>	33	33	<sup>1</sup>
27	<b>B</b>	<b>0</b>	29	32	32	6	<b>1</b>	12	30	31	<b>6</b>	<b>7</b>	30	31	
29	<b>8</b>	<b>D</b>	16	31	32	26	28	30	2	<b>1</b>	30	8	27	<b>A</b>	
30	26	31	17	<b>0</b>	3	<b>2</b>	13	<b>7</b>	<b>3</b>	7	<b>E</b>	11	32	<b>4</b>	<sup>4</sup>
<b>E</b>	33	32	23	12	<b>5</b>	28	29	2	<b>8</b>	32	<b>9</b>	33	32	31	
<b>B</b>	33	<b>7</b>	<b>C</b>	11	14	<b>4</b>	2	1	5	8	32	<b>6</b>	33	34	
21	<b>9</b>	20	<b>E</b>	13	14	<b>B</b>	<b>0</b>	22	4	5	31	32	33	12	<sup>7</sup>
<b>7</b>	32	33	<b>B</b>	33	11	31	23	<b>2</b>	31	<b>A</b>	16	<b>4</b>	9	10	
10	9	12	11	<b>4</b>	<b>E</b>	1	5	<b>1</b>	12	11	1	<b>C</b>	<b>2</b>	<b>3</b>	
8	<b>A</b>	<b>C</b>	13	<b>9</b>	2	<b>8</b>	<b>E</b>	12	11	2	3	33	<b>1</b>	34	<sup>10</sup>
12	3	<b>4</b>	28	29	<b>0</b>	30	30	29	10	1	<b>A</b>	<b>2</b>	2	<b>C</b>	
19	18	18	<b>8</b>	<b>1</b>	1	24	25	<b>4</b>	10	<b>D</b>	7	5	3	4	
<b>4</b>	<b>D</b>	17	21	19	20	16	27	26	<b>7</b>	<b>5</b>	9	1	<b>9</b>	8	<sup>13</sup>
31	33	26	1	32	29	30	<b>8</b>	<b>A</b>	<b>5</b>	<b>B</b>	<b>3</b>	31	32	30	
<b>A</b>	30	<b>8</b>	15	31	<b>9</b>	<b>0</b>	29	30	31	32	30	31	31	<b>6</b>	
<sup>1</sup>					<sup>6</sup>					<sup>11</sup>					

TournamentPlus Diff: 34 / 76.4241.B434.674B.1322.2221.B224.3389.9992

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There are 34 steps required to solve the puzzle above with a total of 151 empty locations that must be determined, out of a total puzzle size of 225.

All 34 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 7 independent moves.

- \* The only spot for 7 in the 9th row is (7, 9).
- \* The only spot for 0 in the 4th column is (4, 14).
- \* The only spot for E in the 5th 5x3 rectangle is (9, 6).
- \* The only spot for B in the 9th 5x3 rectangle is (12, 9).
- \* The only spot for A in the 15th 5x3 rectangle is (13, 13).
- \* The only spot for A in the 3rd 3x5 inner rectangle is (6, 12).
- \* The only spot for E in the 4th 3x5 inner rectangle is (11, 11).

Step 2: There are 6 independent moves.

- \* The only spot for 9 in the 6th row is (8, 6).
- \* The only spot for 0 in the 5th 5x3 rectangle is (9, 5).
- \* The only spot for 7 in the 11th 5x3 rectangle is (6, 10).
- \* The only spot for 8 in the 12th 5x3 rectangle is (14, 11).
- \* The only spot for B in the 2nd 3x5 inner rectangle is (10, 3).
- \* The only spot for 3 in the 4th 3x5 inner rectangle is (11, 10).

Step 3: There are 4 independent moves.

- \* The only spot for 7 in the 11th row is (2, 11).
- \* The only spot for 6 in the 12th 5x3 rectangle is (14, 12).
- \* The only spot for B in the 1st 3x5 inner rectangle is (6, 4).
- \* The only spot for 4 in the 4th 3x5 inner rectangle is (12, 10).

Step 4: There are 2 independent moves.

- \* The only spot for 7 in the 12th 5x3 rectangle is (15, 12).
- \* The only spot for 4 in the 2nd 3x5 inner rectangle is (10, 7).

Step 5: There are 4 independent moves.

- \* The only spot for A in the 8th 5x3 rectangle is (8, 9).
- \* The only spot for 9 in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for 6 in the 2nd 3x5 inner rectangle is (11, 7).
- \* The only spot for A in the 2nd 3x5 inner rectangle is (10, 6).

Step 6: There is 1 independent move.

- \* The only spot for A in the 2nd 5x3 rectangle is (7, 2).

Step 7: There are 2 independent moves.

- \* 0 must be placed at (12, 12) because it is the only value left that is not already in the 12th row, the 12th column, the 12th 5x3 rectangle or the 4th 3x5 inner rectangle.
- \* C must be placed at (11, 4) because it is the only value left that is not already in the 4th row, the 11th column, the 6th 5x3 rectangle or the 2nd 3x5 inner rectangle.

Step 8: There are 4 independent moves.

- \* The only spot for 0 in the 13th column is (13, 3).
- \* The only spot for 0 in the 10th 5x3 rectangle is (1, 10).
- \* The only spot for 0 in the 15th 5x3 rectangle is (15, 13).
- \* The only spot for 0 in the 2nd 3x5 inner rectangle is (11, 6).

Step 9: There are 3 independent moves.

- \* The only spot for 0 in the 9th row is (2, 9).
- \* The only spot for 0 in the 9th 5x3 rectangle is (14, 8).
- \* The only spot for 8 in the 15th 5x3 rectangle is (12, 13).



Step 10: There are 4 independent moves.

- \* The only spot for 8 in the 9th row is (1, 9).
- \* The only spot for E in the 9th 5x3 rectangle is (15, 8).
- \* The only spot for C in the 4th 3x5 inner rectangle is (10, 12).
- \* The only spot for 1 in the 4th 3x5 inner rectangle is (10, 11).

Step 11: There are 6 independent moves.

- \* The only spot for 8 in the 4th row is (13, 4).
- \* The only spot for 8 in the 8th row is (6, 8).
- \* The only spot for D in the 9th row is (4, 9).
- \* The only spot for 8 in the 4th 5x3 rectangle is (5, 6).
- \* The only spot for 9 in the 9th 5x3 rectangle is (11, 9).
- \* The only spot for 2 in the 4th 3x5 inner rectangle is (10, 10).

Step 12: There are 7 independent moves.

- \* The only spot for 5 in the 9th row is (3, 9).
- \* The only spot for D in the 10th row is (9, 10).
- \* The only spot for D in the 5th column is (5, 5).
- \* The only spot for 8 in the 2nd 5x3 rectangle is (9, 2).
- \* The only spot for 8 in the 9th 5x3 rectangle is (15, 7).
- \* The only spot for D in the 10th 5x3 rectangle is (1, 11).
- \* The only spot for 6 in the 4th 3x5 inner rectangle is (10, 9).

Step 13: There are 4 independent moves.

- \* The only spot for 6 in the 10th row is (4, 10).
- \* The only spot for 8 in the 3rd 5x3 rectangle is (11, 1).
- \* The only spot for D in the 5th 5x3 rectangle is (8, 4).
- \* The only spot for A in the 1st 3x5 inner rectangle is (5, 7).

Step 14: There are 2 independent moves.

- \* 3 must be placed at (6, 7) because it is the only value left that is not already in the 7th row, the 6th column, the 8th 5x3 rectangle or the 1st 3x5 inner rectangle.
- \* 1 must be placed at (6, 6) because it is the only value left that is not already in the 6th row, the 6th column, the 5th 5x3 rectangle or the 1st 3x5 inner rectangle.

Step 15: There is 1 independent move.

- \* The only spot for 1 in the 4th column is (4, 15).

Step 16: There are 3 independent moves.

- \* The only spot for 1 in the 13th row is (7, 13).
- \* The only spot for 7 in the 4th column is (4, 3).
- \* The only spot for 1 in the 12th column is (12, 8).

Step 17: There are 2 independent moves.

- \* The only spot for E in the 13th row is (3, 13).
- \* The only spot for 9 in the 1st 3x5 inner rectangle is (4, 4).

Step 18: There are 2 independent moves.

- \* The only spot for B in the 3rd column is (3, 12).
- \* The only spot for E in the 10th 5x3 rectangle is (2, 12).

Step 19: There are 2 independent moves.

- \* The only spot for 2 in the 10th 5x3 rectangle is (1, 12).

- \* The only spot for B in the 3rd 3x5 inner rectangle is (5, 13).

Step 20: There are 2 independent moves.

- \* The only spot for 2 in the 7th 5x3 rectangle is (3, 7).
- \* The only spot for C in the 3rd 3x5 inner rectangle is (6, 13).

Step 21: There are 2 independent moves.

- \* The only spot for 1 in the 7th 5x3 rectangle is (1, 7).
- \* The only spot for 2 in the 3rd 3x5 inner rectangle is (4, 13).

Step 22: There is 1 independent move.

- \* The only spot for C in the 7th row is (9, 7).

Step 23: There are 2 independent moves.

- \* 5 must be placed at (8, 8) because it is the only value left that is not already in the 8th row, the 8th column or the 8th 5x3 rectangle.
- \* 4 must be placed at (4, 5) because it is the only value left that is not already in the 5th row, the 4th column, the 4th 5x3 rectangle or the 1st 3x5 inner rectangle.

Step 24: There are 2 independent moves.

- \* The only spot for 5 in the 12th row is (7, 12).
- \* The only spot for 4 in the 1st 5x3 rectangle is (2, 1).

Step 25: There are 2 independent moves.

- \* The only spot for 3 in the 12th row is (8, 12).
- \* The only spot for 1 in the 1st 5x3 rectangle is (3, 1).

Step 26: There are 4 independent moves.

- \* The only spot for 1 in the 4th row is (2, 4).
- \* The only spot for 3 in the 13th row is (9, 13).
- \* The only spot for 9 in the 3rd column is (3, 14).
- \* The only spot for 3 in the 7th column is (7, 3).

Step 27: There are 3 independent moves.

- \* The only spot for E in the 3rd row is (14, 3).
- \* The only spot for 6 in the 13th row is (8, 13).
- \* The only spot for 3 in the 1st column is (1, 2).

Step 28: There are 3 independent moves.

- \* The only spot for 4 in the 3rd row is (8, 3).
- \* The only spot for 3 in the 4th column is (4, 11).
- \* The only spot for 6 in the 5th 5x3 rectangle is (7, 5).

Step 29: There are 8 independent moves.

- \* The only spot for C in the 3rd row is (1, 3).
- \* The only spot for 5 in the 4th column is (4, 2).
- \* The only spot for 2 in the 8th column is (8, 15).
- \* The only spot for C in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for C in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for 6 in the 11th 5x3 rectangle is (9, 11).
- \* The only spot for 4 in the 14th 5x3 rectangle is (6, 14).
- \* The only spot for 5 in the 3rd 3x5 inner rectangle is (5, 11).

Step 30: There are 14 independent moves.

- \* The only spot for E in the 1st row is (5, 1).

- \* The only spot for 5 in the 1st column is (1, 4).
- \* The only spot for E in the 7th column is (7, 14).
- \* The only spot for 9 in the 9th column is (9, 3).
- \* The only spot for C in the 12th column is (12, 15).
- \* The only spot for 9 in the 1st 5x3 rectangle is (1, 1).
- \* The only spot for E in the 2nd 5x3 rectangle is (10, 2).
- \* The only spot for 5 in the 3rd 5x3 rectangle is (12, 3).
- \* The only spot for C in the 3rd 5x3 rectangle is (14, 2).
- \* The only spot for B in the 11th 5x3 rectangle is (8, 11).
- \* The only spot for 9 in the 11th 5x3 rectangle is (7, 11).
- \* The only spot for 5 in the 13th 5x3 rectangle is (2, 15).
- \* The only spot for B in the 14th 5x3 rectangle is (9, 15).
- \* The only spot for 2 in the 15th 5x3 rectangle is (15, 14).

Step 31: There are 15 independent moves.

- \* The only spot for 6 in the 1st row is (6, 1).
- \* The only spot for 6 in the 1st column is (1, 14).
- \* The only spot for D in the 7th column is (7, 8).
- \* The only spot for 7 in the 12th column is (12, 7).
- \* The only spot for 4 in the 14th column is (14, 15).
- \* The only spot for 1 in the 15th column is (15, 5).
- \* The only spot for 6 in the 1st 5x3 rectangle is (5, 3).
- \* The only spot for 9 in the 3rd 5x3 rectangle is (15, 2).
- \* The only spot for 4 in the 3rd 5x3 rectangle is (11, 2).
- \* The only spot for 6 in the 4th 5x3 rectangle is (3, 4).
- \* The only spot for 9 in the 8th 5x3 rectangle is (10, 8).
- \* The only spot for 3 in the 13th 5x3 rectangle is (5, 15).
- \* The only spot for D in the 14th 5x3 rectangle is (10, 15).
- \* The only spot for E in the 15th 5x3 rectangle is (13, 15).
- \* The only spot for 1 in the 15th 5x3 rectangle is (13, 14).

Step 32: There are 14 independent moves.

- \* The only spot for A in the 4th row is (14, 4).
- \* The only spot for 7 in the 11th column is (11, 15).
- \* The only spot for 2 in the 11th column is (11, 5).
- \* The only spot for D in the 13th column is (13, 7).
- \* The only spot for 2 in the 1st 5x3 rectangle is (5, 2).
- \* The only spot for D in the 2nd 5x3 rectangle is (6, 2).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (12, 1).
- \* The only spot for A in the 4th 5x3 rectangle is (3, 5).
- \* The only spot for 7 in the 6th 5x3 rectangle is (14, 5).
- \* The only spot for 6 in the 7th 5x3 rectangle is (2, 8).
- \* The only spot for 7 in the 13th 5x3 rectangle is (5, 14).
- \* The only spot for D in the 15th 5x3 rectangle is (14, 14).
- \* The only spot for 2 in the 1st 3x5 inner rectangle is (6, 3).
- \* The only spot for D in the 2nd 3x5 inner rectangle is (12, 6).

Step 33: There are 11 independent moves.

- \* The only spot for 3 in the 5th row is (2, 5).
- \* The only spot for 5 in the 13th column is (13, 10).
- \* The only spot for B in the 14th column is (14, 1).
- \* The only spot for D in the 3rd 5x3 rectangle is (15, 1).
- \* The only spot for 2 in the 4th 5x3 rectangle is (2, 6).
- \* The only spot for 3 in the 6th 5x3 rectangle is (14, 6).
- \* The only spot for B in the 6th 5x3 rectangle is (13, 5).
- \* The only spot for C in the 7th 5x3 rectangle is (5, 8).
- \* The only spot for 3 in the 7th 5x3 rectangle is (3, 8).
- \* The only spot for 5 in the 9th 5x3 rectangle is (14, 7).
- \* The only spot for C in the 13th 5x3 rectangle is (2, 14).

Step 34: There are 2 independent moves.

- \* The only spot for 5 in the 6th 5x3 rectangle is (15, 6).
- \* The only spot for B in the 12th 5x3 rectangle is (15, 10).

## Solution for Puzzle 47

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9	4	1	A	E	6	C	7	5	0	8	2	3	B	D
3	B	0	5	2	D	A	1	8	E	4	6	7	C	9
C	8	D	7	6	2	3	4	9	B	1	5	0	E	A
5	1	6	9	0	B	2	D	7	3	C	E	8	A	4
E	3	A	4	D	5	6	C	0	8	2	9	B	7	1
B	2	7	C	8	1	4	9	E	A	0	D	6	3	5
1	9	2	E	A	3	B	0	C	4	6	7	D	5	8
7	6	3	B	C	8	D	5	2	9	A	1	4	0	E
8	0	5	D	4	E	7	A	1	6	9	B	C	2	3
0	A	C	6	9	7	8	E	D	2	3	4	5	1	B
D	7	4	3	5	0	9	B	6	1	E	A	2	8	C
2	E	B	8	1	A	5	3	4	C	D	0	9	6	7
4	D	E	2	B	C	1	6	3	7	5	8	A	9	0
6	C	9	0	7	4	E	8	A	5	B	3	1	D	2
A	5	8	1	3	9	0	2	B	D	7	C	E	4	6

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## HyperSudoku-15 Puzzle 48, TournamentPlus/39

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4			A		1		B	C					3	
	3			D				4		A				
	8	C					3				D	6		9
6	0	8					7						5	
		3		B	6	E		D						2
	5					C		B	2		E			3
	2		3				E		5			4		
1		E								3	6			7
					D	1	8	3					C	B
		D	8			0				2			E	6
2				9		4			7	5				
A				E				8	6					0
		4		1	2						A		6	
				0	3	D			C		9		4	
D			C						4	0	7			

TournamentPlus

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E) exactly once in each row, each column, each 5x3 rectangle, and each 3x5 inner rectangle.

There are 39 steps required to solve the puzzle above with a total of 144 empty locations that must be determined, out of a total puzzle size of 225.

## First Three Steps to Solve Puzzle 48

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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4			A		1		B	C	<sup>1</sup>				3	
	3			D				4	<sup>3</sup>	A				
<sup>2</sup>	8	C					3			<sup>1</sup>	D	6	<sup>3</sup>	9
6	0	8	<sup>1</sup>	<sup>2</sup>			7		<sup>1</sup>			<sup>2</sup>	5	<sup>1</sup>
		3		B	6	E	<sup>1</sup>	D		<sup>2</sup>				2
	5		<sup>2</sup>			C		B	2	<sup>1</sup>	E			3
	2		3				E		5			4		
1	<sup>1</sup>	E								3	6	<sup>2</sup>		7
					D	1	8	3		<sup>2</sup>		<sup>1</sup>	C	B
		D	8	<sup>1</sup>		0				2			E	6
2				9		4		<sup>1</sup>	7	5	<sup>3</sup>			
A				E		<sup>2</sup>	<sup>3</sup>	8	6					0
<sup>2</sup>		4		1	2						A		6	
				0	3	D			C		9		4	
D			C		<sup>3</sup>				4	0	7	<sup>2</sup>	<sup>2</sup>	

TournamentPlus

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There are 39 steps required to solve the puzzle above with a total of 144 empty locations that must be determined, out of a total puzzle size of 225.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 48

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<b>4</b>	<sup>32</sup>	<sup>31</sup>	<b>A</b>	<sup>23</sup>	<b>1</b>	<sup>28</sup>	<b>B</b>	<b>C</b>	<sup>1</sup>	<sup>5</sup>	<sup>30</sup>	<sup>32</sup>	<b>3</b>	<sup>33</sup>	<sup>1</sup>
<sup>35</sup>	<b>3</b>	<sup>34</sup>	<sup>33</sup>	<b>D</b>	<sup>29</sup>	<sup>7</sup>	<sup>27</sup>	<b>4</b>	<sup>3</sup>	<b>A</b>	<sup>31</sup>	<sup>39</sup>	<sup>29</sup>	<sup>38</sup>	
<sup>2</sup>	<b>8</b>	<b>C</b>	<sup>4</sup>	<sup>20</sup>	<sup>19</sup>	<sup>21</sup>	<b>3</b>	<sup>18</sup>	<sup>10</sup>	<sup>1</sup>	<b>D</b>	<b>6</b>	<sup>3</sup>	<b>9</b>	
<b>6</b>	<b>0</b>	<b>8</b>	<sup>1</sup>	<sup>2</sup>	<sup>13</sup>	<sup>14</sup>	<b>7</b>	<sup>10</sup>	<sup>1</sup>	<sup>37</sup>	<sup>38</sup>	<sup>2</sup>	<b>5</b>	<sup>1</sup>	<sup>4</sup>
<sup>34</sup>	<sup>35</sup>	<b>3</b>	<sup>9</sup>	<b>B</b>	<b>6</b>	<b>E</b>	<sup>1</sup>	<b>D</b>	<sup>9</sup>	<sup>2</sup>	<sup>38</sup>	<sup>26</sup>	<sup>37</sup>	<b>2</b>	
<sup>32</sup>	<b>5</b>	<sup>33</sup>	<sup>2</sup>	<sup>24</sup>	<sup>7</sup>	<b>C</b>	<sup>8</sup>	<b>B</b>	<b>2</b>	<sup>1</sup>	<b>E</b>	<sup>34</sup>	<sup>30</sup>	<b>3</b>	
<sup>34</sup>	<b>2</b>	<sup>35</sup>	<b>3</b>	<sup>23</sup>	<sup>22</sup>	<sup>26</sup>	<b>E</b>	<sup>25</sup>	<b>5</b>	<sup>14</sup>	<sup>37</sup>	<b>4</b>	<sup>36</sup>	<sup>38</sup>	<sup>7</sup>
<b>1</b>	<sup>1</sup>	<b>E</b>	<sup>15</sup>	<sup>25</sup>	<sup>8</sup>	<sup>17</sup>	<sup>23</sup>	<sup>24</sup>	<sup>11</sup>	<b>3</b>	<b>6</b>	<sup>2</sup>	<sup>25</sup>	<b>7</b>	
<sup>31</sup>	<sup>31</sup>	<sup>32</sup>	<sup>10</sup>	<sup>9</sup>	<b>D</b>	<b>1</b>	<b>8</b>	<b>3</b>	<sup>12</sup>	<sup>2</sup>	<sup>5</sup>	<sup>1</sup>	<b>C</b>	<b>B</b>	
<sup>35</sup>	<sup>39</sup>	<b>D</b>	<b>8</b>	<sup>1</sup>	<sup>27</sup>	<b>0</b>	<sup>28</sup>	<sup>30</sup>	<sup>10</sup>	<b>2</b>	<sup>38</sup>	<sup>29</sup>	<b>E</b>	<b>6</b>	<sup>10</sup>
<b>2</b>	<sup>37</sup>	<sup>32</sup>	<sup>6</sup>	<b>9</b>	<sup>36</sup>	<b>4</b>	<sup>4</sup>	<sup>1</sup>	<b>7</b>	<b>5</b>	<sup>3</sup>	<sup>27</sup>	<sup>38</sup>	<sup>26</sup>	
<b>A</b>	<sup>38</sup>	<sup>30</sup>	<sup>28</sup>	<b>E</b>	<sup>37</sup>	<sup>2</sup>	<sup>3</sup>	<b>8</b>	<b>6</b>	<sup>36</sup>	<sup>39</sup>	<sup>39</sup>	<sup>35</sup>	<b>0</b>	
<sup>2</sup>	<sup>29</sup>	<b>4</b>	<sup>30</sup>	<b>1</b>	<b>2</b>	<sup>32</sup>	<sup>24</sup>	<sup>27</sup>	<sup>6</sup>	<sup>38</sup>	<b>A</b>	<sup>33</sup>	<b>6</b>	<sup>37</sup>	<sup>13</sup>
<sup>25</sup>	<sup>30</sup>	<sup>31</sup>	<sup>32</sup>	<b>0</b>	<b>3</b>	<b>D</b>	<sup>26</sup>	<sup>26</sup>	<b>C</b>	<sup>15</sup>	<b>9</b>	<sup>33</sup>	<b>4</b>	<sup>31</sup>	
<b>D</b>	<sup>32</sup>	<sup>33</sup>	<b>C</b>	<sup>24</sup>	<sup>3</sup>	<sup>31</sup>	<sup>16</sup>	<sup>29</sup>	<b>4</b>	<b>0</b>	<b>7</b>	<sup>2</sup>	<sup>2</sup>	<sup>25</sup>	

TournamentPlus

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There are 39 steps required to solve the puzzle above with a total of 144 empty locations that must be determined, out of a total puzzle size of 225.

All 39 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 11 independent moves.

- \* The only spot for 2 in the 9th row is (13, 9).
- \* The only spot for D in the 2nd column is (2, 8).
- \* The only spot for 4 in the 15th column is (15, 4).
- \* The only spot for D in the 2nd 5x3 rectangle is (10, 1).
- \* The only spot for 4 in the 3rd 5x3 rectangle is (11, 3).
- \* The only spot for E in the 4th 5x3 rectangle is (4, 4).
- \* The only spot for 5 in the 5th 5x3 rectangle is (8, 5).
- \* The only spot for E in the 11th 5x3 rectangle is (9, 11).
- \* The only spot for 6 in the 2nd 3x5 inner rectangle is (11, 6).
- \* The only spot for 3 in the 2nd 3x5 inner rectangle is (10, 4).
- \* The only spot for 3 in the 3rd 3x5 inner rectangle is (5, 10).

Step 2: There are 11 independent moves.

- \* The only spot for E in the 3rd row is (1, 3).
- \* The only spot for D in the 4th row is (13, 4).
- \* The only spot for 3 in the 15th row is (13, 15).
- \* The only spot for 2 in the 4th 5x3 rectangle is (5, 4).
- \* The only spot for E in the 9th 5x3 rectangle is (11, 9).
- \* The only spot for 5 in the 9th 5x3 rectangle is (13, 8).
- \* The only spot for 3 in the 11th 5x3 rectangle is (7, 12).
- \* The only spot for 3 in the 13th 5x3 rectangle is (1, 13).
- \* The only spot for 2 in the 15th 5x3 rectangle is (14, 15).
- \* The only spot for D in the 1st 3x5 inner rectangle is (4, 6).
- \* The only spot for 7 in the 2nd 3x5 inner rectangle is (11, 5).

Step 3: There are 5 independent moves.

- \* The only spot for B in the 3rd row is (14, 3).
- \* The only spot for E in the 10th column is (10, 2).
- \* The only spot for 2 in the 11th 5x3 rectangle is (8, 12).
- \* The only spot for E in the 14th 5x3 rectangle is (6, 15).
- \* The only spot for 3 in the 4th 3x5 inner rectangle is (12, 11).

Step 4: There are 2 independent moves.

- \* The only spot for 1 in the 3rd row is (4, 3).
- \* The only spot for D in the 11th 5x3 rectangle is (8, 11).

Step 5: There are 2 independent moves.

- \* 0 must be placed at (12, 9) because it is the only value left that is not already in the 9th row, the 12th column, the 9th 5x3 rectangle or the 4th 3x5 inner rectangle.
- \* 8 must be placed at (11, 1) because it is the only value left that is not already in the 1st row, the 11th column or the 3rd 5x3 rectangle.

Step 6: There are 2 independent moves.

- \* The only spot for 0 in the 3rd 3x5 inner rectangle is (4, 11).
- \* The only spot for 8 in the 4th 3x5 inner rectangle is (10, 13).

Step 7: There are 2 independent moves.

- \* The only spot for 8 in the 7th column is (7, 2).
- \* The only spot for 8 in the 5th 5x3 rectangle is (6, 6).

Step 8: There are 2 independent moves.

- \* The only spot for 4 in the 6th column is (6, 8).
- \* The only spot for 4 in the 5th 5x3 rectangle is (8, 6).

Step 9: There are 3 independent moves.

- \* The only spot for 4 in the 5th column is (5, 9).
- \* The only spot for 0 in the 5th 5x3 rectangle is (10, 5).
- \* The only spot for 4 in the 1st 3x5 inner rectangle is (4, 5).

Step 10: There are 4 independent moves.

- \* The only spot for 1 in the 10th column is (10, 10).
- \* The only spot for 1 in the 5th 5x3 rectangle is (9, 4).
- \* The only spot for A in the 2nd 3x5 inner rectangle is (10, 3).
- \* The only spot for 6 in the 3rd 3x5 inner rectangle is (4, 9).

Step 11: There is 1 independent move.

- \* The only spot for B in the 10th column is (10, 8).

Step 12: There is 1 independent move.

- \* The only spot for 9 in the 10th column is (10, 9).

Step 13: There is 1 independent move.

- \* The only spot for 9 in the 1st 3x5 inner rectangle is (6, 4).

Step 14: There are 2 independent moves.

- \* The only spot for A in the 5th 5x3 rectangle is (7, 4).
- \* The only spot for 9 in the 2nd 3x5 inner rectangle is (11, 7).

Step 15: There are 2 independent moves.

- \* The only spot for 1 in the 11th column is (11, 14).
- \* The only spot for 9 in the 7th 5x3 rectangle is (4, 8).

Step 16: There is 1 independent move.

- \* The only spot for 1 in the 14th 5x3 rectangle is (8, 15).

Step 17: There is 1 independent move.

- \* 2 must be placed at (7, 8) because it is the only value left that is not already in the 8th row, the 7th column or the 8th 5x3 rectangle.

Step 18: There is 1 independent move.

- \* The only spot for 2 in the 2nd 5x3 rectangle is (9, 3).

Step 19: There is 1 independent move.

- \* The only spot for 0 in the 3rd row is (6, 3).

Step 20: There is 1 independent move.

- \* The only spot for 5 in the 1st 3x5 inner rectangle is (5, 3).

Step 21: There is 1 independent move.

- \* The only spot for 7 in the 3rd row is (7, 3).

Step 22: There is 1 independent move.

- \* The only spot for 7 in the 6th column is (6, 7).

Step 23: There are 3 independent moves.

- \* The only spot for 7 in the 5th column is (5, 1).
- \* The only spot for C in the 8th 5x3 rectangle is (8, 8).
- \* The only spot for C in the 1st 3x5 inner rectangle is (5, 7).

Step 24: There are 4 independent moves.

- \* The only spot for 0 in the 8th row is (9, 8).
- \* The only spot for 6 in the 5th column is (5, 15).
- \* The only spot for 0 in the 8th column is (8, 13).
- \* The only spot for A in the 1st 3x5 inner rectangle is (5, 6).

Step 25: There are 5 independent moves.

- \* The only spot for A in the 8th row is (14, 8).
- \* The only spot for 8 in the 15th row is (15, 15).
- \* The only spot for 8 in the 5th column is (5, 8).
- \* The only spot for A in the 8th 5x3 rectangle is (9, 7).
- \* The only spot for 8 in the 13th 5x3 rectangle is (1, 14).

Step 26: There are 5 independent moves.

- \* The only spot for 6 in the 9th column is (9, 14).
- \* The only spot for A in the 15th column is (15, 11).
- \* The only spot for A in the 6th 5x3 rectangle is (13, 5).
- \* The only spot for 6 in the 8th 5x3 rectangle is (7, 7).
- \* The only spot for A in the 14th 5x3 rectangle is (8, 14).

Step 27: There are 4 independent moves.

- \* The only spot for 8 in the 13th column is (13, 11).
- \* The only spot for 6 in the 2nd 5x3 rectangle is (8, 2).
- \* The only spot for 7 in the 14th 5x3 rectangle is (9, 13).
- \* The only spot for A in the 3rd 3x5 inner rectangle is (6, 10).

Step 28: There are 3 independent moves.

- \* The only spot for 9 in the 8th column is (8, 10).
- \* The only spot for 9 in the 2nd 5x3 rectangle is (7, 1).
- \* The only spot for 7 in the 3rd 3x5 inner rectangle is (4, 12).

Step 29: There are 5 independent moves.

- \* The only spot for 9 in the 13th row is (2, 13).
- \* The only spot for 7 in the 14th column is (14, 2).
- \* The only spot for 5 in the 2nd 5x3 rectangle is (6, 2).
- \* The only spot for 7 in the 12th 5x3 rectangle is (13, 10).
- \* The only spot for 9 in the 14th 5x3 rectangle is (9, 15).

Step 30: There are 6 independent moves.

- \* The only spot for 5 in the 12th row is (3, 12).
- \* The only spot for 5 in the 12th column is (12, 1).
- \* The only spot for 0 in the 14th column is (14, 6).
- \* The only spot for 5 in the 11th 5x3 rectangle is (9, 10).
- \* The only spot for E in the 13th 5x3 rectangle is (2, 14).
- \* The only spot for 5 in the 3rd 3x5 inner rectangle is (4, 13).

Step 31: There are 7 independent moves.

- \* The only spot for 2 in the 1st row is (3, 1).
- \* The only spot for 7 in the 2nd column is (2, 9).
- \* The only spot for 2 in the 3rd 5x3 rectangle is (12, 2).
- \* The only spot for 5 in the 7th 5x3 rectangle is (1, 9).
- \* The only spot for 7 in the 13th 5x3 rectangle is (3, 14).

- \* The only spot for 5 in the 14th 5x3 rectangle is (7, 15).
- \* The only spot for 5 in the 15th 5x3 rectangle is (15, 14).

Step 32: There are 8 independent moves.

- \* The only spot for 0 in the 1st row is (13, 1).
- \* The only spot for A in the 2nd column is (2, 15).
- \* The only spot for 6 in the 3rd column is (3, 11).
- \* The only spot for 6 in the 1st 5x3 rectangle is (2, 1).
- \* The only spot for 7 in the 4th 5x3 rectangle is (1, 6).
- \* The only spot for A in the 7th 5x3 rectangle is (3, 9).
- \* The only spot for 2 in the 13th 5x3 rectangle is (4, 14).
- \* The only spot for B in the 14th 5x3 rectangle is (7, 13).

Step 33: There are 6 independent moves.

- \* The only spot for 1 in the 3rd column is (3, 6).
- \* The only spot for B in the 4th column is (4, 2).
- \* The only spot for E in the 13th column is (13, 13).
- \* The only spot for E in the 3rd 5x3 rectangle is (15, 1).
- \* The only spot for B in the 13th 5x3 rectangle is (3, 15).
- \* The only spot for B in the 15th 5x3 rectangle is (13, 14).

Step 34: There are 4 independent moves.

- \* The only spot for 9 in the 6th row is (13, 6).
- \* The only spot for 9 in the 3rd column is (3, 2).
- \* The only spot for 9 in the 4th 5x3 rectangle is (1, 5).
- \* The only spot for B in the 7th 5x3 rectangle is (1, 7).

Step 35: There are 5 independent moves.

- \* The only spot for C in the 1st column is (1, 10).
- \* The only spot for 0 in the 1st 5x3 rectangle is (1, 2).
- \* The only spot for C in the 4th 5x3 rectangle is (2, 5).
- \* The only spot for 0 in the 7th 5x3 rectangle is (3, 7).
- \* The only spot for 9 in the 12th 5x3 rectangle is (14, 12).

Step 36: There are 3 independent moves.

- \* The only spot for C in the 11th row is (6, 11).
- \* The only spot for D in the 14th column is (14, 7).
- \* The only spot for D in the 12th 5x3 rectangle is (11, 12).

Step 37: There are 6 independent moves.

- \* The only spot for B in the 11th row is (2, 11).
- \* The only spot for B in the 11th column is (11, 4).
- \* The only spot for 8 in the 14th column is (14, 5).
- \* The only spot for 8 in the 9th 5x3 rectangle is (12, 7).
- \* The only spot for D in the 15th 5x3 rectangle is (15, 13).
- \* The only spot for B in the 3rd 3x5 inner rectangle is (6, 12).

Step 38: There are 8 independent moves.

- \* The only spot for 1 in the 14th column is (14, 11).
- \* The only spot for C in the 15th column is (15, 2).
- \* The only spot for 1 in the 9th 5x3 rectangle is (15, 7).

- \* The only spot for 1 in the 10th 5x3 rectangle is (2, 12).
- \* The only spot for C in the 15th 5x3 rectangle is (11, 13).
- \* The only spot for 1 in the 2nd 3x5 inner rectangle is (12, 5).
- \* The only spot for C in the 2nd 3x5 inner rectangle is (12, 4).
- \* The only spot for B in the 4th 3x5 inner rectangle is (12, 10).

Step 39: There are 4 independent moves.

- \* The only spot for 1 in the 3rd 5x3 rectangle is (13, 2).
- \* The only spot for 4 in the 10th 5x3 rectangle is (2, 10).
- \* The only spot for C in the 12th 5x3 rectangle is (13, 12).
- \* The only spot for 4 in the 4th 3x5 inner rectangle is (12, 12).

## Solution for Puzzle 48

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

4	6	2	A	7	1	9	B	C	D	8	5	0	3	E
0	3	9	B	D	5	8	6	4	E	A	2	1	7	C
E	8	C	1	5	0	7	3	2	A	4	D	6	B	9
6	0	8	E	2	9	A	7	1	3	B	C	D	5	4
9	C	3	4	B	6	E	5	D	0	7	1	A	8	2
7	5	1	D	A	8	C	4	B	2	6	E	9	0	3
B	2	0	3	C	7	6	E	A	5	9	8	4	D	1
1	D	E	9	8	4	2	C	0	B	3	6	5	A	7
5	7	A	6	4	D	1	8	3	9	E	0	2	C	B
C	4	D	8	3	A	0	9	5	1	2	B	7	E	6
2	B	6	0	9	C	4	D	E	7	5	3	8	1	A
A	1	5	7	E	B	3	2	8	6	D	4	C	9	0
3	9	4	5	1	2	B	0	7	8	C	A	E	6	D
8	E	7	2	0	3	D	A	6	C	1	9	B	4	5
D	A	B	C	6	E	5	1	9	4	0	7	3	2	8

TournamentPlus

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## Chapter 27

# Two Challenging Sudoku-16 Puzzles

All two puzzles in this section are at difficulty level seventeen. The puzzles are arranged by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 49** (130/256) DiffKey 17 / 9.9322.1D34.4799.9974

**Puzzle 50** (135/256) DiffKey 17 / 9.9735.8879.7755.6785

## Sudoku-16 Puzzle 49, Challenging/17

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

130/256

	7	0	F		8	A	4	6		9				3	
	5	1		B		C		0			A	6	7		F
		6			9		1		F		8			5	0
C		B	8		F	D			3			9	2	4	
4		2	5			E		3		B				0	
6				A	3		2	8	0			E	5	1	
B	3	9	E			4				F	5			6	
			D	9		5	F		C	7	E		3		
			C	3	A				6				B		5
E	9			D	C	6					2	1		F	
		A			4	F		9		0	1	C	D	E	
	F	D					5			8	C	0	4		
		E		F			A	5	8	C		3	6		
F			6							1		5	0		B
	B		A	4	0	3				6				D	E
8			9	6	5			E	B		0				7

Challenging

Diff: 17 / 9.9322.1D34.4799.9974

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 17 steps required to solve the puzzle above with a total of 130 empty locations that must be determined, out of a total puzzle size of 256.



## First Three Steps to Solve Puzzle 49

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

130/256

	7	0	F	<sup>3</sup>	8	A	4	6		9	<sup>1</sup>			3	
<sup>1</sup>	5	1		B		C	<sup>1</sup>	0			A	6	7	<sup>1</sup>	F
		6			9		1	<sup>1</sup>	F		8	<sup>2</sup>		5	0
C	<sup>3</sup>	B	8	<sup>2</sup>	F	D	<sup>1</sup>		3	<sup>2</sup>		9	2	4	
4		2	5			E		3		B	<sup>1</sup>			0	
6		<sup>1</sup>	<sup>2</sup>	A	3	<sup>1</sup>	2	8	0			E	5	1	
B	3	9	E			4	<sup>2</sup>			F	5			6	
			D	9	<sup>1</sup>	5	F		C	7	E		3	<sup>1</sup>	
			C	3	A	<sup>1</sup>			6				B		5
E	9		<sup>2</sup>	D	C	6				<sup>1</sup>	2	1		F	
	<sup>1</sup>	A			4	F		9		0	1	C	D	E	<sup>2</sup>
	F	D					5			8	C	0	4		<sup>1</sup>
		E		F	<sup>2</sup>		A	5	8	C		3	6		
F			6			<sup>2</sup>				1	<sup>1</sup>	5	0	<sup>3</sup>	B
	B		A	4	0	3				6				D	E
8		<sup>2</sup>	9	6	5			E	B	<sup>2</sup>	0				7

Challenging

Diff: 17 / 9.9322.1D34.4799.9974

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There are 17 steps required to solve the puzzle above with a total of 130 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 49

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>9</sup>	7	0	F	<sup>3</sup>	8	A	4	6	<sup>8</sup>	9	<sup>1</sup>	7	<sup>12</sup>	3	<sup>11</sup>	<sup>1</sup>
<sup>1</sup>	5	1	<sup>14</sup>	B	<sup>8</sup>	C	<sup>1</sup>	0	<sup>16</sup>	<sup>15</sup>	A	6	7	<sup>1</sup>	F	
<sup>12</sup>	<sup>13</sup>	6	<sup>13</sup>	<sup>15</sup>	9	<sup>14</sup>	1	<sup>1</sup>	F	<sup>14</sup>	8	<sup>2</sup>	<sup>7</sup>	5	0	
C	<sup>3</sup>	B	8	<sup>2</sup>	F	D	<sup>1</sup>	<sup>5</sup>	3	<sup>2</sup>	<sup>6</sup>	9	2	4	<sup>4</sup>	
4	<sup>12</sup>	2	5	<sup>14</sup>	<sup>14</sup>	E	<sup>13</sup>	3	<sup>15</sup>	B	<sup>1</sup>	<sup>12</sup>	<sup>11</sup>	0	<sup>16</sup>	<sup>5</sup>
6	<sup>7</sup>	<sup>1</sup>	<sup>2</sup>	A	3	<sup>1</sup>	2	8	0	<sup>16</sup>	<sup>12</sup>	E	5	1	<sup>15</sup>	
B	3	9	E	<sup>15</sup>	<sup>15</sup>	4	<sup>2</sup>	<sup>17</sup>	<sup>17</sup>	F	5	<sup>13</sup>	<sup>12</sup>	6	<sup>14</sup>	
<sup>11</sup>	<sup>10</sup>	<sup>7</sup>	D	9	<sup>1</sup>	5	F	<sup>15</sup>	C	7	E	<sup>14</sup>	3	<sup>1</sup>	<sup>15</sup>	
<sup>9</sup>	<sup>8</sup>	<sup>15</sup>	C	3	A	<sup>1</sup>	<sup>16</sup>	<sup>15</sup>	6	<sup>9</sup>	<sup>14</sup>	<sup>14</sup>	B	<sup>13</sup>	5	<sup>9</sup>
E	9	<sup>14</sup>	<sup>2</sup>	D	C	6	<sup>15</sup>	<sup>16</sup>	<sup>15</sup>	<sup>1</sup>	2	1	<sup>5</sup>	F	<sup>7</sup>	
<sup>15</sup>	<sup>1</sup>	A	<sup>15</sup>	<sup>14</sup>	4	F	<sup>14</sup>	9	<sup>15</sup>	0	1	C	D	E	<sup>2</sup>	
<sup>13</sup>	F	D	<sup>15</sup>	<sup>9</sup>	<sup>12</sup>	<sup>13</sup>	5	<sup>16</sup>	<sup>17</sup>	8	C	0	4	<sup>14</sup>	<sup>1</sup>	
<sup>13</sup>	<sup>11</sup>	E	<sup>10</sup>	F	<sup>2</sup>	<sup>14</sup>	A	5	8	C	<sup>13</sup>	3	6	<sup>14</sup>	<sup>12</sup>	<sup>13</sup>
F	<sup>14</sup>	<sup>15</sup>	6	<sup>13</sup>	<sup>13</sup>	<sup>2</sup>	<sup>10</sup>	<sup>14</sup>	<sup>11</sup>	1	<sup>1</sup>	5	0	<sup>3</sup>	B	
<sup>14</sup>	B	<sup>13</sup>	A	4	0	3	<sup>12</sup>	<sup>17</sup>	<sup>16</sup>	6	<sup>15</sup>	<sup>11</sup>	<sup>10</sup>	D	E	
8	<sup>14</sup>	<sup>2</sup>	9	6	5	<sup>11</sup>	<sup>7</sup>	E	B	<sup>2</sup>	0	<sup>13</sup>	<sup>12</sup>	<sup>4</sup>	7	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Challenging

Diff: 17 / 9.9322.1D34.4799.9974

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 17 steps required to solve the puzzle above with a total of 130 empty locations that must be determined, out of a total puzzle size of 256.

All 17 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 16 independent moves.

- \* The only spot for B in the 6th row is (7, 6).
- \* The only spot for 6 in the 8th row is (6, 8).
- \* The only spot for 6 in the 12th row is (16, 12).
- \* The only spot for 0 in the 7th column is (7, 9).
- \* The only spot for 3 in the 12th column is (12, 14).
- \* The only spot for B in the 12th column is (12, 1).
- \* The only spot for B in the 15th column is (15, 8).
- \* The only spot for 9 in the 1st 4x4 square is (1, 2).
- \* The only spot for 6 in the 2nd 4x4 square is (8, 4).
- \* The only spot for 3 in the 2nd 4x4 square is (8, 2).
- \* The only spot for C in the 3rd 4x4 square is (9, 3).
- \* The only spot for 8 in the 4th 4x4 square is (15, 2).
- \* The only spot for F in the 5th 4x4 square is (3, 6).
- \* The only spot for 6 in the 7th 4x4 square is (12, 5).
- \* The only spot for 6 in the 9th 4x4 square is (2, 11).
- \* The only spot for 3 in the 11th 4x4 square is (11, 10).

Step 2: There are 11 independent moves.

- \* The only spot for 8 in the 7th column is (7, 14).
- \* The only spot for 0 in the 8th column is (8, 7).
- \* The only spot for A in the 11th column is (11, 16).
- \* The only spot for 5 in the 11th column is (11, 4).
- \* The only spot for 0 in the 2nd 4x4 square is (5, 4).
- \* The only spot for B in the 4th 4x4 square is (13, 3).
- \* The only spot for 7 in the 5th 4x4 square is (4, 6).
- \* The only spot for 0 in the 9th 4x4 square is (4, 10).
- \* The only spot for 3 in the 12th 4x4 square is (16, 11).
- \* The only spot for 3 in the 13th 4x4 square is (3, 16).
- \* The only spot for B in the 14th 4x4 square is (6, 13).

Step 3: There are 3 independent moves.

- \* The only spot for E in the 4th row is (2, 4).
- \* The only spot for 5 in the 2nd 4x4 square is (5, 1).
- \* The only spot for A in the 16th 4x4 square is (15, 14).

Step 4: There are 2 independent moves.

- \* The only spot for A in the 4th row is (16, 4).
- \* The only spot for C in the 15th column is (15, 16).

Step 5: There are 2 independent moves.

- \* The only spot for 1 in the 4th row is (9, 4).
- \* The only spot for A in the 12th 4x4 square is (14, 10).

Step 6: There is 1 independent move.

- \* The only spot for 7 in the 3rd 4x4 square is (12, 4).

Step 7: There are 6 independent moves.

- \* D must be placed at (8, 16) because it is the only value left that is not already in the 16th row, the 8th column or the 14th 4x4 square.

- \* 8 must be placed at (16, 10) because it is the only value left that is not already in the 10th row, the 16th column or the 12th 4x4 square.
- \* 8 must be placed at (3, 8) because it is the only value left that is not already in the 8th row, the 3rd column or the 5th 4x4 square.
- \* C must be placed at (2, 6) because it is the only value left that is not already in the 6th row, the 2nd column or the 5th 4x4 square.
- \* E must be placed at (14, 3) because it is the only value left that is not already in the 3rd row, the 14th column or the 4th 4x4 square.
- \* D must be placed at (13, 1) because it is the only value left that is not already in the 1st row, the 13th column or the 4th 4x4 square.

Step 8: There are 3 independent moves.

- \* The only spot for E in the 1st row is (10, 1).
- \* The only spot for E in the 2nd 4x4 square is (6, 2).
- \* The only spot for 8 in the 9th 4x4 square is (2, 9).

Step 9: There are 4 independent moves.

- \* The only spot for 2 in the 1st row is (1, 1).
- \* The only spot for 1 in the 9th row is (1, 9).
- \* The only spot for E in the 12th row is (5, 12).
- \* The only spot for E in the 11th 4x4 square is (11, 9).

Step 10: There are 4 independent moves.

- \* The only spot for 1 in the 8th row is (2, 8).
- \* The only spot for 1 in the 15th row is (14, 15).
- \* The only spot for 1 in the 4th column is (4, 13).
- \* The only spot for E in the 14th 4x4 square is (8, 14).

Step 11: There are 7 independent moves.

- \* The only spot for 9 in the 14th row is (10, 14).
- \* The only spot for 0 in the 2nd column is (2, 13).
- \* The only spot for 9 in the 14th column is (14, 5).
- \* The only spot for 1 in the 4th 4x4 square is (16, 1).
- \* The only spot for 0 in the 5th 4x4 square is (1, 8).
- \* The only spot for 1 in the 14th 4x4 square is (7, 16).
- \* The only spot for 8 in the 16th 4x4 square is (13, 15).

Step 12: There are 10 independent moves.

- \* The only spot for 9 in the 15th row is (8, 15).
- \* The only spot for A in the 1st column is (1, 3).
- \* The only spot for F in the 14th column is (14, 16).
- \* The only spot for 9 in the 16th column is (16, 13).
- \* The only spot for C in the 4th 4x4 square is (14, 1).
- \* The only spot for A in the 5th 4x4 square is (2, 5).
- \* The only spot for 9 in the 7th 4x4 square is (12, 6).
- \* The only spot for 8 in the 8th 4x4 square is (14, 7).
- \* The only spot for F in the 8th 4x4 square is (13, 5).
- \* The only spot for 1 in the 10th 4x4 square is (6, 12).

Step 13: There are 13 independent moves.

- \* The only spot for 9 in the 9th row is (15, 9).

- \* The only spot for 4 in the 13th row is (12, 13).
- \* The only spot for C in the 15th row is (3, 15).
- \* The only spot for D in the 1st column is (1, 13).
- \* The only spot for 3 in the 1st column is (1, 12).
- \* The only spot for 2 in the 6th column is (6, 14).
- \* The only spot for C in the 8th column is (8, 5).
- \* The only spot for 3 in the 1st 4x4 square is (4, 3).
- \* The only spot for D in the 1st 4x4 square is (2, 3).
- \* The only spot for 7 in the 8th 4x4 square is (13, 7).
- \* The only spot for 9 in the 10th 4x4 square is (7, 12).
- \* The only spot for C in the 14th 4x4 square is (5, 14).
- \* The only spot for 4 in the 16th 4x4 square is (13, 16).

Step 14: There are 19 independent moves.

- \* The only spot for 4 in the 3rd row is (11, 3).
- \* The only spot for 2 in the 9th row is (13, 9).
- \* The only spot for 4 in the 2nd column is (2, 14).
- \* The only spot for 5 in the 3rd column is (3, 10).
- \* The only spot for 7 in the 6th column is (6, 5).
- \* The only spot for 2 in the 7th column is (7, 3).
- \* The only spot for 8 in the 8th column is (8, 11).
- \* The only spot for D in the 12th column is (12, 9).
- \* The only spot for 4 in the 1st 4x4 square is (4, 2).
- \* The only spot for 8 in the 6th 4x4 square is (5, 5).
- \* The only spot for A in the 8th 4x4 square is (13, 8).
- \* The only spot for C in the 8th 4x4 square is (16, 7).
- \* The only spot for 2 in the 10th 4x4 square is (5, 11).
- \* The only spot for 7 in the 12th 4x4 square is (15, 12).
- \* The only spot for 2 in the 13th 4x4 square is (2, 16).
- \* The only spot for 5 in the 13th 4x4 square is (1, 15).
- \* The only spot for 7 in the 14th 4x4 square is (7, 13).
- \* The only spot for D in the 15th 4x4 square is (9, 14).
- \* The only spot for 2 in the 16th 4x4 square is (15, 13).

Step 15: There are 18 independent moves.

- \* The only spot for 1 in the 5th row is (10, 5).
- \* The only spot for 4 in the 6th row is (16, 6).
- \* The only spot for B in the 11th row is (4, 11).
- \* The only spot for 7 in the 1st column is (1, 11).
- \* The only spot for 4 in the 10th column is (10, 10).
- \* The only spot for 2 in the 11th column is (11, 2).
- \* The only spot for F in the 12th column is (12, 15).
- \* The only spot for 7 in the 2nd 4x4 square is (5, 3).
- \* The only spot for D in the 6th 4x4 square is (6, 7).
- \* The only spot for 1 in the 6th 4x4 square is (5, 7).
- \* The only spot for 4 in the 7th 4x4 square is (9, 8).
- \* The only spot for 2 in the 8th 4x4 square is (16, 8).

- \* The only spot for 2 in the 9th 4x4 square is (4, 12).
- \* The only spot for 4 in the 9th 4x4 square is (3, 9).
- \* The only spot for B in the 10th 4x4 square is (8, 10).
- \* The only spot for 5 in the 11th 4x4 square is (10, 11).
- \* The only spot for F in the 11th 4x4 square is (9, 9).
- \* The only spot for 7 in the 13th 4x4 square is (3, 14).

Step 16: There are 7 independent moves.

- \* The only spot for 7 in the 10th column is (10, 15).
- \* The only spot for D in the 3rd 4x4 square is (10, 2).
- \* The only spot for D in the 7th 4x4 square is (11, 6).
- \* The only spot for D in the 8th 4x4 square is (16, 5).
- \* The only spot for 7 in the 10th 4x4 square is (8, 9).
- \* The only spot for B in the 11th 4x4 square is (9, 12).
- \* The only spot for 7 in the 11th 4x4 square is (9, 10).

Step 17: There are 4 independent moves.

- \* The only spot for A in the 9th column is (9, 7).
- \* The only spot for 2 in the 10th column is (10, 7).
- \* The only spot for A in the 11th 4x4 square is (10, 12).
- \* The only spot for 2 in the 15th 4x4 square is (9, 15).

## Solution for Puzzle 49

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

2	7	0	F	5	8	A	4	6	E	9	B	D	C	3	1
9	5	1	4	B	E	C	3	0	D	2	A	6	7	8	F
A	D	6	3	7	9	2	1	C	F	4	8	B	E	5	0
C	E	B	8	0	F	D	6	1	3	5	7	9	2	4	A
4	A	2	5	8	7	E	C	3	1	B	6	F	9	0	D
6	C	F	7	A	3	B	2	8	0	D	9	E	5	1	4
B	3	9	E	1	D	4	0	A	2	F	5	7	8	6	C
0	1	8	D	9	6	5	F	4	C	7	E	A	3	B	2
1	8	4	C	3	A	0	7	F	6	E	D	2	B	9	5
E	9	5	0	D	C	6	B	7	4	3	2	1	A	F	8
7	6	A	B	2	4	F	8	9	5	0	1	C	D	E	3
3	F	D	2	E	1	9	5	B	A	8	C	0	4	7	6
D	0	E	1	F	B	7	A	5	8	C	4	3	6	2	9
F	4	7	6	C	2	8	E	D	9	1	3	5	0	A	B
5	B	C	A	4	0	3	9	2	7	6	F	8	1	D	E
8	2	3	9	6	5	1	D	E	B	A	0	4	F	C	7

Challenging

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## Sudoku-16 Puzzle 50, Challenging/17

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

135/256

			E	B	6	5		3		2	C				
	0						D		F		4	8	7	E	
8	C		2	4			E		7	6			D		B
	1	B			A		2		8		9		C	4	5
	E			8	9		7	D				1			
B	9			A	D	E		F		3	1		8		
C	7		6	5							0		B	D	F
A		1						E		4		9	2		C
	A	E					B	9		1	8		F		
6	F	0			8		5			D		B		C	
		D		E	C	A	0	5	3			2			6
3			C	F		D			0	7				8	
E		C		D	5	6						F		B	8
								4	E	A		C		1	9
4		A	B		E	C		6	9				3		
		F	1			8			2			D	A		

Challenging

Diff: 17 / 9.9735.8879.7755.6785

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 17 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 256.



## First Three Steps to Solve Puzzle 50

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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		<sup>3</sup>	E	B	6	5	<sup>1</sup>	3	<sup>1</sup>	2	C				
	0	<sup>1</sup>	<sup>1</sup>	<sup>1</sup>			D		F		4	8	7	E	<sup>1</sup>
8	C		2	4			E		7	6			D		B
	1	B			A		2		8	<sup>1</sup>	9	<sup>1</sup>	C	4	5
	E			8	9		7	D		<sup>2</sup>	<sup>2</sup>	1			
B	9	<sup>1</sup>		A	D	E	<sup>1</sup>	F		3	1		8		
C	7		6	5				<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	0	<sup>1</sup>	B	D	F
A		1					<sup>3</sup>	E		4	<sup>1</sup>	9	2		C
<sup>2</sup>	A	E		<sup>2</sup>			B	9	<sup>1</sup>	1	8		F		<sup>1</sup>
6	F	0			8		5		<sup>2</sup>	D	<sup>3</sup>	B		C	
<sup>1</sup>		D		E	C	A	0	5	3	<sup>2</sup>		2			6
3		<sup>3</sup>	C	F		D			0	7	<sup>2</sup>		<sup>3</sup>	8	
E	<sup>1</sup>	C	<sup>2</sup>	D	5	6	<sup>1</sup>	<sup>2</sup>	<sup>2</sup>	<sup>3</sup>	<sup>3</sup>	F	<sup>2</sup>	B	8
		<sup>2</sup>						4	E	A		C		1	9
4		A	B		E	C		6	9	<sup>1</sup>			3	<sup>1</sup>	
		F	1			8		<sup>1</sup>	2			D	A		<sup>1</sup>

Challenging

Diff: 17 / 9.9735.8879.7755.6785

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 17 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 50

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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8	4	3	E	B	6	5	1	3	1	2	C	9	12	9	13	1
9	0	1	1	1	14	15	D	6	F	5	4	8	7	E	1	
8	C	5	2	4	11	10	E	7	7	6	4	10	D	9	B	
7	1	B	6	9	A	8	2	8	8	1	9	1	C	4	5	
9	E	15	7	8	9	15	7	D	14	2	2	1	11	10	14	5
B	9	1	8	A	D	E	1	F	12	3	1	16	8	13	16	
C	7	14	6	5	17	16	17	1	2	1	0	1	B	D	F	
A	7	1	6	13	9	14	3	E	13	4	1	9	2	15	C	
2	A	E	8	2	11	16	B	9	1	1	8	15	F	14	1	9
6	F	0	9	5	8	15	5	16	2	D	3	B	13	C	17	
1	6	D	5	E	C	A	0	5	3	2	7	2	7	6	6	
3	7	3	C	F	16	D	17	17	0	7	2	8	3	8	16	
E	1	C	2	D	5	6	1	2	2	3	3	F	2	B	8	13
11	11	2	7	6	10	11	12	4	E	A	9	C	10	1	9	
4	9	A	B	6	E	C	9	6	9	1	8	16	3	1	15	
10	12	F	1	12	5	8	4	1	2	6	10	D	A	11	1	
1				5				9				13				

Challenging

Diff: 17 / 9.9735.8879.7755.6785

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 17 steps required to solve the puzzle above with a total of 135 empty locations that must be determined, out of a total puzzle size of 256.

All 17 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 23 independent moves.

- \* The only spot for 2 in the 6th row is (3, 6).
- \* The only spot for 2 in the 13th row is (2, 13).
- \* The only spot for C in the 9th column is (9, 16).
- \* The only spot for 8 in the 9th column is (9, 7).
- \* The only spot for 2 in the 15th column is (15, 15).
- \* The only spot for A in the 1st 4x4 square is (4, 2).
- \* The only spot for 6 in the 1st 4x4 square is (3, 2).
- \* The only spot for C in the 2nd 4x4 square is (5, 2).
- \* The only spot for 8 in the 2nd 4x4 square is (8, 1).
- \* The only spot for E in the 3rd 4x4 square is (11, 4).
- \* The only spot for D in the 3rd 4x4 square is (10, 1).
- \* The only spot for 6 in the 4th 4x4 square is (13, 4).
- \* The only spot for 2 in the 4th 4x4 square is (16, 2).
- \* The only spot for C in the 6th 4x4 square is (8, 6).
- \* The only spot for 7 in the 7th 4x4 square is (12, 8).
- \* The only spot for 9 in the 7th 4x4 square is (11, 7).
- \* The only spot for E in the 8th 4x4 square is (13, 7).
- \* The only spot for 1 in the 9th 4x4 square is (1, 11).
- \* The only spot for C in the 11th 4x4 square is (10, 9).
- \* The only spot for D in the 12th 4x4 square is (16, 9).
- \* The only spot for A in the 14th 4x4 square is (8, 13).
- \* The only spot for 8 in the 15th 4x4 square is (11, 15).
- \* The only spot for E in the 16th 4x4 square is (16, 16).

Step 2: There are 13 independent moves.

- \* The only spot for A in the 7th row is (10, 7).
- \* The only spot for 6 in the 9th row is (5, 9).
- \* The only spot for 9 in the 13th row is (4, 13).
- \* The only spot for 8 in the 3rd column is (3, 14).
- \* The only spot for 1 in the 10th column is (10, 13).
- \* The only spot for F in the 11th column is (11, 11).
- \* The only spot for 2 in the 7th 4x4 square is (12, 5).
- \* The only spot for C in the 7th 4x4 square is (11, 5).
- \* The only spot for 2 in the 9th 4x4 square is (1, 9).
- \* The only spot for 6 in the 11th 4x4 square is (12, 12).
- \* The only spot for 4 in the 11th 4x4 square is (10, 10).
- \* The only spot for 7 in the 15th 4x4 square is (9, 13).
- \* The only spot for 4 in the 16th 4x4 square is (14, 13).

Step 3: There are 7 independent moves.

- \* The only spot for E in the 12th row is (14, 12).
- \* The only spot for 3 in the 13th row is (12, 13).
- \* The only spot for 0 in the 13th row is (11, 13).
- \* The only spot for 7 in the 3rd column is (3, 1).
- \* The only spot for 6 in the 6th 4x4 square is (8, 8).
- \* The only spot for 9 in the 9th 4x4 square is (3, 12).

- \* The only spot for E in the 11th 4x4 square is (12, 10).

Step 4: There are 3 independent moves.

- \* The only spot for 9 in the 8th column is (8, 16).
- \* The only spot for A in the 12th column is (12, 3).
- \* The only spot for 4 in the 1st 4x4 square is (2, 1).

Step 5: There are 5 independent moves.

- \* The only spot for 5 in the 3rd row is (3, 3).
- \* The only spot for 4 in the 11th row is (4, 11).
- \* The only spot for 9 in the 5th column is (5, 10).
- \* The only spot for 5 in the 3rd 4x4 square is (11, 2).
- \* The only spot for 4 in the 14th 4x4 square is (6, 16).

Step 6: There are 8 independent moves.

- \* The only spot for 7 in the 11th row is (15, 11).
- \* The only spot for 8 in the 4th column is (4, 8).
- \* The only spot for 1 in the 5th column is (5, 15).
- \* The only spot for 2 in the 5th column is (5, 14).
- \* The only spot for B in the 11th column is (11, 16).
- \* The only spot for 3 in the 1st 4x4 square is (4, 4).
- \* The only spot for B in the 3rd 4x4 square is (9, 2).
- \* The only spot for 8 in the 9th 4x4 square is (2, 11).

Step 7: There are 8 independent moves.

- \* The only spot for D in the 4th column is (4, 14).
- \* The only spot for F in the 4th column is (4, 5).
- \* The only spot for D in the 1st 4x4 square is (1, 4).
- \* The only spot for 1 in the 3rd 4x4 square is (9, 3).
- \* The only spot for D in the 5th 4x4 square is (2, 8).
- \* The only spot for B in the 9th 4x4 square is (2, 12).
- \* The only spot for B in the 11th 4x4 square is (12, 11).
- \* The only spot for 9 in the 12th 4x4 square is (14, 11).

Step 8: There are 7 independent moves.

- \* The only spot for F in the 4th row is (7, 4).
- \* The only spot for 5 in the 12th row is (13, 12).
- \* The only spot for 0 in the 4th column is (4, 6).
- \* The only spot for F in the 1st 4x4 square is (1, 1).
- \* The only spot for 0 in the 3rd 4x4 square is (9, 4).
- \* The only spot for 5 in the 9th 4x4 square is (4, 9).
- \* The only spot for D in the 15th 4x4 square is (12, 15).

Step 9: There are 11 independent moves.

- \* The only spot for 9 in the 1st row is (15, 1).
- \* The only spot for F in the 15th row is (8, 15).
- \* The only spot for 5 in the 15th row is (2, 15).
- \* The only spot for A in the 13th column is (13, 1).
- \* The only spot for 9 in the 1st 4x4 square is (1, 2).
- \* The only spot for 7 in the 2nd 4x4 square is (5, 4).

- \* The only spot for F in the 4th 4x4 square is (15, 3).
- \* The only spot for 5 in the 5th 4x4 square is (1, 5).
- \* The only spot for F in the 6th 4x4 square is (6, 8).
- \* The only spot for 7 in the 9th 4x4 square is (4, 10).
- \* The only spot for F in the 15th 4x4 square is (12, 14).

Step 10: There are 7 independent moves.

- \* The only spot for 7 in the 16th row is (1, 16).
- \* The only spot for B in the 6th column is (6, 14).
- \* The only spot for 5 in the 14th column is (14, 14).
- \* The only spot for A in the 15th column is (15, 5).
- \* The only spot for 9 in the 2nd 4x4 square is (7, 3).
- \* The only spot for 3 in the 4th 4x4 square is (13, 3).
- \* The only spot for 5 in the 15th 4x4 square is (12, 16).

Step 11: There are 7 independent moves.

- \* The only spot for 6 in the 14th row is (2, 14).
- \* The only spot for 7 in the 6th column is (6, 9).
- \* The only spot for 6 in the 14th column is (14, 5).
- \* The only spot for 0 in the 2nd 4x4 square is (6, 3).
- \* The only spot for 0 in the 13th 4x4 square is (1, 14).
- \* The only spot for 7 in the 14th 4x4 square is (7, 14).
- \* The only spot for 6 in the 16th 4x4 square is (15, 16).

Step 12: There are 5 independent moves.

- \* The only spot for 3 in the 14th row is (8, 14).
- \* The only spot for 0 in the 14th column is (14, 1).
- \* The only spot for 6 in the 7th 4x4 square is (10, 6).
- \* The only spot for 3 in the 13th 4x4 square is (2, 16).
- \* The only spot for 0 in the 14th 4x4 square is (5, 16).

Step 13: There are 5 independent moves.

- \* The only spot for 5 in the 6th row is (15, 6).
- \* The only spot for 3 in the 5th column is (5, 8).
- \* The only spot for 1 in the 14th column is (14, 10).
- \* The only spot for 1 in the 4th 4x4 square is (16, 1).
- \* The only spot for 5 in the 7th 4x4 square is (10, 8).

Step 14: There are 6 independent moves.

- \* The only spot for 3 in the 7th row is (3, 7).
- \* The only spot for B in the 8th row is (7, 8).
- \* The only spot for 3 in the 6th column is (6, 2).
- \* The only spot for 3 in the 15th column is (15, 9).
- \* The only spot for B in the 7th 4x4 square is (10, 5).
- \* The only spot for 3 in the 8th 4x4 square is (16, 5).

Step 15: There are 7 independent moves.

- \* The only spot for 0 in the 16th column is (16, 15).
- \* The only spot for 1 in the 2nd 4x4 square is (7, 2).
- \* The only spot for 4 in the 5th 4x4 square is (3, 5).

- \* The only spot for 0 in the 6th 4x4 square is (7, 5).
- \* The only spot for 0 in the 8th 4x4 square is (15, 8).
- \* The only spot for 3 in the 10th 4x4 square is (7, 10).
- \* The only spot for 0 in the 12th 4x4 square is (13, 9).

Step 16: There are 8 independent moves.

- \* The only spot for 4 in the 9th row is (7, 9).
- \* The only spot for 2 in the 10th row is (9, 10).
- \* The only spot for 2 in the 7th column is (7, 7).
- \* The only spot for 4 in the 13th column is (13, 6).
- \* The only spot for 7 in the 16th column is (16, 6).
- \* The only spot for 2 in the 10th 4x4 square is (6, 12).
- \* The only spot for 4 in the 12th 4x4 square is (16, 12).
- \* The only spot for 7 in the 16th 4x4 square is (13, 15).

Step 17: There are 5 independent moves.

- \* The only spot for 1 in the 6th column is (6, 7).
- \* The only spot for 4 in the 6th 4x4 square is (8, 7).
- \* The only spot for 1 in the 10th 4x4 square is (8, 12).
- \* The only spot for A in the 11th 4x4 square is (9, 12).
- \* The only spot for A in the 12th 4x4 square is (16, 10).

## Solution for Puzzle 50

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

F	4	7	E	B	6	5	8	3	D	2	C	A	0	9	1
9	0	6	A	C	3	1	D	B	F	5	4	8	7	E	2
8	C	5	2	4	0	9	E	1	7	6	A	3	D	F	B
D	1	B	3	7	A	F	2	0	8	E	9	6	C	4	5
5	E	4	F	8	9	0	7	D	B	C	2	1	6	A	3
B	9	2	0	A	D	E	C	F	6	3	1	4	8	5	7
C	7	3	6	5	1	2	4	8	A	9	0	E	B	D	F
A	D	1	8	3	F	B	6	E	5	4	7	9	2	0	C
2	A	E	5	6	7	4	B	9	C	1	8	0	F	3	D
6	F	0	7	9	8	3	5	2	4	D	E	B	1	C	A
1	8	D	4	E	C	A	0	5	3	F	B	2	9	7	6
3	B	9	C	F	2	D	1	A	0	7	6	5	E	8	4
E	2	C	9	D	5	6	A	7	1	0	3	F	4	B	8
0	6	8	D	2	B	7	3	4	E	A	F	C	5	1	9
4	5	A	B	1	E	C	F	6	9	8	D	7	3	2	0
7	3	F	1	0	4	8	9	C	2	B	5	D	A	6	E

Challenging

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## Chapter 28

# Two Tournament Sudoku-16 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-five to twenty-nine. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 51** (146/256) DiffKey 25 / 9.9841.1121.231D.3689.9999.6661

**Puzzle 52** (159/256) DiffKey 29 / 9.8975.44A2.3211.1112.2336.9775.7999



## Sudoku-16 Puzzle 51, Tournament/25

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	8		6		9	0		B	E				1		C
2							8		D		0				
	0			1						F	2	6	A		E
5	7	4	F	2		B				1					9
F			5	6	3			2			B	0			4
A		8	3							7	6			2	
	C		1			F	2	D					3	8	
		E		C	A	5			3	8	F	9			
		2		0	7		B				4		5	6	
			7	A					6	5			4		
0	D					6		A	7	E		1			
6		5			4			F		B			9	7	0
	A			7	8	3	F							C	
9		3	2				6	C	4					F	A
1		C	D		0						E		B	9	8
								3	0	A		4	E		

Tournament

Diff: 25 / 9.9841.1121.231D.3689.9999.6661

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 25 steps required to solve the puzzle above with a total of 146 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 51

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	8		6	<sup>2</sup>	9	0		B	E		<sup>3</sup>	<sup>1</sup>	1		C
2							8		D		0				
	0			1						F	2	6	A		E
5	7	4	F	2	<sup>3</sup>	B				1				<sup>1</sup>	9
F			5	6	3	<sup>1</sup>	<sup>2</sup>	2	<sup>3</sup>		B	0		<sup>1</sup>	4
A	<sup>3</sup>	8	3				<sup>2</sup>	<sup>1</sup>		7	6			2	
	C	<sup>2</sup>	1	<sup>3</sup>		F	2	D		<sup>1</sup>		<sup>2</sup>	3	8	
	<sup>1</sup>	E	<sup>2</sup>	C	A	5	<sup>3</sup>	<sup>2</sup>	3	8	F	9			
<sup>3</sup>		2		0	7		B				4		5	6	
			7	A				<sup>1</sup>	6	5			4	<sup>2</sup>	
0	D		<sup>1</sup>			6		A	7	E		1			
6		5			4			F	<sup>1</sup>	B			9	7	0
<sup>2</sup>	A	<sup>2</sup>	<sup>3</sup>	7	8	3	F		<sup>1</sup>						C
9		3	2				6	C	4		<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	F	A
1		C	D		0			<sup>2</sup>	<sup>1</sup>		E	<sup>1</sup>	B	9	8
								3	0	A		4	E		

Tournament

Diff: 25 / 9.9841.1121.231D.3689.9999.6661

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 25 steps required to solve the puzzle above with a total of 146 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 51

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<sup>21</sup>	<b>8</b>	<sup>6</sup>	<b>6</b>	<sup>2</sup>	<b>9</b>	<b>0</b>	<sup>20</sup>	<b>B</b>	<b>E</b>	<sup>17</sup>	<sup>3</sup>	<sup>1</sup>	<b>1</b>	<sup>21</sup>	<b>C</b>	<sup>1</sup>
<b>2</b>	<sup>4</sup>	<sup>5</sup>	<sup>17</sup>	<sup>13</sup>	<sup>4</sup>	<sup>7</sup>	<b>8</b>	<sup>19</sup>	<b>D</b>	<sup>16</sup>	<b>0</b>	<sup>18</sup>	<sup>19</sup>	<sup>17</sup>	<sup>17</sup>	
<sup>20</sup>	<b>0</b>	<sup>19</sup>	<sup>20</sup>	<b>1</b>	<sup>21</sup>	<sup>4</sup>	<sup>18</sup>	<sup>18</sup>	<sup>17</sup>	<b>F</b>	<b>2</b>	<b>6</b>	<b>A</b>	<sup>21</sup>	<b>E</b>	
<b>5</b>	<b>7</b>	<b>4</b>	<b>F</b>	<b>2</b>	<sup>3</sup>	<b>B</b>	<sup>16</sup>	<sup>4</sup>	<sup>15</sup>	<b>1</b>	<sup>14</sup>	<sup>18</sup>	<sup>17</sup>	<sup>1</sup>	<b>9</b>	
<b>F</b>	<sup>13</sup>	<sup>15</sup>	<b>5</b>	<b>6</b>	<b>3</b>	<sup>1</sup>	<sup>2</sup>	<b>2</b>	<sup>3</sup>	<sup>17</sup>	<b>B</b>	<b>0</b>	<sup>16</sup>	<sup>1</sup>	<b>4</b>	<sup>5</sup>
<b>A</b>	<sup>3</sup>	<b>8</b>	<b>3</b>	<sup>18</sup>	<sup>19</sup>	<sup>17</sup>	<sup>2</sup>	<sup>1</sup>	<sup>17</sup>	<b>7</b>	<b>6</b>	<sup>20</sup>	<sup>21</sup>	<b>2</b>	<sup>19</sup>	
<sup>16</sup>	<b>C</b>	<sup>2</sup>	<b>1</b>	<sup>3</sup>	<sup>13</sup>	<b>F</b>	<b>2</b>	<b>D</b>	<sup>16</sup>	<sup>1</sup>	<sup>15</sup>	<sup>2</sup>	<b>3</b>	<b>8</b>	<sup>17</sup>	
<sup>14</sup>	<sup>1</sup>	<b>E</b>	<sup>2</sup>	<b>C</b>	<b>A</b>	<b>5</b>	<sup>3</sup>	<sup>2</sup>	<b>3</b>	<b>8</b>	<b>F</b>	<b>9</b>	<sup>11</sup>	<sup>20</sup>	<sup>21</sup>	
<sup>3</sup>	<sup>20</sup>	<b>2</b>	<sup>20</sup>	<b>0</b>	<b>7</b>	<sup>22</sup>	<b>B</b>	<sup>22</sup>	<sup>18</sup>	<sup>15</sup>	<b>4</b>	<sup>21</sup>	<b>5</b>	<b>6</b>	<sup>21</sup>	<sup>9</sup>
<sup>18</sup>	<sup>18</sup>	<sup>24</sup>	<b>7</b>	<b>A</b>	<sup>24</sup>	<sup>23</sup>	<sup>22</sup>	<sup>1</sup>	<b>6</b>	<b>5</b>	<sup>23</sup>	<sup>19</sup>	<b>4</b>	<sup>2</sup>	<sup>22</sup>	
<b>0</b>	<b>D</b>	<sup>23</sup>	<sup>1</sup>	<sup>16</sup>	<sup>24</sup>	<b>6</b>	<sup>21</sup>	<b>A</b>	<b>7</b>	<b>E</b>	<sup>24</sup>	<b>1</b>	<sup>21</sup>	<sup>19</sup>	<sup>22</sup>	
<b>6</b>	<sup>19</sup>	<b>5</b>	<sup>19</sup>	<sup>15</sup>	<b>4</b>	<sup>24</sup>	<sup>23</sup>	<b>F</b>	<sup>1</sup>	<b>B</b>	<sup>23</sup>	<sup>20</sup>	<b>9</b>	<b>7</b>	<b>0</b>	
<sup>2</sup>	<b>A</b>	<sup>2</sup>	<sup>3</sup>	<b>7</b>	<b>8</b>	<b>3</b>	<b>F</b>	<sup>21</sup>	<sup>1</sup>	<sup>10</sup>	<sup>22</sup>	<sup>19</sup>	<sup>20</sup>	<b>C</b>	<sup>21</sup>	<sup>13</sup>
<b>9</b>	<sup>12</sup>	<b>3</b>	<b>2</b>	<sup>14</sup>	<sup>16</sup>	<sup>15</sup>	<b>6</b>	<b>C</b>	<b>4</b>	<sup>13</sup>	<sup>1</sup>	<sup>2</sup>	<sup>1</sup>	<b>F</b>	<b>A</b>	
<b>1</b>	<sup>10</sup>	<b>C</b>	<b>D</b>	<sup>11</sup>	<b>0</b>	<sup>8</sup>	<sup>8</sup>	<sup>2</sup>	<sup>1</sup>	<sup>9</sup>	<b>E</b>	<sup>1</sup>	<b>B</b>	<b>9</b>	<b>8</b>	
<sup>19</sup>	<sup>17</sup>	<sup>16</sup>	<sup>18</sup>	<sup>19</sup>	<sup>25</sup>	<sup>24</sup>	<sup>23</sup>	<b>3</b>	<b>0</b>	<b>A</b>	<sup>20</sup>	<b>4</b>	<b>E</b>	<sup>21</sup>	<sup>11</sup>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Tournament

Diff: 25 / 9.9841.1121.231D.3689.9999.6661

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 25 steps required to solve the puzzle above with a total of 146 empty locations that must be determined, out of a total puzzle size of 256.

All 25 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 15 independent moves.

- \* The only spot for 0 in the 14th row is (14, 14).
- \* The only spot for 8 in the 14th row is (12, 14).
- \* The only spot for 0 in the 11th column is (11, 7).
- \* The only spot for A in the 15th column is (15, 5).
- \* The only spot for 0 in the 15th column is (15, 4).
- \* The only spot for 2 in the 4th 4x4 square is (13, 1).
- \* The only spot for 2 in the 5th 4x4 square is (2, 8).
- \* The only spot for 8 in the 6th 4x4 square is (7, 5).
- \* The only spot for E in the 7th 4x4 square is (9, 6).
- \* The only spot for 4 in the 9th 4x4 square is (4, 11).
- \* The only spot for 2 in the 11th 4x4 square is (10, 12).
- \* The only spot for 0 in the 11th 4x4 square is (9, 10).
- \* The only spot for F in the 15th 4x4 square is (10, 15).
- \* The only spot for B in the 15th 4x4 square is (10, 13).
- \* The only spot for 3 in the 16th 4x4 square is (13, 15).

Step 2: There are 12 independent moves.

- \* The only spot for F in the 1st row is (5, 1).
- \* The only spot for E in the 5th row is (8, 5).
- \* The only spot for 0 in the 6th row is (8, 6).
- \* The only spot for 4 in the 13th row is (1, 13).
- \* The only spot for 7 in the 14th row is (13, 14).
- \* The only spot for 7 in the 15th row is (9, 15).
- \* The only spot for 0 in the 3rd column is (3, 13).
- \* The only spot for E in the 15th column is (15, 10).
- \* The only spot for 0 in the 5th 4x4 square is (4, 8).
- \* The only spot for 6 in the 5th 4x4 square is (3, 7).
- \* The only spot for 4 in the 7th 4x4 square is (9, 8).
- \* The only spot for E in the 8th 4x4 square is (13, 7).

Step 3: There are 8 independent moves.

- \* The only spot for E in the 4th row is (6, 4).
- \* The only spot for 1 in the 5th row is (10, 5).
- \* The only spot for 4 in the 7th row is (5, 7).
- \* The only spot for E in the 13th row is (4, 13).
- \* The only spot for E in the 1st column is (1, 9).
- \* The only spot for 7 in the 3rd 4x4 square is (12, 1).
- \* The only spot for 4 in the 5th 4x4 square is (2, 6).
- \* The only spot for 7 in the 6th 4x4 square is (8, 8).

Step 4: There are 4 independent moves.

- \* The only spot for 7 in the 3rd row is (7, 3).
- \* The only spot for 6 in the 4th row is (9, 4).
- \* The only spot for E in the 1st 4x4 square is (2, 2).
- \* The only spot for 6 in the 2nd 4x4 square is (6, 2).

Step 5: There is 1 independent move.

- \* The only spot for 1 in the 1st 4x4 square is (3, 2).

Step 6: There is 1 independent move.

- \* The only spot for A in the 3rd column is (3, 1).

Step 7: There is 1 independent move.

- \* The only spot for A in the 2nd row is (7, 2).

Step 8: There are 2 independent moves.

- \* The only spot for 4 in the 7th column is (7, 15).
- \* The only spot for A in the 14th 4x4 square is (8, 15).

Step 9: There is 1 independent move.

- \* The only spot for 2 in the 15th row is (11, 15).

Step 10: There are 2 independent moves.

- \* The only spot for 6 in the 15th row is (2, 15).
- \* The only spot for 6 in the 15th 4x4 square is (11, 13).

Step 11: There are 3 independent moves.

- \* The only spot for 5 in the 15th row is (5, 15).
- \* The only spot for 6 in the 14th column is (14, 8).
- \* The only spot for 6 in the 16th 4x4 square is (16, 16).

Step 12: There is 1 independent move.

- \* The only spot for 5 in the 14th row is (2, 14).

Step 13: There are 4 independent moves.

- \* D must be placed at (11, 14) because it is the only value left that is not already in the 14th row, the 11th column or the 15th 4x4 square.
- \* B must be placed at (6, 7) because it is the only value left that is not already in the 7th row, the 6th column or the 6th 4x4 square.
- \* 9 must be placed at (2, 5) because it is the only value left that is not already in the 5th row, the 2nd column or the 5th 4x4 square.
- \* 3 must be placed at (5, 2) because it is the only value left that is not already in the 2nd row, the 5th column or the 2nd 4x4 square.

Step 14: There are 3 independent moves.

- \* The only spot for 3 in the 4th row is (12, 4).
- \* The only spot for B in the 14th row is (5, 14).
- \* The only spot for B in the 5th 4x4 square is (1, 8).

Step 15: There are 6 independent moves.

- \* The only spot for E in the 5th column is (5, 12).
- \* The only spot for A in the 12th column is (12, 7).
- \* The only spot for A in the 3rd 4x4 square is (10, 4).
- \* The only spot for D in the 5th 4x4 square is (3, 5).
- \* The only spot for 3 in the 11th 4x4 square is (11, 9).
- \* The only spot for E in the 14th 4x4 square is (7, 14).

Step 16: There are 8 independent moves.

- \* The only spot for C in the 4th row is (8, 4).
- \* The only spot for 7 in the 5th row is (14, 5).
- \* The only spot for 9 in the 7th row is (10, 7).
- \* The only spot for 1 in the 14th row is (6, 14).
- \* The only spot for 7 in the 3rd column is (3, 16).

- \* The only spot for 9 in the 11th column is (11, 2).
- \* The only spot for 7 in the 5th 4x4 square is (1, 7).
- \* The only spot for 8 in the 10th 4x4 square is (5, 11).

Step 17: There are 11 independent moves.

- \* The only spot for 4 in the 2nd row is (15, 2).
- \* The only spot for C in the 2nd row is (4, 2).
- \* The only spot for 5 in the 7th row is (16, 7).
- \* The only spot for C in the 11th column is (11, 5).
- \* The only spot for 8 in the 14th column is (14, 4).
- \* The only spot for C in the 3rd 4x4 square is (10, 3).
- \* The only spot for 4 in the 3rd 4x4 square is (11, 1).
- \* The only spot for 7 in the 4th 4x4 square is (16, 2).
- \* The only spot for 1 in the 6th 4x4 square is (7, 6).
- \* The only spot for 5 in the 7th 4x4 square is (10, 6).
- \* The only spot for F in the 13th 4x4 square is (2, 16).

Step 18: There are 9 independent moves.

- \* The only spot for B in the 2nd row is (13, 2).
- \* The only spot for D in the 4th row is (13, 4).
- \* The only spot for B in the 2nd column is (2, 10).
- \* The only spot for 8 in the 10th column is (10, 9).
- \* The only spot for 4 in the 2nd 4x4 square is (8, 3).
- \* The only spot for 8 in the 3rd 4x4 square is (9, 3).
- \* The only spot for 9 in the 6th 4x4 square is (5, 6).
- \* The only spot for C in the 9th 4x4 square is (1, 10).
- \* The only spot for B in the 13th 4x4 square is (4, 16).

Step 19: There are 12 independent moves.

- \* The only spot for 8 in the 10th row is (13, 10).
- \* The only spot for D in the 5th column is (5, 16).
- \* The only spot for 5 in the 13th column is (13, 13).
- \* The only spot for B in the 15th column is (15, 11).
- \* The only spot for B in the 1st 4x4 square is (3, 3).
- \* The only spot for 5 in the 3rd 4x4 square is (9, 2).
- \* The only spot for F in the 4th 4x4 square is (14, 2).
- \* The only spot for D in the 6th 4x4 square is (6, 6).
- \* The only spot for B in the 8th 4x4 square is (16, 6).
- \* The only spot for 8 in the 9th 4x4 square is (4, 12).
- \* The only spot for 3 in the 9th 4x4 square is (2, 12).
- \* The only spot for 8 in the 13th 4x4 square is (1, 16).

Step 20: There are 10 independent moves.

- \* The only spot for D in the 3rd row is (1, 3).
- \* The only spot for A in the 12th row is (13, 12).
- \* The only spot for D in the 14th column is (14, 13).
- \* The only spot for D in the 15th column is (15, 8).
- \* The only spot for 9 in the 1st 4x4 square is (4, 3).
- \* The only spot for D in the 2nd 4x4 square is (8, 1).

- \* The only spot for F in the 8th 4x4 square is (13, 6).
- \* The only spot for A in the 9th 4x4 square is (4, 9).
- \* The only spot for 1 in the 9th 4x4 square is (2, 9).
- \* The only spot for 5 in the 15th 4x4 square is (12, 16).

Step 21: There are 13 independent moves.

- \* The only spot for 5 in the 1st row is (15, 1).
- \* The only spot for 3 in the 3rd row is (15, 3).
- \* The only spot for F in the 9th row is (16, 9).
- \* The only spot for 5 in the 8th column is (8, 11).
- \* The only spot for 1 in the 9th column is (9, 13).
- \* The only spot for C in the 13th column is (13, 9).
- \* The only spot for 2 in the 14th column is (14, 11).
- \* The only spot for 1 in the 15th column is (15, 16).
- \* The only spot for 3 in the 1st 4x4 square is (1, 1).
- \* The only spot for 5 in the 2nd 4x4 square is (6, 3).
- \* The only spot for 1 in the 8th 4x4 square is (16, 8).
- \* The only spot for C in the 8th 4x4 square is (14, 6).
- \* The only spot for 2 in the 16th 4x4 square is (16, 13).

Step 22: There are 6 independent moves.

- \* The only spot for D in the 9th row is (7, 9).
- \* The only spot for 3 in the 11th row is (16, 11).
- \* The only spot for 9 in the 9th column is (9, 9).
- \* The only spot for 3 in the 10th 4x4 square is (8, 10).
- \* The only spot for D in the 12th 4x4 square is (16, 10).
- \* The only spot for 9 in the 15th 4x4 square is (12, 13).

Step 23: There are 6 independent moves.

- \* The only spot for 1 in the 10th row is (12, 10).
- \* The only spot for 9 in the 11th row is (3, 11).
- \* The only spot for 9 in the 8th column is (8, 16).
- \* The only spot for 1 in the 10th 4x4 square is (8, 12).
- \* The only spot for 9 in the 10th 4x4 square is (7, 10).
- \* The only spot for D in the 11th 4x4 square is (12, 12).

Step 24: There are 6 independent moves.

- \* The only spot for F in the 11th row is (6, 11).
- \* The only spot for C in the 12th row is (7, 12).
- \* The only spot for 2 in the 7th column is (7, 16).
- \* The only spot for F in the 9th 4x4 square is (3, 10).
- \* The only spot for 2 in the 10th 4x4 square is (6, 10).
- \* The only spot for C in the 11th 4x4 square is (12, 11).

Step 25: There is 1 independent move.

- \* The only spot for C in the 14th 4x4 square is (6, 16).

## Solution for Puzzle 51

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

3	8	A	6	F	9	0	D	B	E	4	7	2	1	5	C
2	E	1	C	3	6	A	8	5	D	9	0	B	F	4	7
D	0	B	9	1	5	7	4	8	C	F	2	6	A	3	E
5	7	4	F	2	E	B	C	6	A	1	3	D	8	0	9
F	9	D	5	6	3	8	E	2	1	C	B	0	7	A	4
A	4	8	3	9	D	1	0	E	5	7	6	F	C	2	B
7	C	6	1	4	B	F	2	D	9	0	A	E	3	8	5
B	2	E	0	C	A	5	7	4	3	8	F	9	6	D	1
E	1	2	A	0	7	D	B	9	8	3	4	C	5	6	F
C	B	F	7	A	2	9	3	0	6	5	1	8	4	E	D
0	D	9	4	8	F	6	5	A	7	E	C	1	2	B	3
6	3	5	8	E	4	C	1	F	2	B	D	A	9	7	0
4	A	0	E	7	8	3	F	1	B	6	9	5	D	C	2
9	5	3	2	B	1	E	6	C	4	D	8	7	0	F	A
1	6	C	D	5	0	4	A	7	F	2	E	3	B	9	8
8	F	7	B	D	C	2	9	3	0	A	5	4	E	1	6

Tournament

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## Sudoku-16 Puzzle 52, Tournament/29

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

159/256

			5				7			D	6		3	C	
		7		9	C			F					8		6
D	F	3	4				8				A				
		6			1				B		9	E		D	
	E				A	2				8	0	1		B	3
7										C	5				
3			9	B	4					6					7
C	0	D	1	5				A	3						F
		8	7					6					4	2	E
			F			A			4		3	8	0		
			E	C	2		1		7	9					
						9	4	1	0		C			7	5
	4	5		8				C	2				F		
6					7	1				5				4	
8	A						2	B				5			
1			B		F		D						C	E	0

Tournament

Diff: 29 / 9.8975.44A2.3211.1112.2336.9775.7999

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 29 steps required to solve the puzzle above with a total of 159 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 52

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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			5				7			D	6	<sup>1</sup>	3	C	
		7		9	C	<sup>1</sup>		F					8		6
D	F	3	4				8		<sup>1</sup>		A				
		6	<sup>2</sup>		1				B		9	E		D	
<sup>1</sup>	E	<sup>3</sup>			A	2	<sup>1</sup>	<sup>2</sup>	<sup>3</sup>	8	0	1	<sup>2</sup>	B	3
7			<sup>3</sup>	<sup>1</sup>						C	5				
3	<sup>2</sup>		9	B	4	<sup>3</sup>				6		<sup>1</sup>			7
C	0	D	1	5		<sup>1</sup>		A	3					<sup>2</sup>	F
<sup>3</sup>	<sup>1</sup>	8	7					6				4	2	<sup>2</sup>	E
			F	<sup>1</sup>		A			4		3	8	0	<sup>3</sup>	<sup>1</sup>
<sup>2</sup>			E	C	2		1	<sup>3</sup>	7	9				<sup>3</sup>	
					<sup>1</sup>	9	4	1	0		C			7	5
	4	5		8				C	2				F		
6		<sup>3</sup>			7	1				5				4	<sup>1</sup>
8	A					<sup>2</sup>	2	B				5			
1	<sup>1</sup>		B		F	<sup>1</sup>	D						C	E	0

Tournament

Diff: 29 / 9.8975.44A2.3211.1112.2336.9775.7999

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There are 29 steps required to solve the puzzle above with a total of 159 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 52

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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29	6	5	<b>5</b>	28	24	22	<b>7</b>	29	22	<b>D</b>	<b>6</b>	1	<b>3</b>	<b>C</b>	21	1
25	7	<b>7</b>	28	<b>9</b>	<b>C</b>	1	10	<b>F</b>	4	9	11	27	<b>8</b>	26	<b>6</b>	
<b>D</b>	<b>F</b>	<b>3</b>	<b>4</b>	29	23	21	<b>8</b>	29	1	20	<b>A</b>	24	22	5	25	
28	7	<b>6</b>	2	27	<b>1</b>	28	4	22	<b>B</b>	21	<b>9</b>	<b>E</b>	27	<b>D</b>	22	
1	<b>E</b>	3	5	4	<b>A</b>	<b>2</b>	1	2	3	<b>8</b>	<b>0</b>	<b>1</b>	2	<b>B</b>	<b>3</b>	5
<b>7</b>	29	28	3	1	27	26	25	10	23	<b>C</b>	<b>5</b>	26	23	28	26	
<b>3</b>	2	27	<b>9</b>	<b>B</b>	<b>4</b>	3	27	11	22	<b>6</b>	24	1	23	28	<b>7</b>	
<b>C</b>	<b>0</b>	<b>D</b>	<b>1</b>	<b>5</b>	20	1	24	<b>A</b>	<b>3</b>	17	16	25	10	2	<b>F</b>	
3	1	<b>8</b>	<b>7</b>	28	5	27	26	<b>6</b>	18	19	17	<b>4</b>	<b>2</b>	2	<b>E</b>	9
4	22	6	<b>F</b>	1	6	<b>A</b>	21	12	<b>4</b>	15	<b>3</b>	<b>8</b>	<b>0</b>	3	1	
2	28	4	<b>E</b>	<b>C</b>	<b>2</b>	22	<b>1</b>	3	<b>7</b>	<b>9</b>	4	29	25	3	27	
29	26	29	28	13	1	<b>9</b>	<b>4</b>	<b>1</b>	<b>0</b>	14	<b>C</b>	29	24	<b>7</b>	<b>5</b>	
5	<b>4</b>	<b>5</b>	28	<b>8</b>	29	23	20	<b>C</b>	<b>2</b>	19	22	22	<b>F</b>	23	29	13
<b>6</b>	27	3	29	28	<b>7</b>	<b>1</b>	19	7	24	<b>5</b>	23	27	26	<b>4</b>	1	
<b>8</b>	<b>A</b>	4	29	9	28	2	<b>2</b>	<b>B</b>	22	18	22	<b>5</b>	21	24	29	
<b>1</b>	1	6	<b>B</b>	22	<b>F</b>	1	<b>D</b>	22	21	22	8	7	<b>C</b>	<b>E</b>	<b>0</b>	
1				5				9				13				

Tournament

Diff: 29 / 9.8975.44A2.3211.1112.2336.9775.7999

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 29 steps required to solve the puzzle above with a total of 159 empty locations that must be determined, out of a total puzzle size of 256.

All 29 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 15 independent moves.

- \* The only spot for C in the 5th row is (8, 5).
- \* The only spot for C in the 9th row is (2, 9).
- \* The only spot for 8 in the 12th row is (6, 12).
- \* The only spot for F in the 1st column is (1, 5).
- \* The only spot for 7 in the 7th column is (7, 8).
- \* The only spot for D in the 2nd 4x4 square is (7, 2).
- \* The only spot for C in the 3rd 4x4 square is (10, 3).
- \* The only spot for F in the 4th 4x4 square is (13, 1).
- \* The only spot for 1 in the 6th 4x4 square is (5, 6).
- \* The only spot for C in the 8th 4x4 square is (13, 7).
- \* The only spot for 7 in the 10th 4x4 square is (5, 10).
- \* The only spot for C in the 12th 4x4 square is (16, 10).
- \* The only spot for 7 in the 13th 4x4 square is (2, 16).
- \* The only spot for 5 in the 14th 4x4 square is (7, 16).
- \* The only spot for 8 in the 16th 4x4 square is (16, 14).

Step 2: There are 8 independent moves.

- \* The only spot for 5 in the 5th row is (14, 5).
- \* The only spot for 8 in the 8th row is (15, 8).
- \* The only spot for 1 in the 9th row is (15, 9).
- \* The only spot for 4 in the 1st column is (1, 11).
- \* The only spot for C in the 1st 4x4 square is (4, 4).
- \* The only spot for 5 in the 5th 4x4 square is (2, 7).
- \* The only spot for 7 in the 7th 4x4 square is (9, 5).
- \* The only spot for C in the 14th 4x4 square is (7, 15).

Step 3: There are 9 independent moves.

- \* The only spot for 9 in the 5th row is (10, 5).
- \* The only spot for 4 in the 5th row is (3, 5).
- \* The only spot for 8 in the 7th row is (7, 7).
- \* The only spot for 9 in the 9th row is (1, 9).
- \* The only spot for 5 in the 11th row is (9, 11).
- \* The only spot for 8 in the 4th column is (4, 6).
- \* The only spot for F in the 12th 4x4 square is (15, 11).
- \* The only spot for 9 in the 12th 4x4 square is (15, 10).
- \* The only spot for C in the 13th 4x4 square is (3, 14).

Step 4: There are 7 independent moves.

- \* The only spot for 5 in the 4th row is (8, 4).
- \* The only spot for D in the 5th row is (5, 5).
- \* The only spot for 5 in the 3rd 4x4 square is (10, 2).
- \* The only spot for 0 in the 9th 4x4 square is (3, 11).
- \* The only spot for 5 in the 9th 4x4 square is (1, 10).
- \* The only spot for 8 in the 11th 4x4 square is (12, 11).
- \* The only spot for F in the 13th 4x4 square is (3, 15).

Step 5: There are 5 independent moves.

- \* The only spot for 6 in the 5th row is (4, 5).

- \* The only spot for E in the 3rd column is (3, 1).
- \* The only spot for 5 in the 4th 4x4 square is (15, 3).
- \* The only spot for 5 in the 10th 4x4 square is (6, 9).
- \* The only spot for E in the 13th 4x4 square is (1, 13).

Step 6: There are 4 independent moves.

- \* The only spot for 9 in the 3rd column is (3, 16).
- \* The only spot for 1 in the 3rd column is (3, 10).
- \* The only spot for 9 in the 1st 4x4 square is (2, 1).
- \* The only spot for D in the 10th 4x4 square is (6, 10).

Step 7: There are 4 independent moves.

- \* The only spot for 2 in the 16th row is (13, 16).
- \* The only spot for 8 in the 1st 4x4 square is (2, 4).
- \* The only spot for 1 in the 1st 4x4 square is (2, 2).
- \* The only spot for 9 in the 15th 4x4 square is (9, 14).

Step 8: There is 1 independent move.

- \* 4 must be placed at (12, 16) because it is the only value left that is not already in the 16th row, the 12th column or the 15th 4x4 square.

Step 9: There are 2 independent moves.

- \* The only spot for 4 in the 2nd row is (11, 2).
- \* The only spot for 4 in the 14th 4x4 square is (5, 15).

Step 10: There are 3 independent moves.

- \* The only spot for 3 in the 2nd row is (8, 2).
- \* The only spot for 4 in the 8th row is (14, 8).
- \* The only spot for 4 in the 7th 4x4 square is (9, 6).

Step 11: There are 2 independent moves.

- \* The only spot for E in the 2nd row is (12, 2).
- \* The only spot for D in the 9th column is (9, 7).

Step 12: There is 1 independent move.

- \* The only spot for E in the 9th column is (9, 10).

Step 13: There is 1 independent move.

- \* The only spot for E in the 10th 4x4 square is (5, 12).

Step 14: There is 1 independent move.

- \* The only spot for F in the 12th row is (11, 12).

Step 15: There is 1 independent move.

- \* The only spot for 2 in the 11th 4x4 square is (11, 10).

Step 16: There is 1 independent move.

- \* The only spot for 2 in the 8th row is (12, 8).

Step 17: There are 2 independent moves.

- \* The only spot for B in the 12th column is (12, 9).
- \* The only spot for B in the 7th 4x4 square is (11, 8).

Step 18: There are 2 independent moves.

- \* The only spot for E in the 11th column is (11, 15).
- \* The only spot for D in the 11th 4x4 square is (10, 9).

Step 19: There are 3 independent moves.

- \* The only spot for A in the 11th 4x4 square is (11, 9).
- \* The only spot for E in the 14th 4x4 square is (8, 14).
- \* The only spot for 0 in the 15th 4x4 square is (11, 13).

Step 20: There are 3 independent moves.

- \* The only spot for E in the 8th row is (6, 8).
- \* The only spot for A in the 8th column is (8, 13).
- \* The only spot for 1 in the 11th column is (11, 3).

Step 21: There are 6 independent moves.

- \* The only spot for A in the 16th row is (10, 16).
- \* The only spot for B in the 8th column is (8, 10).
- \* The only spot for 1 in the 14th column is (14, 15).
- \* The only spot for E in the 2nd 4x4 square is (7, 3).
- \* The only spot for 7 in the 3rd 4x4 square is (11, 4).
- \* The only spot for 1 in the 4th 4x4 square is (16, 1).

Step 22: There are 15 independent moves.

- \* The only spot for 4 in the 1st row is (7, 1).
- \* The only spot for 6 in the 10th row is (2, 10).
- \* The only spot for 7 in the 15th row is (12, 15).
- \* The only spot for 6 in the 16th row is (5, 16).
- \* The only spot for 1 in the 10th column is (10, 7).
- \* The only spot for 8 in the 10th column is (10, 1).
- \* The only spot for 3 in the 11th column is (11, 16).
- \* The only spot for 7 in the 14th column is (14, 3).
- \* The only spot for 3 in the 3rd 4x4 square is (9, 4).
- \* The only spot for 4 in the 4th 4x4 square is (16, 4).
- \* The only spot for 6 in the 10th 4x4 square is (7, 11).
- \* The only spot for 8 in the 15th 4x4 square is (9, 16).
- \* The only spot for 6 in the 15th 4x4 square is (10, 15).
- \* The only spot for 1 in the 15th 4x4 square is (12, 13).
- \* The only spot for 7 in the 16th 4x4 square is (13, 13).

Step 23: There are 7 independent moves.

- \* The only spot for E in the 7th row is (14, 7).
- \* The only spot for B in the 7th column is (7, 13).
- \* The only spot for 9 in the 14th column is (14, 6).
- \* The only spot for 6 in the 2nd 4x4 square is (6, 3).
- \* The only spot for E in the 7th 4x4 square is (10, 6).
- \* The only spot for D in the 15th 4x4 square is (12, 14).
- \* The only spot for 6 in the 16th 4x4 square is (15, 13).

Step 24: There are 7 independent moves.

- \* The only spot for 9 in the 13th column is (13, 3).
- \* The only spot for 6 in the 14th column is (14, 12).
- \* The only spot for 3 in the 15th column is (15, 15).
- \* The only spot for B in the 2nd 4x4 square is (6, 1).
- \* The only spot for 9 in the 6th 4x4 square is (8, 8).

- \* The only spot for F in the 7th 4x4 square is (12, 7).
- \* The only spot for F in the 15th 4x4 square is (10, 14).

Step 25: There are 5 independent moves.

- \* The only spot for B in the 3rd row is (16, 3).
- \* The only spot for 6 in the 8th row is (13, 8).
- \* The only spot for D in the 14th column is (14, 11).
- \* The only spot for B in the 1st 4x4 square is (1, 2).
- \* The only spot for 6 in the 6th 4x4 square is (8, 6).

Step 26: There are 7 independent moves.

- \* The only spot for D in the 2nd column is (2, 12).
- \* The only spot for F in the 8th column is (8, 9).
- \* The only spot for D in the 13th column is (13, 6).
- \* The only spot for B in the 14th column is (14, 14).
- \* The only spot for 2 in the 16th column is (16, 6).
- \* The only spot for 2 in the 4th 4x4 square is (15, 2).
- \* The only spot for F in the 6th 4x4 square is (7, 6).

Step 27: There are 10 independent moves.

- \* The only spot for 2 in the 2nd column is (2, 14).
- \* The only spot for 3 in the 7th column is (7, 9).
- \* The only spot for 0 in the 8th column is (8, 7).
- \* The only spot for A in the 14th column is (14, 4).
- \* The only spot for A in the 16th column is (16, 11).
- \* The only spot for F in the 2nd 4x4 square is (5, 4).
- \* The only spot for 0 in the 4th 4x4 square is (13, 2).
- \* The only spot for 2 in the 5th 4x4 square is (3, 7).
- \* The only spot for 3 in the 6th 4x4 square is (6, 6).
- \* The only spot for A in the 16th 4x4 square is (13, 14).

Step 28: There are 13 independent moves.

- \* The only spot for A in the 2nd row is (4, 2).
- \* The only spot for 2 in the 4th row is (1, 4).
- \* The only spot for A in the 7th row is (15, 7).
- \* The only spot for 3 in the 13th row is (4, 13).
- \* The only spot for 3 in the 2nd column is (2, 11).
- \* The only spot for 2 in the 4th column is (4, 12).
- \* The only spot for 0 in the 6th column is (6, 15).
- \* The only spot for 0 in the 7th column is (7, 4).
- \* The only spot for A in the 2nd 4x4 square is (5, 1).
- \* The only spot for A in the 5th 4x4 square is (3, 6).
- \* The only spot for 0 in the 8th 4x4 square is (15, 6).
- \* The only spot for 0 in the 10th 4x4 square is (5, 9).
- \* The only spot for 3 in the 14th 4x4 square is (5, 14).

Step 29: There are 14 independent moves.

- \* The only spot for 2 in the 1st row is (9, 1).
- \* The only spot for 0 in the 3rd row is (9, 3).

- \* The only spot for B in the 11th row is (13, 11).
- \* The only spot for D in the 13th row is (16, 13).
- \* The only spot for 9 in the 15th row is (16, 15).
- \* The only spot for 0 in the 1st 4x4 square is (1, 1).
- \* The only spot for 2 in the 2nd 4x4 square is (5, 3).
- \* The only spot for B in the 5th 4x4 square is (2, 6).
- \* The only spot for B in the 9th 4x4 square is (3, 12).
- \* The only spot for A in the 9th 4x4 square is (1, 12).
- \* The only spot for 3 in the 12th 4x4 square is (13, 12).
- \* The only spot for D in the 13th 4x4 square is (4, 15).
- \* The only spot for 0 in the 13th 4x4 square is (4, 14).
- \* The only spot for 9 in the 14th 4x4 square is (6, 13).



## Solution for Puzzle 52

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

0	9	E	5	A	B	4	7	2	8	D	6	F	3	C	1
B	1	7	A	9	C	D	3	F	5	4	E	0	8	2	6
D	F	3	4	2	6	E	8	0	C	1	A	9	7	5	B
2	8	6	C	F	1	0	5	3	B	7	9	E	A	D	4
F	E	4	6	D	A	2	C	7	9	8	0	1	5	B	3
7	B	A	8	1	3	F	6	4	E	C	5	D	9	0	2
3	5	2	9	B	4	8	0	D	1	6	F	C	E	A	7
C	0	D	1	5	E	7	9	A	3	B	2	6	4	8	F
9	C	8	7	0	5	3	F	6	D	A	B	4	2	1	E
5	6	1	F	7	D	A	B	E	4	2	3	8	0	9	C
4	3	0	E	C	2	6	1	5	7	9	8	B	D	F	A
A	D	B	2	E	8	9	4	1	0	F	C	3	6	7	5
E	4	5	3	8	9	B	A	C	2	0	1	7	F	6	D
6	2	C	0	3	7	1	E	9	F	5	D	A	B	4	8
8	A	F	D	4	0	C	2	B	6	E	7	5	1	3	9
1	7	9	B	6	F	5	D	8	A	3	4	2	C	E	0

Tournament

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## Chapter 29

# Two TournamentPlus Sudoku-16 Puzzles

There are two puzzles in this section ranging in difficulty from thirty-nine to forty-two. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 53** (140/256) DiffKey 39 / 969.4221.2B22.2136.331C.12A1.1222.3333.5589.9432

**Puzzle 54** (152/256) DiffKey 42 / 99.6443.2343.2643.3211.1D32.1133.22C4.2124.3323+

## Sudoku-16 Puzzle 53, TournamentPlus/39

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

				2	E	4			C	D	A				
1	C			F				9			6				0
F		8		6	7			4					C	5	E
A	9			1	D					5		B	6	4	
	7		0				4	5	A					9	
	D	C		E			1		B		7	0		2	
		5				B		C	D				1		A
8	A	1				5				2			B	D	6
		6		8	1	E	C			3		2		0	
	4				3	7		A	E			C	F	8	
	E	3					D	7			F				5
		9	7	5	0				6	C			E	1	
3			B		C				F		D	A		6	
						9	8	2		7		F	0		1
C		F	8				E			A		5			2
7	2		9	A	F			6	1	8					B

TournamentPlus

Diff: 39 / 969.4221.2B22.2136.331C.12A1.1222.3333.5589+

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 39 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 53

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

				2	E	4		<sup>1</sup>	C	D	A	<sup>3</sup>			
1	C			F				9			6	<sup>3</sup>	<sup>1</sup>	<sup>2</sup>	0
F		8	<sup>3</sup>	6	7		<sup>3</sup>	4				<sup>2</sup>	C	5	E
A	9			1	D	<sup>1</sup>		<sup>2</sup>		5	<sup>3</sup>	B	6	4	
	7		0				4	5	A		<sup>3</sup>			9	<sup>1</sup>
	D	C		E			1	<sup>3</sup>	B		7	0	<sup>1</sup>	2	
		5				B		C	D				1		A
8	A	1		<sup>1</sup>		5				2			B	D	6
	<sup>3</sup>	6	<sup>2</sup>	8	1	E	C			3		2		0	
	4		<sup>2</sup>		3	7	<sup>1</sup>	A	E			C	F	8	
<sup>3</sup>	E	3	<sup>1</sup>				D	7	<sup>1</sup>	<sup>2</sup>	F	<sup>1</sup>	<sup>3</sup>	<sup>1</sup>	5
	<sup>1</sup>	9	7	5	0				6	C			E	1	
3			B		C				F		D	A		6	
		<sup>1</sup>				9	8	2		7		F	0		1
C		F	8				E			A		5			2
7	2		9	A	F			6	1	8					B

TournamentPlus

Diff: 39 / 969.4221.2B22.2136.331C.12A1.1222.3333.5589+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 39 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 53

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

17	7	19	16	2	E	4	14	1	C	D	A	3	34	31	33	1
1	C	18	17	F	15	16	8	9	15	4	6	3	1	2	0	
F	13	8	3	6	7	4	3	4	15	6	16	2	C	5	E	
A	9	27	28	1	D	1	17	2	14	5	3	B	6	4	19	
32	7	8	0	24	29	23	4	5	A	6	3	31	32	9	1	5
35	D	C	29	E	4	25	1	3	B	36	7	0	1	2	30	
36	14	5	28	15	30	B	31	C	D	29	35	32	1	34	A	
8	A	1	30	1	9	5	32	35	36	2	36	33	B	D	6	
38	3	6	2	8	1	E	C	37	34	3	37	2	20	0	36	9
39	4	26	2	5	3	7	1	A	E	35	38	C	F	8	37	
3	E	3	1	10	11	9	D	7	1	2	F	1	3	1	5	
38	1	9	7	5	0	5	4	36	6	C	39	33	E	1	35	
3	11	35	B	21	C	12	10	36	F	34	D	A	35	6	34	13
25	15	1	26	28	19	9	8	2	35	7	34	F	0	33	1	
C	12	F	8	27	22	36	E	36	35	A	37	5	35	21	2	
7	2	36	9	A	F	35	15	6	1	8	33	34	34	32	B	
1				5				9				13				

TournamentPlus

Diff: 39 / 969.4221.2B22.2136.331C.12A1.1222.3333.5589+

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There are 39 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

All 39 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for C in the 8th row is (5, 8).
- \* The only spot for 6 in the 10th row is (8, 10).
- \* The only spot for 8 in the 11th row is (10, 11).
- \* The only spot for A in the 3rd column is (3, 14).
- \* The only spot for 1 in the 9th column is (9, 1).
- \* The only spot for C in the 2nd 4x4 square is (7, 4).
- \* The only spot for 2 in the 4th 4x4 square is (14, 2).
- \* The only spot for 5 in the 8th 4x4 square is (14, 6).
- \* The only spot for C in the 8th 4x4 square is (16, 5).
- \* The only spot for 8 in the 9th 4x4 square is (2, 12).
- \* The only spot for C in the 9th 4x4 square is (4, 11).
- \* The only spot for B in the 12th 4x4 square is (15, 11).
- \* The only spot for 6 in the 12th 4x4 square is (13, 11).

Step 2: There are 6 independent moves.

- \* The only spot for 1 in the 11th row is (11, 11).
- \* The only spot for F in the 3rd 4x4 square is (9, 4).
- \* The only spot for 1 in the 4th 4x4 square is (13, 3).
- \* The only spot for A in the 4th 4x4 square is (15, 2).
- \* The only spot for 1 in the 9th 4x4 square is (4, 10).
- \* The only spot for A in the 9th 4x4 square is (4, 9).

Step 3: There are 10 independent moves.

- \* The only spot for 9 in the 3rd row is (8, 3).
- \* The only spot for D in the 3rd row is (4, 3).
- \* The only spot for 0 in the 11th row is (1, 11).
- \* The only spot for 8 in the 9th column is (9, 6).
- \* The only spot for 9 in the 13th column is (13, 1).
- \* The only spot for 8 in the 3rd 4x4 square is (12, 4).
- \* The only spot for D in the 4th 4x4 square is (13, 2).
- \* The only spot for 1 in the 7th 4x4 square is (12, 5).
- \* The only spot for F in the 9th 4x4 square is (2, 9).
- \* The only spot for A in the 12th 4x4 square is (14, 11).

Step 4: There are 4 independent moves.

- \* The only spot for A in the 6th column is (6, 6).
- \* The only spot for A in the 8th column is (8, 12).
- \* The only spot for A in the 2nd 4x4 square is (7, 3).
- \* The only spot for E in the 3rd 4x4 square is (11, 2).

Step 5: There are 2 independent moves.

- \* The only spot for F in the 10th 4x4 square is (7, 12).
- \* The only spot for B in the 10th 4x4 square is (5, 10).

Step 6: There are 2 independent moves.

- \* The only spot for F in the 5th row is (11, 5).
- \* The only spot for B in the 11th column is (11, 3).

Step 7: There is 1 independent move.

- \* The only spot for B in the 2nd column is (2, 1).

Step 8: There are 2 independent moves.

- \* The only spot for B in the 3rd column is (3, 5).
- \* The only spot for B in the 8th column is (8, 2).

Step 9: There are 2 independent moves.

- \* 2 must be placed at (7, 11) because it is the only value left that is not already in the 11th row, the 7th column or the 10th 4x4 square.
- \* 9 must be placed at (6, 8) because it is the only value left that is not already in the 8th row, the 6th column or the 6th 4x4 square.

Step 10: There are 2 independent moves.

- \* The only spot for 9 in the 10th 4x4 square is (5, 11).
- \* The only spot for 2 in the 14th 4x4 square is (8, 13).

Step 11: There are 2 independent moves.

- \* The only spot for 5 in the 13th row is (2, 13).
- \* The only spot for 4 in the 10th 4x4 square is (6, 11).

Step 12: There are 2 independent moves.

- \* The only spot for 1 in the 13th row is (7, 13).
- \* The only spot for 1 in the 13th 4x4 square is (2, 15).

Step 13: There is 1 independent move.

- \* The only spot for 0 in the 2nd column is (2, 3).

Step 14: There are 3 independent moves.

- \* The only spot for 0 in the 1st row is (8, 1).
- \* The only spot for 3 in the 2nd column is (2, 7).
- \* The only spot for 0 in the 3rd 4x4 square is (10, 4).

Step 15: There are 6 independent moves.

- \* The only spot for 6 in the 2nd column is (2, 14).
- \* The only spot for 5 in the 8th column is (8, 16).
- \* The only spot for 2 in the 10th column is (10, 3).
- \* The only spot for 5 in the 2nd 4x4 square is (6, 2).
- \* The only spot for 7 in the 3rd 4x4 square is (10, 2).
- \* The only spot for 0 in the 6th 4x4 square is (5, 7).

Step 16: There are 3 independent moves.

- \* The only spot for 5 in the 4th column is (4, 1).
- \* The only spot for 8 in the 2nd 4x4 square is (7, 2).
- \* The only spot for 3 in the 3rd 4x4 square is (12, 3).

Step 17: There are 3 independent moves.

- \* The only spot for 3 in the 2nd row is (4, 2).
- \* The only spot for 6 in the 1st 4x4 square is (1, 1).
- \* The only spot for 3 in the 2nd 4x4 square is (8, 4).

Step 18: There is 1 independent move.

- \* The only spot for 4 in the 1st 4x4 square is (3, 2).

Step 19: There are 3 independent moves.

- \* B must be placed at (6, 14) because it is the only value left that is not already in the 14th row, the 6th column or the 14th 4x4 square.

- \* 7 must be placed at (16, 4) because it is the only value left that is not already in the 4th row, the 16th column or the 4th 4x4 square.
- \* 7 must be placed at (3, 1) because it is the only value left that is not already in the 1st row, the 3rd column or the 1st 4x4 square.

Step 20: There is 1 independent move.

- \* The only spot for 7 in the 12th 4x4 square is (14, 9).

Step 21: There are 2 independent moves.

- \* The only spot for 7 in the 13th row is (5, 13).
- \* The only spot for 7 in the 16th 4x4 square is (15, 15).

Step 22: There is 1 independent move.

- \* 6 must be placed at (6, 15) because it is the only value left that is not already in the 15th row, the 6th column or the 14th 4x4 square.

Step 23: There is 1 independent move.

- \* The only spot for 6 in the 5th row is (7, 5).

Step 24: There is 1 independent move.

- \* The only spot for D in the 6th 4x4 square is (5, 5).

Step 25: There are 2 independent moves.

- \* The only spot for D in the 14th row is (1, 14).
- \* The only spot for 3 in the 6th 4x4 square is (7, 6).

Step 26: There are 2 independent moves.

- \* The only spot for D in the 9th 4x4 square is (3, 10).
- \* The only spot for 4 in the 13th 4x4 square is (4, 14).

Step 27: There are 2 independent moves.

- \* The only spot for 2 in the 3rd column is (3, 4).
- \* The only spot for 4 in the 14th 4x4 square is (5, 15).

Step 28: There are 3 independent moves.

- \* The only spot for 2 in the 4th column is (4, 7).
- \* The only spot for E in the 1st 4x4 square is (4, 4).
- \* The only spot for 3 in the 14th 4x4 square is (5, 14).

Step 29: There are 3 independent moves.

- \* The only spot for 6 in the 7th row is (11, 7).
- \* The only spot for 6 in the 5th 4x4 square is (4, 6).
- \* The only spot for 2 in the 6th 4x4 square is (6, 5).

Step 30: There are 3 independent moves.

- \* The only spot for F in the 6th row is (16, 6).
- \* The only spot for F in the 5th 4x4 square is (4, 8).
- \* The only spot for 8 in the 6th 4x4 square is (6, 7).

Step 31: There are 3 independent moves.

- \* The only spot for 8 in the 13th column is (13, 5).
- \* The only spot for F in the 4th 4x4 square is (15, 1).
- \* The only spot for F in the 6th 4x4 square is (8, 7).

Step 32: There are 5 independent moves.

- \* The only spot for 3 in the 5th row is (14, 5).
- \* The only spot for E in the 5th row is (1, 5).



- \* The only spot for 7 in the 7th row is (13, 7).
- \* The only spot for 3 in the 15th column is (15, 16).
- \* The only spot for 7 in the 6th 4x4 square is (8, 8).

Step 33: There are 5 independent moves.

- \* The only spot for C in the 16th row is (12, 16).
- \* The only spot for 3 in the 13th column is (13, 12).
- \* The only spot for 3 in the 4th 4x4 square is (16, 1).
- \* The only spot for 4 in the 8th 4x4 square is (13, 8).
- \* The only spot for C in the 16th 4x4 square is (15, 14).

Step 34: There are 8 independent moves.

- \* The only spot for E in the 14th row is (12, 14).
- \* The only spot for 4 in the 16th row is (14, 16).
- \* The only spot for 4 in the 10th column is (10, 9).
- \* The only spot for 8 in the 16th column is (16, 13).
- \* The only spot for 8 in the 4th 4x4 square is (14, 1).
- \* The only spot for E in the 8th 4x4 square is (15, 7).
- \* The only spot for 4 in the 15th 4x4 square is (11, 13).
- \* The only spot for E in the 16th 4x4 square is (13, 16).

Step 35: There are 11 independent moves.

- \* The only spot for 4 in the 6th row is (1, 6).
- \* The only spot for 9 in the 13th row is (14, 13).
- \* The only spot for D in the 16th row is (7, 16).
- \* The only spot for 9 in the 10th column is (10, 15).
- \* The only spot for 0 in the 11th column is (11, 10).
- \* The only spot for E in the 7th 4x4 square is (9, 8).
- \* The only spot for 4 in the 7th 4x4 square is (12, 7).
- \* The only spot for 4 in the 12th 4x4 square is (16, 12).
- \* The only spot for E in the 13th 4x4 square is (3, 13).
- \* The only spot for 5 in the 15th 4x4 square is (10, 14).
- \* The only spot for D in the 16th 4x4 square is (14, 15).

Step 36: There are 10 independent moves.

- \* The only spot for D in the 12th row is (9, 12).
- \* The only spot for 0 in the 13th row is (9, 13).
- \* The only spot for 9 in the 5th 4x4 square is (1, 7).
- \* The only spot for 0 in the 7th 4x4 square is (12, 8).
- \* The only spot for 3 in the 7th 4x4 square is (10, 8).
- \* The only spot for 9 in the 7th 4x4 square is (11, 6).
- \* The only spot for D in the 12th 4x4 square is (16, 9).
- \* The only spot for 0 in the 13th 4x4 square is (3, 16).
- \* The only spot for 0 in the 14th 4x4 square is (7, 15).
- \* The only spot for 3 in the 15th 4x4 square is (9, 15).

Step 37: There are 4 independent moves.

- \* The only spot for 9 in the 9th row is (12, 9).
- \* The only spot for B in the 9th column is (9, 9).

- \* The only spot for 9 in the 12th 4x4 square is (16, 10).
- \* The only spot for B in the 15th 4x4 square is (12, 15).

Step 38: There are 3 independent moves.

- \* The only spot for 5 in the 9th row is (1, 9).
- \* The only spot for B in the 9th 4x4 square is (1, 12).
- \* The only spot for 5 in the 11th 4x4 square is (12, 10).

Step 39: There are 2 independent moves.

- \* The only spot for 2 in the 9th 4x4 square is (1, 10).
- \* The only spot for 2 in the 11th 4x4 square is (12, 12).

## Solution for Puzzle 53

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

6	B	7	5	2	E	4	0	1	C	D	A	9	8	F	3
1	C	4	3	F	5	8	B	9	7	E	6	D	2	A	0
F	0	8	D	6	7	A	9	4	2	B	3	1	C	5	E
A	9	2	E	1	D	C	3	F	0	5	8	B	6	4	7
E	7	B	0	D	2	6	4	5	A	F	1	8	3	9	C
4	D	C	6	E	A	3	1	8	B	9	7	0	5	2	F
9	3	5	2	0	8	B	F	C	D	6	4	7	1	E	A
8	A	1	F	C	9	5	7	E	3	2	0	4	B	D	6
5	F	6	A	8	1	E	C	B	4	3	9	2	7	0	D
2	4	D	1	B	3	7	6	A	E	0	5	C	F	8	9
0	E	3	C	9	4	2	D	7	8	1	F	6	A	B	5
B	8	9	7	5	0	F	A	D	6	C	2	3	E	1	4
3	5	E	B	7	C	1	2	0	F	4	D	A	9	6	8
D	6	A	4	3	B	9	8	2	5	7	E	F	0	C	1
C	1	F	8	4	6	0	E	3	9	A	B	5	D	7	2
7	2	0	9	A	F	D	5	6	1	8	C	E	4	3	B

TournamentPlus

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## Sudoku-16 Puzzle 54, TournamentPlus/42

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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			6				1	B	0		9				
	A	4	9	6		2				5	1				C
2	8			5		A				F		E	9	B	
	D			C				2		8		F	0		1
E			D	0						B		6			4
9		6			E	C						0		F	
	B		4	9		D		E			0		C		
					7			4	8		6				3
0						1				E	B	C		5	F
		E			D			9	1	6	C			3	
B		3	C	A	F		5						6		
			7				C		F			1	A		
			1			5	4							6	0
C				D	B	3	A						7		E
4		B					7		C			8	3	D	
	F	A	3						5	9	E		1		

TournamentPlus

Diff: 42 / 99.6443.2343.2643.3211.1D32.1133.22C4.2124+

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, and each 4x4 square.

There are 42 steps required to solve the puzzle above with a total of 152 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 54

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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	<sup>2</sup>	<sup>3</sup>	6				1	B	0		9				
<sup>2</sup>	A	4	9	6	<sup>2</sup>	2	<sup>1</sup>		<sup>2</sup>	5	1				C
2	8	<sup>1</sup>	<sup>2</sup>	5		A	<sup>2</sup>	<sup>2</sup>		F		E	9	B	<sup>1</sup>
	D		<sup>1</sup>	C			<sup>2</sup>	2	<sup>1</sup>	8		F	0		1
E			D	0					<sup>1</sup>	B		6			4
9		6		<sup>1</sup>	E	C						0		F	
	B		4	9		D		E			0		C		
					7			4	8	<sup>3</sup>	6		<sup>1</sup>		3
0						1	<sup>3</sup>			E	B	C		5	F
		E	<sup>3</sup>		D			9	1	6	C			3	
B	<sup>1</sup>	3	C	A	F		5						6		
			7				C		F			1	A		
			1	<sup>3</sup>	<sup>1</sup>	5	4		<sup>1</sup>				<sup>1</sup>	6	0
C				D	B	3	A						7		E
4		B	<sup>2</sup>				7		C			8	3	D	
	F	A	3						5	9	E	<sup>2</sup>	1	<sup>1</sup>	<sup>3</sup>

TournamentPlus

Diff: 42 / 99.6443.2343.2643.3211.1D32.1133.22C4.2124+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 42 steps required to solve the puzzle above with a total of 152 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 54

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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42	2	3	6	41	41	28	1	B	0	15	9	38	38	16	30	1
2	A	4	9	6	2	2	1	16	2	5	1	17	19	18	C	
2	8	1	2	5	40	A	2	2	42	F	42	E	9	B	1	
42	D	25	1	C	27	41	2	2	1	8	41	F	0	15	1	
E	4	26	D	0	36	20	12	35	1	B	38	6	37	26	4	5
9	5	6	21	1	E	C	22	30	40	42	31	0	4	F	41	
25	B	12	4	9	37	D	11	E	41	42	0	40	C	29	42	
24	12	23	6	25	7	20	13	4	8	3	6	4	1	5	3	
0	10	31	22	40	10	1	3	36	41	E	B	C	29	5	F	9
4	5	E	3	41	D	14	21	9	1	6	C	5	15	3	40	
B	1	3	C	A	F	40	5	33	39	40	34	41	6	34	9	
9	9	30	7	21	39	34	C	32	F	41	42	1	A	33	30	
14	6	8	1	3	1	5	4	20	1	36	35	7	1	6	0	13
C	11	12	13	D	B	3	A	34	20	29	35	8	7	9	E	
4	10	B	2	28	26	27	7	12	C	13	14	8	3	D	6	
8	F	A	3	40	41	12	13	7	5	9	E	2	1	1	3	
1				5				9				13				

TournamentPlus

Diff: 42 / 99.6443.2343.2643.3211.1D32.1133.22C4.2124+

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [3-steps](#); [Solution](#).

There are 42 steps required to solve the puzzle above with a total of 152 empty locations that must be determined, out of a total puzzle size of 256.

All 42 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for B in the 2nd row is (8, 2).
- \* The only spot for 6 in the 4th row is (10, 4).
- \* The only spot for C in the 13th row is (6, 13).
- \* The only spot for E in the 14th column is (14, 8).
- \* The only spot for B in the 1st 4x4 square is (4, 4).
- \* The only spot for 1 in the 1st 4x4 square is (3, 3).
- \* The only spot for 6 in the 4th 4x4 square is (16, 3).
- \* The only spot for 4 in the 6th 4x4 square is (5, 6).
- \* The only spot for 9 in the 7th 4x4 square is (10, 5).
- \* The only spot for 1 in the 9th 4x4 square is (2, 11).
- \* The only spot for B in the 15th 4x4 square is (10, 13).
- \* The only spot for C in the 16th 4x4 square is (15, 16).
- \* The only spot for F in the 16th 4x4 square is (14, 13).

Step 2: There are 10 independent moves.

- \* The only spot for 0 in the 2nd row is (6, 2).
- \* The only spot for F in the 2nd row is (1, 2).
- \* The only spot for C in the 3rd row is (9, 3).
- \* The only spot for 4 in the 16th row is (13, 16).
- \* The only spot for E in the 4th column is (4, 15).
- \* The only spot for E in the 8th column is (8, 4).
- \* The only spot for 0 in the 1st 4x4 square is (4, 3).
- \* The only spot for E in the 1st 4x4 square is (2, 1).
- \* The only spot for D in the 2nd 4x4 square is (8, 3).
- \* The only spot for E in the 3rd 4x4 square is (10, 2).

Step 3: There are 6 independent moves.

- \* The only spot for 9 in the 8th column is (8, 9).
- \* The only spot for C in the 1st 4x4 square is (3, 1).
- \* The only spot for C in the 7th 4x4 square is (11, 8).
- \* The only spot for F in the 9th 4x4 square is (4, 10).
- \* The only spot for E in the 14th 4x4 square is (5, 13).
- \* The only spot for B in the 16th 4x4 square is (16, 16).

Step 4: There are 4 independent moves.

- \* The only spot for B in the 6th row is (14, 6).
- \* The only spot for D in the 8th row is (13, 8).
- \* The only spot for A in the 10th row is (1, 10).
- \* The only spot for C in the 5th 4x4 square is (2, 5).

Step 5: There are 4 independent moves.

- \* The only spot for 5 in the 10th row is (2, 10).
- \* The only spot for 3 in the 2nd column is (2, 6).
- \* The only spot for 9 in the 8th 4x4 square is (15, 8).
- \* The only spot for B in the 12th 4x4 square is (13, 10).

Step 6: There are 3 independent moves.

- \* The only spot for A in the 8th row is (4, 8).

- \* The only spot for 5 in the 15th row is (16, 15).
- \* The only spot for 7 in the 2nd column is (2, 13).

Step 7: There are 2 independent moves.

- \* The only spot for 7 in the 15th 4x4 square is (9, 16).
- \* The only spot for A in the 16th 4x4 square is (13, 13).

Step 8: There are 3 independent moves.

- \* The only spot for 9 in the 13th row is (3, 13).
- \* The only spot for D in the 16th row is (1, 16).
- \* The only spot for 9 in the 16th 4x4 square is (13, 14).

Step 9: There are 4 independent moves.

- \* The only spot for 9 in the 11th row is (16, 11).
- \* The only spot for 6 in the 1st column is (1, 12).
- \* The only spot for 9 in the 9th 4x4 square is (2, 12).
- \* The only spot for 2 in the 16th 4x4 square is (15, 14).

Step 10: There are 3 independent moves.

- \* The only spot for 4 in the 9th 4x4 square is (2, 9).
- \* The only spot for 6 in the 10th 4x4 square is (6, 9).
- \* The only spot for 2 in the 13th 4x4 square is (2, 15).

Step 11: There are 2 independent moves.

- \* The only spot for 6 in the 6th 4x4 square is (8, 7).
- \* The only spot for 6 in the 13th 4x4 square is (2, 14).

Step 12: There are 6 independent moves.

- \* The only spot for F in the 7th row is (3, 7).
- \* The only spot for 6 in the 16th row is (7, 16).
- \* The only spot for 0 in the 2nd column is (2, 8).
- \* The only spot for 3 in the 8th column is (8, 5).
- \* The only spot for 0 in the 13th 4x4 square is (3, 14).
- \* The only spot for 6 in the 15th 4x4 square is (9, 15).

Step 13: There are 4 independent moves.

- \* The only spot for 0 in the 16th row is (8, 16).
- \* The only spot for F in the 8th column is (8, 8).
- \* The only spot for 5 in the 13th 4x4 square is (4, 14).
- \* The only spot for 0 in the 15th 4x4 square is (11, 15).

Step 14: There are 3 independent moves.

- \* The only spot for 0 in the 10th row is (7, 10).
- \* The only spot for 8 in the 13th 4x4 square is (1, 13).
- \* The only spot for A in the 15th 4x4 square is (12, 15).

Step 15: There are 3 independent moves.

- \* The only spot for A in the 4th row is (15, 4).
- \* The only spot for 4 in the 10th row is (14, 10).
- \* The only spot for A in the 3rd 4x4 square is (11, 1).

Step 16: There are 2 independent moves.

- \* The only spot for D in the 3rd 4x4 square is (9, 2).
- \* The only spot for 4 in the 4th 4x4 square is (15, 1).



Step 17: There is 1 independent move.

- \* The only spot for 3 in the 2nd row is (13, 2).

Step 18: There is 1 independent move.

- \* The only spot for 7 in the 2nd row is (15, 2).

Step 19: There is 1 independent move.

- \* The only spot for 8 in the 2nd row is (14, 2).

Step 20: There are 4 independent moves.

- \* 4 must be placed at (10, 14) because it is the only value left that is not already in the 14th row, the 10th column or the 15th 4x4 square.
- \* 3 must be placed at (9, 13) because it is the only value left that is not already in the 13th row, the 9th column or the 15th 4x4 square.
- \* B must be placed at (7, 8) because it is the only value left that is not already in the 8th row, the 7th column or the 6th 4x4 square.
- \* 8 must be placed at (7, 5) because it is the only value left that is not already in the 5th row, the 7th column or the 6th 4x4 square.

Step 21: There are 3 independent moves.

- \* The only spot for 8 in the 8th column is (8, 10).
- \* The only spot for 8 in the 5th 4x4 square is (4, 6).
- \* The only spot for B in the 10th 4x4 square is (5, 12).

Step 22: There are 2 independent moves.

- \* The only spot for 2 in the 4th column is (4, 9).
- \* The only spot for 2 in the 8th column is (8, 6).

Step 23: There is 1 independent move.

- \* The only spot for 2 in the 8th row is (3, 8).

Step 24: There is 1 independent move.

- \* The only spot for 5 in the 8th row is (1, 8).

Step 25: There are 3 independent moves.

- \* The only spot for 1 in the 8th row is (5, 8).
- \* The only spot for 5 in the 1st 4x4 square is (3, 4).
- \* The only spot for 1 in the 5th 4x4 square is (1, 7).

Step 26: There are 3 independent moves.

- \* The only spot for 7 in the 5th 4x4 square is (3, 5).
- \* The only spot for 1 in the 8th 4x4 square is (15, 5).
- \* The only spot for 1 in the 14th 4x4 square is (6, 15).

Step 27: There are 2 independent moves.

- \* The only spot for 9 in the 6th column is (6, 4).
- \* The only spot for 9 in the 14th 4x4 square is (7, 15).

Step 28: There are 2 independent moves.

- \* The only spot for F in the 7th column is (7, 1).
- \* The only spot for F in the 14th 4x4 square is (5, 15).

Step 29: There are 3 independent moves.

- \* 1 must be placed at (11, 14) because it is the only value left that is not already in the 14th row, the 11th column or the 15th 4x4 square.
- \* D must be placed at (14, 9) because it is the only value left that is not already in the 9th row, the 14th column or the 12th 4x4 square.

- \* 8 must be placed at (15, 7) because it is the only value left that is not already in the 7th row, the 15th column or the 8th 4x4 square.

Step 30: There are 4 independent moves.

- \* The only spot for D in the 4th 4x4 square is (16, 1).
- \* The only spot for 1 in the 7th 4x4 square is (9, 6).
- \* The only spot for D in the 9th 4x4 square is (3, 12).
- \* The only spot for 8 in the 12th 4x4 square is (16, 12).

Step 31: There are 2 independent moves.

- \* The only spot for 5 in the 6th row is (12, 6).
- \* The only spot for 8 in the 9th 4x4 square is (3, 9).

Step 32: There is 1 independent move.

- \* The only spot for 5 in the 11th 4x4 square is (9, 12).

Step 33: There are 2 independent moves.

- \* The only spot for 0 in the 12th row is (15, 12).
- \* The only spot for 0 in the 11th 4x4 square is (9, 11).

Step 34: There are 4 independent moves.

- \* The only spot for E in the 12th row is (7, 12).
- \* The only spot for 8 in the 9th column is (9, 14).
- \* The only spot for 8 in the 11th 4x4 square is (12, 11).
- \* The only spot for E in the 12th 4x4 square is (15, 11).

Step 35: There are 3 independent moves.

- \* The only spot for F in the 9th column is (9, 5).
- \* The only spot for D in the 12th column is (12, 13).
- \* The only spot for F in the 15th 4x4 square is (12, 14).

Step 36: There are 3 independent moves.

- \* The only spot for A in the 5th row is (6, 5).
- \* The only spot for A in the 9th column is (9, 9).
- \* The only spot for 2 in the 15th 4x4 square is (11, 13).

Step 37: There are 2 independent moves.

- \* The only spot for 5 in the 5th row is (14, 5).
- \* The only spot for 5 in the 6th 4x4 square is (6, 7).

Step 38: There are 3 independent moves.

- \* The only spot for 2 in the 5th row is (12, 5).
- \* The only spot for 2 in the 14th column is (14, 1).
- \* The only spot for 5 in the 4th 4x4 square is (13, 1).

Step 39: There are 2 independent moves.

- \* The only spot for 2 in the 12th row is (6, 12).
- \* The only spot for 2 in the 11th 4x4 square is (10, 11).

Step 40: There are 8 independent moves.

- \* The only spot for 4 in the 6th column is (6, 3).
- \* The only spot for D in the 10th column is (10, 6).
- \* The only spot for 2 in the 13th column is (13, 7).
- \* The only spot for 4 in the 10th 4x4 square is (7, 11).
- \* The only spot for 3 in the 10th 4x4 square is (5, 9).

- \* The only spot for D in the 11th 4x4 square is (11, 11).
- \* The only spot for 2 in the 12th 4x4 square is (16, 10).
- \* The only spot for 2 in the 14th 4x4 square is (5, 16).

Step 41: There are 11 independent moves.

- \* The only spot for A in the 6th row is (16, 6).
- \* The only spot for 8 in the 5th column is (5, 1).
- \* The only spot for 7 in the 7th column is (7, 4).
- \* The only spot for 4 in the 11th column is (11, 12).
- \* The only spot for 3 in the 2nd 4x4 square is (6, 1).
- \* The only spot for 4 in the 3rd 4x4 square is (12, 4).
- \* The only spot for A in the 7th 4x4 square is (10, 7).
- \* The only spot for 7 in the 10th 4x4 square is (5, 10).
- \* The only spot for 7 in the 11th 4x4 square is (10, 9).
- \* The only spot for 7 in the 12th 4x4 square is (13, 11).
- \* The only spot for 8 in the 14th 4x4 square is (6, 16).

Step 42: There are 8 independent moves.

- \* The only spot for 7 in the 6th row is (11, 6).
- \* The only spot for 3 in the 10th column is (10, 3).
- \* The only spot for 3 in the 1st 4x4 square is (1, 4).
- \* The only spot for 7 in the 1st 4x4 square is (1, 1).
- \* The only spot for 7 in the 3rd 4x4 square is (12, 3).
- \* The only spot for 3 in the 7th 4x4 square is (11, 7).
- \* The only spot for 7 in the 8th 4x4 square is (16, 7).
- \* The only spot for 3 in the 11th 4x4 square is (12, 12).

## Solution for Puzzle 54

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

7	E	C	6	8	3	F	1	B	0	A	9	5	2	4	D
F	A	4	9	6	0	2	B	D	E	5	1	3	8	7	C
2	8	1	0	5	4	A	D	C	3	F	7	E	9	B	6
3	D	5	B	C	9	7	E	2	6	8	4	F	0	A	1
E	C	7	D	0	A	8	3	F	9	B	2	6	5	1	4
9	3	6	8	4	E	C	2	1	D	7	5	0	B	F	A
1	B	F	4	9	5	D	6	E	A	3	0	2	C	8	7
5	0	2	A	1	7	B	F	4	8	C	6	D	E	9	3
0	4	8	2	3	6	1	9	A	7	E	B	C	D	5	F
A	5	E	F	7	D	0	8	9	1	6	C	B	4	3	2
B	1	3	C	A	F	4	5	0	2	D	8	7	6	E	9
6	9	D	7	B	2	E	C	5	F	4	3	1	A	0	8
8	7	9	1	E	C	5	4	3	B	2	D	A	F	6	0
C	6	0	5	D	B	3	A	8	4	1	F	9	7	2	E
4	2	B	E	F	1	9	7	6	C	0	A	8	3	D	5
D	F	A	3	2	8	6	0	7	5	9	E	4	1	C	B

TournamentPlus

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## Chapter 30

# Two Challenging HyperSudoku-16 Puzzles

There are two puzzles in this section ranging in difficulty from nineteen to twenty. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 55** (140/256) DiffKey 19 / 998.6469.9563.5537.7953

**Puzzle 56** (158/256) DiffKey 20 / 9752.2421.12C5.9999.9992

## HyperSudoku-16 Puzzle 55, Challenging/19

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

9		4			1	A	F		0			7		C	D
	A	C	7		3		0		6					1	F
E	1					C			A	F					
3		F						7	8	1	C	A			5
0	4		E		6	F		3		5	B				
	2				C		1		F						A
7		A					5	0			9	1		3	
C		6		0				8	1			4	F	5	
			6	7			C		9	0					2
	0	9		3			B	A			6		5		
	E	8	1		9					7		F	C	A	
B				F	A		D	1			2		6	8	
	7		0	B			2		3					F	
6			3			8	A	F		B	1		0		
4				1				D		A	E	6		2	8
		5	A	4	F					9			3		1

Challenging

Diff: 19 / 998.6469.9563.5537.7953

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 19 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 55

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

9	<sup>2</sup>	4			1	A	F		0			7		C	D
	A	C	7		3		0		6					1	F
E	1	<sup>1</sup>			<sup>1</sup>	C			A	F				<sup>2</sup>	
3		F			<sup>2</sup>			7	8	1	C	A		<sup>1</sup>	5
0	4	<sup>1</sup>	E	<sup>1</sup>	6	F		3		5	B				<sup>3</sup>
	2	<sup>1</sup>			C		1		F	<sup>1</sup>	<sup>2</sup>	<sup>2</sup>			A
7		A					5	0		<sup>3</sup>	9	1		3	<sup>2</sup>
C		6		0				8	1		<sup>1</sup>	4	F	5	
<sup>1</sup>			6	7	<sup>2</sup>		C		9	0	<sup>1</sup>		<sup>1</sup>		2
<sup>2</sup>	0	9		3		<sup>1</sup>	B	A		<sup>2</sup>	6		5		
	E	8	1	<sup>1</sup>	9		<sup>3</sup>		<sup>1</sup>	7		F	C	A	
B		<sup>1</sup>	<sup>1</sup>	F	A		D	1			2		6	8	
<sup>1</sup>	7	<sup>3</sup>	0	B		<sup>3</sup>	2	<sup>2</sup>	3		<sup>2</sup>		<sup>1</sup>	F	
6		<sup>2</sup>	3	<sup>1</sup>		8	A	F		B	1		0		
4		<sup>2</sup>		1	<sup>1</sup>			D		A	E	6	<sup>3</sup>	2	8
		5	A	4	F			<sup>3</sup>		9	<sup>1</sup>	<sup>1</sup>	3	<sup>3</sup>	1

Challenging

Diff: 19 / 998.6469.9563.5537.7953

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There are 19 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 55

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

140/256

9	<sup>2</sup>	4	<sup>19</sup>	<sup>18</sup>	1	A	F	<sup>14</sup>	0	<sup>7</sup>	<sup>7</sup>	7	<sup>12</sup>	C	D	<sup>1</sup>
<sup>10</sup>	A	C	7	<sup>10</sup>	3	<sup>13</sup>	0	<sup>12</sup>	6	<sup>6</sup>	<sup>8</sup>	<sup>12</sup>	<sup>10</sup>	1	F	
E	1	<sup>1</sup>	<sup>18</sup>	<sup>19</sup>	<sup>1</sup>	C	<sup>12</sup>	<sup>15</sup>	A	F	<sup>9</sup>	<sup>7</sup>	<sup>11</sup>	<sup>2</sup>	<sup>13</sup>	
3	<sup>15</sup>	F	<sup>17</sup>	<sup>16</sup>	<sup>2</sup>	<sup>18</sup>	<sup>4</sup>	7	8	1	C	A	<sup>10</sup>	<sup>1</sup>	5	
0	4	<sup>1</sup>	E	<sup>1</sup>	6	F	<sup>17</sup>	3	<sup>13</sup>	5	B	<sup>11</sup>	<sup>12</sup>	<sup>16</sup>	<sup>3</sup>	<sup>5</sup>
<sup>9</sup>	2	<sup>1</sup>	<sup>14</sup>	<sup>15</sup>	C	<sup>17</sup>	1	<sup>16</sup>	F	<sup>1</sup>	<sup>2</sup>	<sup>2</sup>	<sup>13</sup>	<sup>17</sup>	A	
7	<sup>8</sup>	A	<sup>15</sup>	<sup>19</sup>	<sup>15</sup>	<sup>18</sup>	5	0	<sup>17</sup>	<sup>3</sup>	9	1	<sup>13</sup>	3	<sup>2</sup>	
C	<sup>16</sup>	6	<sup>15</sup>	0	<sup>14</sup>	<sup>17</sup>	<sup>16</sup>	8	1	<sup>5</sup>	<sup>1</sup>	4	F	5	<sup>15</sup>	
<sup>1</sup>	<sup>5</sup>	<sup>4</sup>	6	7	<sup>2</sup>	<sup>8</sup>	C	<sup>17</sup>	9	0	<sup>1</sup>	<sup>4</sup>	<sup>1</sup>	<sup>17</sup>	2	<sup>9</sup>
<sup>2</sup>	0	9	<sup>7</sup>	3	<sup>8</sup>	<sup>1</sup>	B	A	<sup>16</sup>	<sup>2</sup>	6	<sup>7</sup>	5	<sup>17</sup>	<sup>16</sup>	
<sup>8</sup>	E	8	1	<sup>1</sup>	9	<sup>7</sup>	<sup>3</sup>	<sup>8</sup>	<sup>1</sup>	7	<sup>5</sup>	F	C	A	<sup>6</sup>	
B	<sup>6</sup>	<sup>1</sup>	<sup>1</sup>	F	A	<sup>9</sup>	D	1	<sup>7</sup>	<sup>6</sup>	2	<sup>8</sup>	6	8	<sup>7</sup>	
<sup>1</sup>	7	<sup>3</sup>	0	B	<sup>6</sup>	<sup>3</sup>	2	<sup>2</sup>	3	<sup>4</sup>	<sup>2</sup>	<sup>7</sup>	<sup>1</sup>	F	<sup>8</sup>	<sup>13</sup>
6	<sup>9</sup>	<sup>2</sup>	3	<sup>1</sup>	<sup>7</sup>	8	A	F	<sup>4</sup>	B	1	<sup>8</sup>	0	<sup>6</sup>	<sup>7</sup>	
4	<sup>7</sup>	<sup>2</sup>	<sup>8</sup>	1	<sup>1</sup>	<sup>18</sup>	<sup>17</sup>	D	<sup>5</sup>	A	E	6	<sup>3</sup>	2	8	
<sup>10</sup>	<sup>9</sup>	5	A	4	F	<sup>11</sup>	<sup>10</sup>	<sup>3</sup>	<sup>4</sup>	9	<sup>1</sup>	<sup>1</sup>	3	<sup>3</sup>	1	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Challenging

Diff: 19 / 998.6469.9563.5537.7953

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There are 19 steps required to solve the puzzle above with a total of 140 empty locations that must be determined, out of a total puzzle size of 256.

All 19 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 22 independent moves.

- \* The only spot for 0 in the 4th row is (15, 4).
- \* The only spot for 1 in the 10th row is (7, 10).
- \* The only spot for 0 in the 6th column is (6, 15).
- \* The only spot for B in the 10th column is (10, 11).
- \* The only spot for C in the 13th column is (13, 16).
- \* The only spot for A in the 7th 4x4 square is (12, 8).
- \* The only spot for 7 in the 9th 4x4 square is (3, 12).
- \* The only spot for A in the 9th 4x4 square is (1, 9).
- \* The only spot for F in the 11th 4x4 square is (12, 9).
- \* The only spot for 1 in the 12th 4x4 square is (14, 9).
- \* The only spot for 1 in the 13th 4x4 square is (1, 13).
- \* The only spot for C in the 14th 4x4 square is (5, 14).
- \* The only spot for 0 in the 15th 4x4 square is (12, 16).
- \* The only spot for 3 in the 1st 4x4 inner square is (3, 6).
- \* The only spot for A in the 1st 4x4 inner square is (5, 5).
- \* The only spot for 1 in the 1st 4x4 inner square is (3, 5).
- \* The only spot for 7 in the 1st 4x4 inner square is (6, 3).
- \* The only spot for 0 in the 1st 4x4 inner square is (3, 3).
- \* The only spot for 6 in the 2nd 4x4 inner square is (11, 6).
- \* The only spot for 4 in the 3rd 4x4 inner square is (4, 12).
- \* The only spot for 6 in the 3rd 4x4 inner square is (5, 11).
- \* The only spot for A in the 4th 4x4 inner square is (14, 13).

Step 2: There are 13 independent moves.

- \* The only spot for 6 in the 1st row is (2, 1).
- \* The only spot for 8 in the 9th row is (6, 9).
- \* The only spot for F in the 1st column is (1, 10).
- \* The only spot for B in the 3rd column is (3, 15).
- \* The only spot for C in the 9th column is (9, 13).
- \* The only spot for 8 in the 12th column is (12, 13).
- \* The only spot for 7 in the 12th column is (12, 6).
- \* The only spot for 6 in the 15th column is (15, 3).
- \* The only spot for 6 in the 8th 4x4 square is (16, 7).
- \* The only spot for 8 in the 11th 4x4 square is (11, 10).
- \* The only spot for 4 in the 1st 4x4 inner square is (6, 4).
- \* The only spot for 0 in the 2nd 4x4 inner square is (13, 6).
- \* The only spot for 2 in the 3rd 4x4 inner square is (3, 14).

Step 3: There are 8 independent moves.

- \* The only spot for 6 in the 13th row is (7, 13).
- \* The only spot for 4 in the 8th column is (8, 11).
- \* The only spot for C in the 11th column is (11, 7).
- \* The only spot for 7 in the 14th column is (14, 15).
- \* The only spot for C in the 8th 4x4 square is (16, 5).
- \* The only spot for E in the 13th 4x4 square is (3, 13).
- \* The only spot for 6 in the 15th 4x4 square is (9, 16).

- \* The only spot for B in the 16th 4x4 square is (15, 16).

Step 4: There are 6 independent moves.

- \* The only spot for 7 in the 14th row is (10, 14).
- \* The only spot for D in the 3rd column is (3, 9).
- \* The only spot for 6 in the 2nd 4x4 square is (8, 4).
- \* The only spot for B in the 12th 4x4 square is (13, 9).
- \* The only spot for 2 in the 15th 4x4 square is (10, 16).
- \* The only spot for 4 in the 4th 4x4 inner square is (11, 13).

Step 5: There are 4 independent moves.

- \* The only spot for 3 in the 9th row is (2, 9).
- \* The only spot for D in the 11th row is (12, 11).
- \* The only spot for 2 in the 7th 4x4 square is (11, 8).
- \* The only spot for 5 in the 15th 4x4 square is (10, 15).

Step 6: There are 6 independent moves.

- \* The only spot for 3 in the 11th row is (16, 11).
- \* The only spot for D in the 13th row is (6, 13).
- \* The only spot for 5 in the 2nd column is (2, 12).
- \* The only spot for D in the 3rd 4x4 square is (11, 2).
- \* The only spot for 3 in the 11th 4x4 square is (11, 12).
- \* The only spot for D in the 16th 4x4 square is (15, 14).

Step 7: There are 12 independent moves.

- \* The only spot for 3 in the 1st row is (12, 1).
- \* The only spot for 0 in the 11th row is (7, 11).
- \* The only spot for C in the 12th row is (10, 12).
- \* The only spot for 5 in the 13th row is (13, 13).
- \* The only spot for C in the 2nd column is (2, 15).
- \* The only spot for E in the 11th column is (11, 1).
- \* The only spot for 3 in the 4th 4x4 square is (13, 3).
- \* The only spot for C in the 9th 4x4 square is (4, 10).
- \* The only spot for 0 in the 12th 4x4 square is (16, 12).
- \* The only spot for D in the 12th 4x4 square is (13, 10).
- \* The only spot for 4 in the 16th 4x4 square is (16, 14).
- \* The only spot for 5 in the 3rd 4x4 inner square is (6, 14).

Step 8: There are 10 independent moves.

- \* The only spot for 5 in the 11th row is (9, 11).
- \* The only spot for 9 in the 13th row is (16, 13).
- \* The only spot for F in the 2nd column is (2, 7).
- \* The only spot for 5 in the 12th column is (12, 2).
- \* The only spot for 2 in the 9th 4x4 square is (1, 11).
- \* The only spot for 2 in the 10th 4x4 square is (6, 10).
- \* The only spot for 5 in the 10th 4x4 square is (7, 9).
- \* The only spot for 9 in the 12th 4x4 square is (13, 12).
- \* The only spot for F in the 13th 4x4 square is (4, 15).
- \* The only spot for E in the 16th 4x4 square is (13, 14).

Step 9: There are 5 independent moves.

- \* The only spot for 5 in the 1st column is (1, 6).
- \* The only spot for 8 in the 2nd column is (2, 16).
- \* The only spot for 4 in the 12th column is (12, 3).
- \* The only spot for E in the 10th 4x4 square is (7, 12).
- \* The only spot for 9 in the 13th 4x4 square is (2, 14).

Step 10: There are 6 independent moves.

- \* The only spot for E in the 4th row is (14, 4).
- \* The only spot for 8 in the 1st column is (1, 2).
- \* The only spot for E in the 2nd 4x4 square is (5, 2).
- \* The only spot for 4 in the 4th 4x4 square is (14, 2).
- \* The only spot for D in the 13th 4x4 square is (1, 16).
- \* The only spot for E in the 14th 4x4 square is (8, 16).

Step 11: There are 3 independent moves.

- \* The only spot for 8 in the 13th column is (13, 5).
- \* The only spot for 9 in the 4th 4x4 square is (14, 3).
- \* The only spot for 7 in the 14th 4x4 square is (7, 16).

Step 12: There are 5 independent moves.

- \* The only spot for 8 in the 8th column is (8, 3).
- \* The only spot for 2 in the 13th column is (13, 2).
- \* The only spot for 9 in the 3rd 4x4 square is (9, 2).
- \* The only spot for 8 in the 4th 4x4 square is (14, 1).
- \* The only spot for 2 in the 2nd 4x4 inner square is (14, 5).

Step 13: There are 5 independent moves.

- \* The only spot for B in the 2nd row is (7, 2).
- \* The only spot for D in the 5th row is (10, 5).
- \* The only spot for B in the 14th column is (14, 7).
- \* The only spot for B in the 4th 4x4 square is (16, 3).
- \* The only spot for D in the 2nd 4x4 inner square is (14, 6).

Step 14: There are 3 independent moves.

- \* The only spot for B in the 6th row is (4, 6).
- \* The only spot for B in the 3rd 4x4 square is (9, 1).
- \* The only spot for B in the 6th 4x4 square is (6, 8).

Step 15: There are 7 independent moves.

- \* The only spot for E in the 8th row is (16, 8).
- \* The only spot for B in the 1st 4x4 square is (2, 4).
- \* The only spot for 2 in the 3rd 4x4 square is (9, 3).
- \* The only spot for 9 in the 5th 4x4 square is (4, 8).
- \* The only spot for 8 in the 5th 4x4 square is (4, 7).
- \* The only spot for E in the 6th 4x4 square is (6, 7).
- \* The only spot for 8 in the 1st 4x4 inner square is (5, 6).

Step 16: There are 7 independent moves.

- \* The only spot for 7 in the 8th row is (8, 8).
- \* The only spot for E in the 10th column is (10, 10).

- \* The only spot for 7 in the 16th column is (16, 10).
- \* The only spot for D in the 5th 4x4 square is (2, 8).
- \* The only spot for E in the 7th 4x4 square is (9, 6).
- \* The only spot for 7 in the 8th 4x4 square is (15, 5).
- \* The only spot for 9 in the 1st 4x4 inner square is (5, 4).

Step 17: There are 10 independent moves.

- \* The only spot for 9 in the 5th row is (8, 5).
- \* The only spot for 4 in the 6th row is (7, 6).
- \* The only spot for 4 in the 10th row is (15, 10).
- \* The only spot for 3 in the 8th column is (8, 15).
- \* The only spot for 3 in the 6th 4x4 square is (7, 8).
- \* The only spot for 4 in the 7th 4x4 square is (10, 7).
- \* The only spot for 9 in the 8th 4x4 square is (15, 6).
- \* The only spot for 4 in the 11th 4x4 square is (9, 9).
- \* The only spot for E in the 12th 4x4 square is (15, 9).
- \* The only spot for 2 in the 1st 4x4 inner square is (4, 4).

Step 18: There are 5 independent moves.

- \* The only spot for D in the 4th row is (7, 4).
- \* The only spot for 2 in the 7th column is (7, 7).
- \* The only spot for D in the 1st 4x4 square is (4, 3).
- \* The only spot for 2 in the 2nd 4x4 square is (5, 1).
- \* The only spot for 9 in the 14th 4x4 square is (7, 15).

Step 19: There are 3 independent moves.

- \* The only spot for 5 in the 1st 4x4 square is (4, 1).
- \* The only spot for D in the 6th 4x4 square is (5, 7).
- \* The only spot for 5 in the 1st 4x4 inner square is (5, 3).

## Solution for Puzzle 55

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

9	6	4	5	2	1	A	F	B	0	E	3	7	8	C	D
8	A	C	7	E	3	B	0	9	6	D	5	2	4	1	F
E	1	0	D	5	7	C	8	2	A	F	4	3	9	6	B
3	B	F	2	9	4	D	6	7	8	1	C	A	E	0	5
0	4	1	E	A	6	F	9	3	D	5	B	8	2	7	C
5	2	3	B	8	C	4	1	E	F	6	7	0	D	9	A
7	F	A	8	D	E	2	5	0	4	C	9	1	B	3	6
C	D	6	9	0	B	3	7	8	1	2	A	4	F	5	E
A	3	D	6	7	8	5	C	4	9	0	F	B	1	E	2
F	0	9	C	3	2	1	B	A	E	8	6	D	5	4	7
2	E	8	1	6	9	0	4	5	B	7	D	F	C	A	3
B	5	7	4	F	A	E	D	1	C	3	2	9	6	8	0
1	7	E	0	B	D	6	2	C	3	4	8	5	A	F	9
6	9	2	3	C	5	8	A	F	7	B	1	E	0	D	4
4	C	B	F	1	0	9	3	D	5	A	E	6	7	2	8
D	8	5	A	4	F	7	E	6	2	9	0	C	3	B	1

Challenging

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## HyperSudoku-16 Puzzle 56, Challenging/20

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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E		4			0					F	C		3	7	
			2			A		9			8		1		
	8			2	7	4	D					C			
		9	D	F					7				5	E	B
B	9			1					5			8	6		
						0					1	7		F	
3	C		4				2		0		F				
	F		6	5		9		8			E				C
	3		A						9	8		0		1	7
4	1	0						D		6	7			5	
				D	5	C	4			1			2		
				0		7	A	5						D	4
		3				6	5			7		F			E
9		6			2						4			A	1
			B	7				E		2		3			
		1	5		B		8	C	3			9			

Challenging

Diff: 20 / 9752.2421.12C5.9999.9992

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 20 steps required to solve the puzzle above with a total of 158 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 56

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>E</b>		<b>4</b>	<sup>1</sup>		<b>0</b>	<sup>1</sup>				<b>F</b>	<b>C</b>		<b>3</b>	<b>7</b>	<sup>1</sup>
			<b>2</b>			<b>A</b>		<b>9</b>		<sup>1</sup>	<b>8</b>		<b>1</b>		
	<b>8</b>	<sup>3</sup>	<sup>1</sup>	<b>2</b>	<b>7</b>	<b>4</b>	<b>D</b>			<sup>2</sup>		<b>C</b>	<sup>1</sup>		
		<b>9</b>	<b>D</b>	<b>F</b>					<b>7</b>				<b>5</b>	<b>E</b>	<b>B</b>
<b>B</b>	<b>9</b>		<sup>2</sup>	<b>1</b>					<b>5</b>		<sup>3</sup>	<b>8</b>	<b>6</b>		
	<sup>2</sup>					<b>0</b>			<sup>1</sup>		<b>1</b>	<b>7</b>		<b>F</b>	
<b>3</b>	<b>C</b>		<b>4</b>				<b>2</b>		<b>0</b>		<b>F</b>	<sup>1</sup>	<sup>3</sup>		<sup>3</sup>
<sup>1</sup>	<b>F</b>		<b>6</b>	<b>5</b>		<b>9</b>		<b>8</b>			<b>E</b>				<b>C</b>
	<b>3</b>		<b>A</b>					<sup>1</sup>	<b>9</b>	<b>8</b>		<b>0</b>		<b>1</b>	<b>7</b>
<b>4</b>	<b>1</b>	<b>0</b>						<b>D</b>		<b>6</b>	<b>7</b>			<b>5</b>	
				<b>D</b>	<b>5</b>	<b>C</b>	<b>4</b>			<b>1</b>			<b>2</b>		
			<sup>3</sup>	<b>0</b>	<sup>1</sup>	<b>7</b>	<b>A</b>	<b>5</b>		<sup>1</sup>	<sup>2</sup>			<b>D</b>	<b>4</b>
		<b>3</b>				<b>6</b>	<b>5</b>			<b>7</b>	<sup>2</sup>	<b>F</b>			<b>E</b>
<b>9</b>		<b>6</b>			<b>2</b>						<b>4</b>	<sup>2</sup>		<b>A</b>	<b>1</b>
			<b>B</b>	<b>7</b>				<b>E</b>		<b>2</b>	<sup>1</sup>	<b>3</b>			
		<b>1</b>	<b>5</b>		<b>B</b>		<b>8</b>	<b>C</b>	<b>3</b>		<sup>2</sup>	<b>9</b>	<sup>1</sup>		

Challenging

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There are 20 steps required to solve the puzzle above with a total of 158 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 56

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>E</b>	<sup>16</sup>	<b>4</b>	<sup>1</sup>	<sup>18</sup>	<b>0</b>	<sup>1</sup>	<sup>17</sup>	<sup>11</sup>	<sup>12</sup>	<b>F</b>	<b>C</b>	<sup>13</sup>	<b>3</b>	<b>7</b>	<sup>1</sup>	<sup>1</sup>
<sup>18</sup>	<sup>19</sup>	<sup>18</sup>	<b>2</b>	<sup>19</sup>	<sup>20</sup>	<b>A</b>	<sup>18</sup>	<b>9</b>	<sup>13</sup>	<sup>1</sup>	<b>8</b>	<sup>15</sup>	<b>1</b>	<sup>17</sup>	<sup>16</sup>	
<sup>15</sup>	<b>8</b>	<sup>3</sup>	<sup>1</sup>	<b>2</b>	<b>7</b>	<b>4</b>	<b>D</b>	<sup>15</sup>	<sup>14</sup>	<sup>2</sup>	<sup>5</sup>	<b>C</b>	<sup>1</sup>	<sup>14</sup>	<sup>13</sup>	
<sup>16</sup>	<sup>17</sup>	<b>9</b>	<b>D</b>	<b>F</b>	<sup>15</sup>	<sup>13</sup>	<sup>14</sup>	<sup>10</sup>	<b>7</b>	<sup>13</sup>	<sup>13</sup>	<sup>12</sup>	<b>5</b>	<b>E</b>	<b>B</b>	
<b>B</b>	<b>9</b>	<sup>13</sup>	<sup>2</sup>	<b>1</b>	<sup>16</sup>	<sup>19</sup>	<sup>19</sup>	<sup>8</sup>	<b>5</b>	<sup>18</sup>	<sup>3</sup>	<b>8</b>	<b>6</b>	<sup>15</sup>	<sup>16</sup>	<sup>5</sup>
<sup>6</sup>	<sup>2</sup>	<sup>12</sup>	<sup>14</sup>	<sup>4</sup>	<sup>14</sup>	<b>0</b>	<sup>15</sup>	<sup>9</sup>	<sup>1</sup>	<sup>17</sup>	<b>1</b>	<b>7</b>	<sup>16</sup>	<b>F</b>	<sup>17</sup>	
<b>3</b>	<b>C</b>	<sup>7</sup>	<b>4</b>	<sup>17</sup>	<sup>18</sup>	<sup>19</sup>	<b>2</b>	<sup>10</sup>	<b>0</b>	<sup>15</sup>	<b>F</b>	<sup>1</sup>	<sup>3</sup>	<sup>16</sup>	<sup>3</sup>	
<sup>1</sup>	<b>F</b>	<sup>6</sup>	<b>6</b>	<b>5</b>	<sup>17</sup>	<b>9</b>	<sup>7</sup>	<b>8</b>	<sup>14</sup>	<sup>16</sup>	<b>E</b>	<sup>17</sup>	<sup>14</sup>	<sup>15</sup>	<b>C</b>	
<sup>4</sup>	<b>3</b>	<sup>5</sup>	<b>A</b>	<sup>16</sup>	<sup>19</sup>	<sup>13</sup>	<sup>20</sup>	<sup>1</sup>	<b>9</b>	<b>8</b>	<sup>11</sup>	<b>0</b>	<sup>6</sup>	<b>1</b>	<b>7</b>	<sup>9</sup>
<b>4</b>	<b>1</b>	<b>0</b>	<sup>6</sup>	<sup>18</sup>	<sup>19</sup>	<sup>12</sup>	<sup>19</sup>	<b>D</b>	<sup>19</sup>	<b>6</b>	<b>7</b>	<sup>17</sup>	<sup>17</sup>	<b>5</b>	<sup>16</sup>	
<sup>17</sup>	<sup>18</sup>	<sup>19</sup>	<sup>15</sup>	<b>D</b>	<b>5</b>	<b>C</b>	<b>4</b>	<sup>13</sup>	<sup>18</sup>	<b>1</b>	<sup>12</sup>	<sup>18</sup>	<b>2</b>	<sup>16</sup>	<sup>15</sup>	
<sup>18</sup>	<sup>17</sup>	<sup>18</sup>	<sup>3</sup>	<b>0</b>	<sup>1</sup>	<b>7</b>	<b>A</b>	<b>5</b>	<sup>16</sup>	<sup>1</sup>	<sup>2</sup>	<sup>19</sup>	<sup>17</sup>	<b>D</b>	<b>4</b>	
<sup>18</sup>	<sup>15</sup>	<b>3</b>	<sup>11</sup>	<sup>15</sup>	<sup>16</sup>	<b>6</b>	<b>5</b>	<sup>15</sup>	<sup>15</sup>	<b>7</b>	<sup>2</sup>	<b>F</b>	<sup>16</sup>	<sup>17</sup>	<b>E</b>	<sup>13</sup>
<b>9</b>	<sup>17</sup>	<b>6</b>	<sup>16</sup>	<sup>17</sup>	<b>2</b>	<sup>18</sup>	<sup>18</sup>	<sup>14</sup>	<sup>17</sup>	<sup>15</sup>	<b>4</b>	<sup>2</sup>	<sup>16</sup>	<b>A</b>	<b>1</b>	
<sup>18</sup>	<sup>18</sup>	<sup>17</sup>	<b>B</b>	<b>7</b>	<sup>18</sup>	<sup>14</sup>	<sup>19</sup>	<b>E</b>	<sup>16</sup>	<b>2</b>	<sup>1</sup>	<b>3</b>	<sup>15</sup>	<sup>17</sup>	<sup>17</sup>	
<sup>17</sup>	<sup>16</sup>	<b>1</b>	<b>5</b>	<sup>19</sup>	<b>B</b>	<sup>18</sup>	<b>8</b>	<b>C</b>	<b>3</b>	<sup>16</sup>	<sup>2</sup>	<b>9</b>	<sup>1</sup>	<sup>18</sup>	<sup>18</sup>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Challenging

Diff: 20 / 9752.2421.12C5.9999.9992

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There are 20 steps required to solve the puzzle above with a total of 158 empty locations that must be determined, out of a total puzzle size of 256.

All 20 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).



Step 1: There are 14 independent moves.

- \* The only spot for 1 in the 7th row is (13, 7).
- \* The only spot for 1 in the 4th column is (4, 1).
- \* The only spot for C in the 11th column is (11, 12).
- \* The only spot for 5 in the 12th column is (12, 15).
- \* The only spot for 3 in the 1st 4x4 square is (4, 3).
- \* The only spot for 5 in the 2nd 4x4 square is (7, 1).
- \* The only spot for 5 in the 3rd 4x4 square is (11, 2).
- \* The only spot for 8 in the 4th 4x4 square is (16, 1).
- \* The only spot for 1 in the 5th 4x4 square is (1, 8).
- \* The only spot for C in the 7th 4x4 square is (10, 6).
- \* The only spot for 1 in the 10th 4x4 square is (6, 12).
- \* The only spot for 4 in the 11th 4x4 square is (9, 9).
- \* The only spot for 7 in the 16th 4x4 square is (14, 16).
- \* The only spot for F in the 2nd 4x4 inner square is (14, 3).

Step 2: There are 7 independent moves.

- \* The only spot for 3 in the 12th row is (12, 12).
- \* The only spot for 5 in the 2nd column is (2, 6).
- \* The only spot for E in the 11th column is (11, 3).
- \* The only spot for 6 in the 12th column is (12, 16).
- \* The only spot for 9 in the 15th 4x4 square is (12, 13).
- \* The only spot for 0 in the 1st 4x4 inner square is (4, 5).
- \* The only spot for 5 in the 4th 4x4 inner square is (13, 14).

Step 3: There are 5 independent moves.

- \* The only spot for 9 in the 12th row is (4, 12).
- \* The only spot for D in the 12th column is (12, 5).
- \* The only spot for 5 in the 8th 4x4 square is (16, 7).
- \* The only spot for E in the 8th 4x4 square is (14, 7).
- \* The only spot for 5 in the 1st 4x4 inner square is (3, 3).

Step 4: There are 2 independent moves.

- \* The only spot for 5 in the 9th 4x4 square is (1, 9).
- \* The only spot for B in the 1st 4x4 inner square is (5, 6).

Step 5: There are 2 independent moves.

- \* The only spot for D in the 9th 4x4 square is (3, 9).
- \* The only spot for B in the 2nd 4x4 inner square is (12, 3).

Step 6: There are 4 independent moves.

- \* The only spot for C in the 9th row is (14, 9).
- \* The only spot for 2 in the 3rd column is (3, 8).
- \* The only spot for D in the 5th 4x4 square is (1, 6).
- \* The only spot for C in the 9th 4x4 square is (4, 10).

Step 7: There are 2 independent moves.

- \* The only spot for 7 in the 8th row is (8, 8).
- \* The only spot for 7 in the 5th 4x4 square is (3, 7).

Step 8: There is 1 independent move.

- \* The only spot for 7 in the 7th 4x4 square is (9, 5).

Step 9: There is 1 independent move.

- \* The only spot for 2 in the 7th 4x4 square is (9, 6).

Step 10: There are 2 independent moves.

- \* The only spot for 3 in the 9th column is (9, 4).
- \* The only spot for 6 in the 7th 4x4 square is (9, 7).

Step 11: There are 3 independent moves.

- \* 8 must be placed at (4, 13) because it is the only value left that is not already in the 13th row, the 4th column, the 13th 4x4 square or the 3rd 4x4 inner square.
- \* 2 must be placed at (12, 9) because it is the only value left that is not already in the 9th row, the 12th column or the 11th 4x4 square.
- \* A must be placed at (9, 1) because it is the only value left that is not already in the 1st row, the 9th column or the 3rd 4x4 square.

Step 12: There are 5 independent moves.

- \* The only spot for A in the 12th column is (12, 11).
- \* The only spot for 2 in the 3rd 4x4 square is (10, 1).
- \* The only spot for 8 in the 5th 4x4 square is (3, 6).
- \* The only spot for 2 in the 10th 4x4 square is (7, 10).
- \* The only spot for 2 in the 2nd 4x4 inner square is (13, 4).

Step 13: There are 9 independent moves.

- \* The only spot for D in the 1st row is (13, 1).
- \* The only spot for 4 in the 4th row is (11, 4).
- \* The only spot for B in the 7th column is (7, 9).
- \* The only spot for 0 in the 12th column is (12, 4).
- \* The only spot for 8 in the 2nd 4x4 square is (7, 4).
- \* The only spot for D in the 3rd 4x4 square is (10, 2).
- \* The only spot for A in the 4th 4x4 square is (16, 3).
- \* The only spot for A in the 5th 4x4 square is (3, 5).
- \* The only spot for 0 in the 11th 4x4 square is (9, 11).

Step 14: There are 9 independent moves.

- \* The only spot for 4 in the 6th row is (6, 6).
- \* The only spot for 1 in the 7th column is (7, 15).
- \* The only spot for F in the 9th column is (9, 14).
- \* The only spot for 1 in the 2nd 4x4 square is (8, 4).
- \* The only spot for 6 in the 3rd 4x4 square is (10, 3).
- \* The only spot for 9 in the 4th 4x4 square is (15, 3).
- \* The only spot for E in the 5th 4x4 square is (4, 6).
- \* The only spot for 4 in the 7th 4x4 square is (10, 8).
- \* The only spot for D in the 8th 4x4 square is (14, 8).

Step 15: There are 16 independent moves.

- \* The only spot for 0 in the 3rd row is (1, 3).
- \* The only spot for 9 in the 7th row is (11, 7).
- \* The only spot for 9 in the 11th row is (16, 11).
- \* The only spot for D in the 13th row is (2, 13).
- \* The only spot for F in the 4th column is (4, 11).

- \* The only spot for B in the 9th column is (9, 13).
- \* The only spot for 1 in the 10th column is (10, 13).
- \* The only spot for 4 in the 13th column is (13, 2).
- \* The only spot for 4 in the 14th column is (14, 15).
- \* The only spot for 1 in the 3rd 4x4 square is (9, 3).
- \* The only spot for 6 in the 6th 4x4 square is (8, 6).
- \* The only spot for 0 in the 8th 4x4 square is (15, 8).
- \* The only spot for 4 in the 8th 4x4 square is (15, 5).
- \* The only spot for 6 in the 1st 4x4 inner square is (6, 4).
- \* The only spot for 4 in the 3rd 4x4 inner square is (5, 13).
- \* The only spot for D in the 4th 4x4 inner square is (11, 14).

Step 16: There are 19 independent moves.

- \* The only spot for 6 in the 1st row is (2, 1).
- \* The only spot for C in the 4th row is (1, 4).
- \* The only spot for B in the 7th row is (15, 7).
- \* The only spot for F in the 12th row is (10, 12).
- \* The only spot for 0 in the 13th row is (14, 13).
- \* The only spot for A in the 10th column is (10, 15).
- \* The only spot for 3 in the 15th column is (15, 11).
- \* The only spot for 0 in the 4th 4x4 square is (16, 2).
- \* The only spot for B in the 7th 4x4 square is (11, 8).
- \* The only spot for 2 in the 8th 4x4 square is (16, 5).
- \* The only spot for 6 in the 10th 4x4 square is (5, 9).
- \* The only spot for F in the 12th 4x4 square is (16, 10).
- \* The only spot for 4 in the 13th 4x4 square is (2, 16).
- \* The only spot for 0 in the 15th 4x4 square is (11, 16).
- \* The only spot for B in the 16th 4x4 square is (14, 14).
- \* The only spot for C in the 1st 4x4 inner square is (6, 5).
- \* The only spot for 9 in the 2nd 4x4 inner square is (14, 6).
- \* The only spot for 7 in the 3rd 4x4 inner square is (4, 14).
- \* The only spot for A in the 3rd 4x4 inner square is (6, 13).

Step 17: There are 21 independent moves.

- \* The only spot for B in the 1st row is (8, 1).
- \* The only spot for 3 in the 8th row is (6, 8).
- \* The only spot for 8 in the 11th row is (1, 11).
- \* The only spot for C in the 13th row is (15, 13).
- \* The only spot for 2 in the 2nd column is (2, 12).
- \* The only spot for A in the 14th column is (14, 10).
- \* The only spot for 6 in the 16th column is (16, 15).
- \* The only spot for A in the 1st 4x4 square is (2, 4).
- \* The only spot for 6 in the 4th 4x4 square is (15, 2).
- \* The only spot for A in the 6th 4x4 square is (5, 7).
- \* The only spot for A in the 8th 4x4 square is (13, 8).
- \* The only spot for 3 in the 8th 4x4 square is (16, 6).
- \* The only spot for B in the 12th 4x4 square is (13, 10).

- \* The only spot for A in the 13th 4x4 square is (1, 16).
- \* The only spot for C in the 13th 4x4 square is (3, 15).
- \* The only spot for E in the 13th 4x4 square is (2, 14).
- \* The only spot for 8 in the 15th 4x4 square is (10, 14).
- \* The only spot for 8 in the 16th 4x4 square is (15, 15).
- \* The only spot for A in the 2nd 4x4 inner square is (11, 6).
- \* The only spot for C in the 3rd 4x4 inner square is (5, 14).
- \* The only spot for 8 in the 4th 4x4 inner square is (14, 12).

Step 18: There are 21 independent moves.

- \* The only spot for 6 in the 11th row is (13, 11).
- \* The only spot for B in the 12th row is (3, 12).
- \* The only spot for 0 in the 14th row is (8, 14).
- \* The only spot for D in the 15th row is (6, 15).
- \* The only spot for F in the 16th row is (7, 16).
- \* The only spot for 7 in the 1st column is (1, 2).
- \* The only spot for F in the 3rd column is (3, 2).
- \* The only spot for 8 in the 5th column is (5, 10).
- \* The only spot for 3 in the 7th column is (7, 14).
- \* The only spot for C in the 2nd 4x4 square is (8, 2).
- \* The only spot for 9 in the 2nd 4x4 square is (5, 1).
- \* The only spot for 8 in the 6th 4x4 square is (6, 7).
- \* The only spot for 6 in the 9th 4x4 square is (1, 12).
- \* The only spot for 7 in the 9th 4x4 square is (2, 11).
- \* The only spot for B in the 11th 4x4 square is (10, 11).
- \* The only spot for 0 in the 13th 4x4 square is (2, 15).
- \* The only spot for F in the 13th 4x4 square is (1, 15).
- \* The only spot for 2 in the 13th 4x4 square is (1, 13).
- \* The only spot for D in the 16th 4x4 square is (16, 16).
- \* The only spot for 2 in the 16th 4x4 square is (15, 16).
- \* The only spot for 3 in the 2nd 4x4 inner square is (11, 5).

Step 19: There are 13 independent moves.

- \* The only spot for 9 in the 6th column is (6, 10).
- \* The only spot for F in the 6th column is (6, 9).
- \* The only spot for E in the 7th column is (7, 5).
- \* The only spot for B in the 1st 4x4 square is (2, 2).
- \* The only spot for 3 in the 2nd 4x4 square is (5, 2).
- \* The only spot for D in the 6th 4x4 square is (7, 7).
- \* The only spot for F in the 6th 4x4 square is (8, 5).
- \* The only spot for 3 in the 10th 4x4 square is (8, 10).
- \* The only spot for E in the 11th 4x4 square is (10, 10).
- \* The only spot for E in the 14th 4x4 square is (5, 16).
- \* The only spot for 9 in the 14th 4x4 square is (8, 15).
- \* The only spot for E in the 3rd 4x4 inner square is (3, 11).
- \* The only spot for E in the 4th 4x4 inner square is (13, 12).

Step 20: There are 2 independent moves.

- \* The only spot for E in the 2nd 4x4 square is (6, 2).
- \* The only spot for E in the 10th 4x4 square is (8, 9).

## Solution for Puzzle 56

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

E	6	4	1	9	0	5	B	A	2	F	C	D	3	7	8
7	B	F	2	3	E	A	C	9	D	5	8	4	1	6	0
0	8	5	3	2	7	4	D	1	6	E	B	C	F	9	A
C	A	9	D	F	6	8	1	3	7	4	0	2	5	E	B
B	9	A	0	1	C	E	F	7	5	3	D	8	6	4	2
D	5	8	E	B	4	0	6	2	C	A	1	7	9	F	3
3	C	7	4	A	8	D	2	6	0	9	F	1	E	B	5
1	F	2	6	5	3	9	7	8	4	B	E	A	D	0	C
5	3	D	A	6	F	B	E	4	9	8	2	0	C	1	7
4	1	0	C	8	9	2	3	D	E	6	7	B	A	5	F
8	7	E	F	D	5	C	4	0	B	1	A	6	2	3	9
6	2	B	9	0	1	7	A	5	F	C	3	E	8	D	4
2	D	3	8	4	A	6	5	B	1	7	9	F	0	C	E
9	E	6	7	C	2	3	0	F	8	D	4	5	B	A	1
F	0	C	B	7	D	1	9	E	A	2	5	3	4	8	6
A	4	1	5	E	B	F	8	C	3	0	6	9	7	2	D

Challenging

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## Chapter 31

# Two Tournament HyperSudoku-16 Puzzles

There are two puzzles in this section ranging in difficulty from twenty-two to twenty-six. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 57** (142/256) DiffKey 22 / 99.4575.4669.9534.A125.5689

**Puzzle 58** (161/256) DiffKey 26 / 99.9534.6467.9463.3445.3999.9752

# HyperSudoku-16 Puzzle 57, Tournament/22

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

142/256

D				5	7		E	6			2	B			3
8	1	2		D				9		B			E		
	9		5			A			D	3			6		
	A		0				2	1					5		
		3	2		A		D	0		9	1	4			
4	5	8	D			2			B				0	6	
	F			0		B			6		D	8	3		1
B	0			3			8	5	2			7	F		
A			8		D	5				6	9	0			B
			9	B		F	4		A	D				8	2
		D	B		3	0				1	4			7	6
			4	1			7	B			3				
				A	C				3	F	8		D		5
1						4	3	D					7		A
	6	4		8						5		1			0
9	D	A			0		5		1			F		B	

Tournament

Diff: 22 / 99.4575.4669.9534.A125.5689

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 22 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 256.



## First Three Steps to Solve Puzzle 57

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

142/256

D	<sup>1</sup>			5	7	<sup>2</sup>	E	6			2	B			3
8	1	2	<sup>2</sup>	D		<sup>2</sup>		9		B			E		
	9		5			A			D	3		<sup>1</sup>	6		<sup>2</sup>
<sup>2</sup>	A		0				2	1		<sup>1</sup>		<sup>1</sup>	5		
		3	2	<sup>2</sup>	A		D	0	<sup>1</sup>	9	1	4	<sup>1</sup>	<sup>1</sup>	
4	5	8	D			2		<sup>1</sup>	B		<sup>2</sup>		0	6	
	F		<sup>2</sup>	0	<sup>1</sup>	B			6		D	8	3	<sup>1</sup>	1
B	0		<sup>1</sup>	3	<sup>2</sup>		8	5	2			7	F		
A	<sup>2</sup>		8		D	5				6	9	0			B
			9	B		F	4		A	D		<sup>1</sup>		8	2
		D	B		3	0	<sup>1</sup>	<sup>2</sup>		1	4			7	6
			4	1	<sup>1</sup>		7	B			3				
	<sup>2</sup>			A	C	<sup>3</sup>	<sup>3</sup>		3	F	8		D		5
1	<sup>1</sup>	<sup>1</sup>				4	3	D			<sup>1</sup>		7		A
	6	4		8		<sup>1</sup>		<sup>3</sup>		5		1		<sup>1</sup>	0
9	D	A	<sup>1</sup>		0		5		1		<sup>2</sup>	F	<sup>3</sup>	B	

Tournament

Diff: 22 / 99.4575.4669.9534.A125.5689

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There are 22 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 57

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

142/256

<b>D</b>	<sup>1</sup>	<sup>10</sup>	<sup>8</sup>	<b>5</b>	<b>7</b>	<sup>2</sup>	<b>E</b>	<b>6</b>	<sup>12</sup>	<sup>14</sup>	<b>2</b>	<b>B</b>	<sup>17</sup>	<sup>18</sup>	<b>3</b>	<sup>1</sup>
<b>8</b>	<b>1</b>	<b>2</b>	<sup>2</sup>	<b>D</b>	<sup>11</sup>	<sup>2</sup>	<sup>11</sup>	<b>9</b>	<sup>20</sup>	<b>B</b>	<sup>13</sup>	<sup>15</sup>	<b>E</b>	<sup>14</sup>	<sup>21</sup>	
<sup>9</sup>	<b>9</b>	<sup>11</sup>	<b>5</b>	<sup>5</sup>	<sup>9</sup>	<b>A</b>	<sup>10</sup>	<sup>12</sup>	<b>D</b>	<b>3</b>	<sup>11</sup>	<sup>1</sup>	<b>6</b>	<sup>11</sup>	<sup>2</sup>	
<sup>2</sup>	<b>A</b>	<sup>10</sup>	<b>0</b>	<sup>4</sup>	<sup>9</sup>	<sup>11</sup>	<b>2</b>	<b>1</b>	<sup>21</sup>	<sup>1</sup>	<sup>10</sup>	<sup>1</sup>	<b>5</b>	<sup>19</sup>	<sup>20</sup>	
<sup>5</sup>	<sup>22</sup>	<b>3</b>	<b>2</b>	<sup>2</sup>	<b>A</b>	<sup>8</sup>	<b>D</b>	<b>0</b>	<sup>1</sup>	<b>9</b>	<b>1</b>	<b>4</b>	<sup>1</sup>	<sup>1</sup>	<sup>22</sup>	<sup>5</sup>
<b>4</b>	<b>5</b>	<b>8</b>	<b>D</b>	<sup>7</sup>	<sup>8</sup>	<b>2</b>	<sup>9</sup>	<sup>1</sup>	<b>B</b>	<sup>8</sup>	<sup>2</sup>	<sup>9</sup>	<b>0</b>	<b>6</b>	<sup>10</sup>	
<sup>10</sup>	<b>F</b>	<sup>22</sup>	<sup>2</sup>	<b>0</b>	<sup>1</sup>	<b>B</b>	<sup>10</sup>	<sup>21</sup>	<b>6</b>	<sup>20</sup>	<b>D</b>	<b>8</b>	<b>3</b>	<sup>1</sup>	<b>1</b>	
<b>B</b>	<b>0</b>	<sup>11</sup>	<sup>1</sup>	<b>3</b>	<sup>2</sup>	<sup>5</sup>	<b>8</b>	<b>5</b>	<b>2</b>	<sup>21</sup>	<sup>14</sup>	<b>7</b>	<b>F</b>	<sup>22</sup>	<sup>21</sup>	
<b>A</b>	<sup>2</sup>	<sup>19</sup>	<b>8</b>	<sup>6</sup>	<b>D</b>	<b>5</b>	<sup>11</sup>	<sup>12</sup>	<sup>22</sup>	<b>6</b>	<b>9</b>	<b>0</b>	<sup>4</sup>	<sup>21</sup>	<b>B</b>	<sup>9</sup>
<sup>13</sup>	<sup>9</sup>	<sup>22</sup>	<b>9</b>	<b>B</b>	<sup>5</sup>	<b>F</b>	<b>4</b>	<sup>21</sup>	<b>A</b>	<b>D</b>	<sup>12</sup>	<sup>1</sup>	<sup>18</sup>	<b>8</b>	<b>2</b>	
<sup>14</sup>	<sup>6</sup>	<b>D</b>	<b>B</b>	<sup>11</sup>	<b>3</b>	<b>0</b>	<sup>1</sup>	<sup>2</sup>	<sup>18</sup>	<b>1</b>	<b>4</b>	<sup>17</sup>	<sup>16</sup>	<b>7</b>	<b>6</b>	
<sup>13</sup>	<sup>22</sup>	<sup>4</sup>	<b>4</b>	<b>1</b>	<sup>1</sup>	<sup>10</sup>	<b>7</b>	<b>B</b>	<sup>21</sup>	<sup>6</sup>	<b>3</b>	<sup>18</sup>	<sup>10</sup>	<sup>22</sup>	<sup>22</sup>	
<sup>5</sup>	<sup>2</sup>	<sup>5</sup>	<sup>6</sup>	<b>A</b>	<b>C</b>	<sup>3</sup>	<sup>3</sup>	<sup>19</sup>	<b>3</b>	<b>F</b>	<b>8</b>	<sup>19</sup>	<b>D</b>	<sup>18</sup>	<b>5</b>	<sup>13</sup>
<b>1</b>	<sup>1</sup>	<sup>1</sup>	<sup>6</sup>	<sup>11</sup>	<sup>5</sup>	<b>4</b>	<b>3</b>	<b>D</b>	<sup>20</sup>	<sup>7</sup>	<sup>1</sup>	<sup>4</sup>	<b>7</b>	<sup>20</sup>	<b>A</b>	
<sup>8</sup>	<b>6</b>	<b>4</b>	<sup>7</sup>	<b>8</b>	<sup>10</sup>	<sup>1</sup>	<sup>11</sup>	<sup>3</sup>	<sup>11</sup>	<b>5</b>	<sup>12</sup>	<b>1</b>	<sup>4</sup>	<sup>1</sup>	<b>0</b>	
<b>9</b>	<b>D</b>	<b>A</b>	<sup>1</sup>	<sup>8</sup>	<b>0</b>	<sup>11</sup>	<b>5</b>	<sup>7</sup>	<b>1</b>	<sup>20</sup>	<sup>2</sup>	<b>F</b>	<sup>3</sup>	<b>B</b>	<sup>19</sup>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Tournament

Diff: 22 / 99.4575.4669.9534.A125.5689

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There are 22 steps required to solve the puzzle above with a total of 142 empty locations that must be determined, out of a total puzzle size of 256.

All 22 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 20 independent moves.

- \* The only spot for 5 in the 5th row is (15, 5).
- \* The only spot for 3 in the 16th row is (4, 16).
- \* The only spot for 1 in the 4th column is (4, 8).
- \* The only spot for 3 in the 13th column is (13, 10).
- \* The only spot for 4 in the 1st 4x4 square is (2, 1).
- \* The only spot for 5 in the 6th 4x4 square is (6, 7).
- \* The only spot for 3 in the 7th 4x4 square is (9, 6).
- \* The only spot for 8 in the 7th 4x4 square is (10, 5).
- \* The only spot for 2 in the 8th 4x4 square is (15, 7).
- \* The only spot for A in the 10th 4x4 square is (8, 11).
- \* The only spot for 5 in the 13th 4x4 square is (3, 14).
- \* The only spot for 8 in the 13th 4x4 square is (2, 14).
- \* The only spot for D in the 14th 4x4 square is (7, 15).
- \* The only spot for 3 in the 16th 4x4 square is (15, 15).
- \* The only spot for B in the 2nd 4x4 inner square is (14, 5).
- \* The only spot for D in the 2nd 4x4 inner square is (13, 4).
- \* The only spot for 8 in the 2nd 4x4 inner square is (11, 4).
- \* The only spot for 2 in the 2nd 4x4 inner square is (13, 3).
- \* The only spot for 8 in the 3rd 4x4 inner square is (6, 12).
- \* The only spot for B in the 4th 4x4 inner square is (12, 14).

Step 2: There are 13 independent moves.

- \* The only spot for 3 in the 2nd row is (7, 2).
- \* The only spot for 8 in the 3rd row is (16, 3).
- \* The only spot for F in the 5th row is (5, 5).
- \* The only spot for 6 in the 4th column is (4, 2).
- \* The only spot for 3 in the 1st 4x4 square is (1, 4).
- \* The only spot for 8 in the 2nd 4x4 square is (7, 1).
- \* The only spot for A in the 5th 4x4 square is (4, 7).
- \* The only spot for 4 in the 6th 4x4 square is (6, 8).
- \* The only spot for F in the 7th 4x4 square is (12, 6).
- \* The only spot for 3 in the 9th 4x4 square is (2, 9).
- \* The only spot for 8 in the 11th 4x4 square is (9, 11).
- \* The only spot for B in the 13th 4x4 square is (2, 13).
- \* The only spot for 6 in the 15th 4x4 square is (12, 16).

Step 3: There are 4 independent moves.

- \* The only spot for 1 in the 7th column is (7, 13).
- \* The only spot for 6 in the 8th column is (8, 13).
- \* The only spot for A in the 9th column is (9, 15).
- \* The only spot for 8 in the 16th 4x4 square is (14, 16).

Step 4: There are 5 independent moves.

- \* The only spot for 6 in the 5th column is (5, 4).
- \* The only spot for 4 in the 14th column is (14, 9).
- \* The only spot for 2 in the 16th 4x4 square is (14, 15).
- \* The only spot for 6 in the 3rd 4x4 inner square is (3, 12).

- \* The only spot for 6 in the 4th 4x4 inner square is (13, 14).

Step 5: There are 7 independent moves.

- \* The only spot for 6 in the 8th row is (7, 8).
- \* The only spot for 2 in the 6th column is (6, 14).
- \* The only spot for 6 in the 5th 4x4 square is (1, 5).
- \* The only spot for 6 in the 10th 4x4 square is (6, 10).
- \* The only spot for 2 in the 13th 4x4 square is (1, 13).
- \* The only spot for 4 in the 1st 4x4 inner square is (5, 3).
- \* The only spot for 0 in the 3rd 4x4 inner square is (3, 13).

Step 6: There are 5 independent moves.

- \* The only spot for 2 in the 11th row is (2, 11).
- \* The only spot for 2 in the 10th 4x4 square is (5, 9).
- \* The only spot for F in the 3rd 4x4 inner square is (4, 14).
- \* The only spot for 7 in the 3rd 4x4 inner square is (4, 13).
- \* The only spot for 2 in the 4th 4x4 inner square is (11, 12).

Step 7: There are 4 independent moves.

- \* The only spot for E in the 4th column is (4, 15).
- \* The only spot for C in the 5th column is (5, 6).
- \* The only spot for 2 in the 15th 4x4 square is (9, 16).
- \* The only spot for 0 in the 4th 4x4 inner square is (11, 14).

Step 8: There are 6 independent moves.

- \* The only spot for 7 in the 6th row is (11, 6).
- \* The only spot for C in the 4th column is (4, 1).
- \* The only spot for 7 in the 5th column is (5, 16).
- \* The only spot for E in the 6th column is (6, 6).
- \* The only spot for 7 in the 6th 4x4 square is (7, 5).
- \* The only spot for C in the 13th 4x4 square is (1, 15).

Step 9: There are 6 independent moves.

- \* The only spot for 7 in the 2nd column is (2, 10).
- \* The only spot for E in the 1st 4x4 square is (1, 3).
- \* The only spot for 1 in the 6th 4x4 square is (8, 6).
- \* The only spot for 9 in the 1st 4x4 inner square is (6, 4).
- \* The only spot for 1 in the 1st 4x4 inner square is (6, 3).
- \* The only spot for A in the 2nd 4x4 inner square is (13, 6).

Step 10: There are 10 independent moves.

- \* The only spot for B in the 4th row is (3, 4).
- \* The only spot for 9 in the 6th row is (16, 6).
- \* The only spot for 7 in the 1st column is (1, 7).
- \* The only spot for B in the 6th column is (6, 15).
- \* The only spot for 9 in the 7th column is (7, 12).
- \* The only spot for F in the 1st 4x4 square is (3, 1).
- \* The only spot for B in the 2nd 4x4 square is (8, 3).
- \* The only spot for 9 in the 6th 4x4 square is (8, 7).
- \* The only spot for E in the 2nd 4x4 inner square is (12, 4).

- \* The only spot for A in the 4th 4x4 inner square is (14, 12).

Step 11: There are 13 independent moves.

- \* The only spot for 0 in the 3rd row is (15, 3).
- \* The only spot for 9 in the 15th row is (10, 15).
- \* The only spot for F in the 6th column is (6, 2).
- \* The only spot for E in the 7th column is (7, 16).
- \* The only spot for C in the 7th column is (7, 4).
- \* The only spot for 0 in the 2nd 4x4 square is (8, 2).
- \* The only spot for 9 in the 5th 4x4 square is (3, 8).
- \* The only spot for E in the 10th 4x4 square is (5, 11).
- \* The only spot for C in the 10th 4x4 square is (8, 9).
- \* The only spot for F in the 14th 4x4 square is (8, 15).
- \* The only spot for 7 in the 1st 4x4 inner square is (3, 3).
- \* The only spot for C in the 2nd 4x4 inner square is (12, 3).
- \* The only spot for 9 in the 3rd 4x4 inner square is (5, 14).

Step 12: There are 5 independent moves.

- \* The only spot for F in the 3rd row is (9, 3).
- \* The only spot for 7 in the 9th column is (9, 9).
- \* The only spot for 0 in the 12th column is (12, 10).
- \* The only spot for 0 in the 3rd 4x4 square is (10, 1).
- \* The only spot for 7 in the 15th 4x4 square is (12, 15).

Step 13: There are 3 independent moves.

- \* The only spot for 5 in the 10th row is (1, 10).
- \* The only spot for 5 in the 12th column is (12, 2).
- \* The only spot for 0 in the 9th 4x4 square is (1, 12).

Step 14: There are 4 independent moves.

- \* The only spot for A in the 2nd row is (15, 2).
- \* The only spot for A in the 12th column is (12, 8).
- \* The only spot for A in the 3rd 4x4 square is (11, 1).
- \* The only spot for F in the 9th 4x4 square is (1, 11).

Step 15: There is 1 independent move.

- \* C must be placed at (13, 2) because it is the only value left that is not already in the 2nd row, the 13th column or the 4th 4x4 square.

Step 16: There is 1 independent move.

- \* The only spot for C in the 4th 4x4 inner square is (14, 11).

Step 17: There are 2 independent moves.

- \* The only spot for 9 in the 14th column is (14, 1).
- \* The only spot for 9 in the 12th 4x4 square is (13, 11).

Step 18: There are 5 independent moves.

- \* The only spot for 5 in the 11th row is (10, 11).
- \* The only spot for 1 in the 14th column is (14, 10).
- \* The only spot for 1 in the 4th 4x4 square is (15, 1).
- \* The only spot for 9 in the 16th 4x4 square is (15, 13).
- \* The only spot for 5 in the 4th 4x4 inner square is (13, 12).

Step 19: There are 5 independent moves.

- \* The only spot for 4 in the 13th row is (9, 13).
- \* The only spot for 4 in the 15th column is (15, 4).
- \* The only spot for 1 in the 9th 4x4 square is (3, 9).
- \* The only spot for 4 in the 16th 4x4 square is (16, 16).
- \* The only spot for E in the 4th 4x4 inner square is (13, 13).

Step 20: There are 6 independent moves.

- \* The only spot for C in the 16th row is (11, 16).
- \* The only spot for 4 in the 3rd 4x4 square is (10, 2).
- \* The only spot for F in the 4th 4x4 square is (16, 4).
- \* The only spot for 4 in the 7th 4x4 square is (11, 7).
- \* The only spot for E in the 15th 4x4 square is (10, 14).
- \* The only spot for C in the 16th 4x4 square is (15, 14).

Step 21: There are 8 independent moves.

- \* The only spot for C in the 8th row is (16, 8).
- \* The only spot for E in the 9th row is (15, 9).
- \* The only spot for C in the 10th column is (10, 12).
- \* The only spot for E in the 11th column is (11, 8).
- \* The only spot for 7 in the 3rd 4x4 square is (10, 4).
- \* The only spot for 7 in the 4th 4x4 square is (16, 2).
- \* The only spot for C in the 7th 4x4 square is (9, 7).
- \* The only spot for E in the 11th 4x4 square is (9, 10).

Step 22: There are 9 independent moves.

- \* The only spot for E in the 3rd column is (3, 7).
- \* The only spot for D in the 16th column is (16, 12).
- \* The only spot for C in the 5th 4x4 square is (2, 5).
- \* The only spot for D in the 8th 4x4 square is (15, 8).
- \* The only spot for E in the 8th 4x4 square is (16, 5).
- \* The only spot for E in the 9th 4x4 square is (2, 12).
- \* The only spot for C in the 9th 4x4 square is (3, 10).
- \* The only spot for F in the 11th 4x4 square is (10, 9).
- \* The only spot for F in the 12th 4x4 square is (15, 12).

## Solution for Puzzle 57

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

D	4	F	C	5	7	8	E	6	0	A	2	B	9	1	3
8	1	2	6	D	F	3	0	9	4	B	5	C	E	A	7
E	9	7	5	4	1	A	B	F	D	3	C	2	6	0	8
3	A	B	0	6	9	C	2	1	7	8	E	D	5	4	F
6	C	3	2	F	A	7	D	0	8	9	1	4	B	5	E
4	5	8	D	C	E	2	1	3	B	7	F	A	0	6	9
7	F	E	A	0	5	B	9	C	6	4	D	8	3	2	1
B	0	9	1	3	4	6	8	5	2	E	A	7	F	D	C
A	3	1	8	2	D	5	C	7	F	6	9	0	4	E	B
5	7	C	9	B	6	F	4	E	A	D	0	3	1	8	2
F	2	D	B	E	3	0	A	8	5	1	4	9	C	7	6
0	E	6	4	1	8	9	7	B	C	2	3	5	A	F	D
2	B	0	7	A	C	1	6	4	3	F	8	E	D	9	5
1	8	5	F	9	2	4	3	D	E	0	B	6	7	C	A
C	6	4	E	8	B	D	F	A	9	5	7	1	2	3	0
9	D	A	3	7	0	E	5	2	1	C	6	F	8	B	4

Tournament

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## HyperSudoku-16 Puzzle 58, Tournament/26

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

161/256

A				3			7	8			C		F	4	
E	B			6	1					7					
					A	4			6	2		7	5		3
	0								5		9			D	
	E							1		D		8			
8	7		0					C			F	B			5
		1				B	8	7			E			F	D
	2			7			E	4				6	3		
	C		E				2	3		F					6
2		3		9						A		5	8	0	
9					3		6		7					C	
		6		A	5				C		1				
			7		F		5				3			E	
				C		7	4			8		F	0		
	6	8			B			5	F	0			D		
5		F	A						E			3	4		B

Tournament

Diff: 26 / 99.9534.6467.9463.3445.3999.9752

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 26 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.



## First Three Steps to Solve Puzzle 58

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>A</b>			<sup>1</sup>	<b>3</b>			<b>7</b>	<b>8</b>	<sup>3</sup>	<sup>2</sup>	<b>C</b>		<b>F</b>	<b>4</b>	
<b>E</b>	<b>B</b>			<b>6</b>	<b>1</b>				<sup>2</sup>	<b>7</b>				<sup>3</sup>	
					<b>A</b>	<b>4</b>			<b>6</b>	<b>2</b>		<b>7</b>	<b>5</b>	<sup>1</sup>	<b>3</b>
	<b>0</b>	<sup>1</sup>							<b>5</b>	<sup>1</sup>	<b>9</b>	<sup>2</sup>	<sup>1</sup>	<b>D</b>	
<sup>3</sup>	<b>E</b>							<b>1</b>		<b>D</b>		<b>8</b>	<sup>3</sup>		
<b>8</b>	<b>7</b>		<b>0</b>					<b>C</b>		<sup>2</sup>	<b>F</b>	<b>B</b>	<sup>1</sup>		<b>5</b>
		<b>1</b>				<b>B</b>	<b>8</b>	<b>7</b>		<sup>2</sup>	<b>E</b>			<b>F</b>	<b>D</b>
	<b>2</b>			<b>7</b>			<b>E</b>	<b>4</b>				<b>6</b>	<b>3</b>		
<sup>2</sup>	<b>C</b>		<b>E</b>				<b>2</b>	<b>3</b>		<b>F</b>			<sup>2</sup>		<b>6</b>
<b>2</b>		<b>3</b>		<b>9</b>	<sup>2</sup>					<b>A</b>		<b>5</b>	<b>8</b>	<b>0</b>	
<b>9</b>					<b>3</b>		<b>6</b>		<b>7</b>				<sup>3</sup>	<b>C</b>	
		<b>6</b>		<b>A</b>	<b>5</b>				<b>C</b>		<b>1</b>		<sup>1</sup>	<sup>1</sup>	
			<b>7</b>		<b>F</b>	<sup>3</sup>	<b>5</b>				<b>3</b>			<b>E</b>	<sup>3</sup>
		<sup>1</sup>		<b>C</b>		<b>7</b>	<b>4</b>			<b>8</b>	<sup>3</sup>	<b>F</b>	<b>0</b>	<sup>1</sup>	
	<b>6</b>	<b>8</b>			<b>B</b>			<b>5</b>	<b>F</b>	<b>0</b>			<b>D</b>		
<b>5</b>		<b>F</b>	<b>A</b>						<b>E</b>	<sup>1</sup>	<sup>3</sup>	<b>3</b>	<b>4</b>	<sup>2</sup>	<b>B</b>

Tournament

Diff: 26 / 99.9534.6467.9463.3445.3999.9752

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There are 26 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 58

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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<b>A</b>	<sup>21</sup>	<sup>13</sup>	<sup>1</sup>	<b>3</b>	<sup>18</sup>	<sup>21</sup>	<b>7</b>	<b>8</b>	<sup>3</sup>	<sup>2</sup>	<b>C</b>	<sup>7</sup>	<b>F</b>	<b>4</b>	<sup>22</sup>	<sup>1</sup>
<b>E</b>	<b>B</b>	<sup>21</sup>	<sup>20</sup>	<b>6</b>	<b>1</b>	<sup>21</sup>	<sup>23</sup>	<sup>24</sup>	<sup>2</sup>	<b>7</b>	<sup>11</sup>	<sup>10</sup>	<sup>12</sup>	<sup>3</sup>	<sup>24</sup>	
<sup>22</sup>	<sup>20</sup>	<sup>20</sup>	<sup>17</sup>	<sup>23</sup>	<b>A</b>	<b>4</b>	<sup>21</sup>	<sup>9</sup>	<b>6</b>	<b>2</b>	<sup>5</sup>	<b>7</b>	<b>5</b>	<sup>1</sup>	<b>3</b>	
<sup>23</sup>	<b>0</b>	<sup>1</sup>	<sup>22</sup>	<sup>21</sup>	<sup>8</sup>	<sup>22</sup>	<sup>8</sup>	<sup>24</sup>	<b>5</b>	<sup>1</sup>	<b>9</b>	<sup>2</sup>	<sup>1</sup>	<b>D</b>	<sup>23</sup>	
<sup>3</sup>	<b>E</b>	<sup>11</sup>	<sup>21</sup>	<sup>22</sup>	<sup>21</sup>	<sup>25</sup>	<sup>26</sup>	<b>1</b>	<sup>23</sup>	<b>D</b>	<sup>4</sup>	<b>8</b>	<sup>3</sup>	<sup>11</sup>	<sup>10</sup>	<sup>5</sup>
<b>8</b>	<b>7</b>	<sup>20</sup>	<b>0</b>	<sup>16</sup>	<sup>4</sup>	<sup>25</sup>	<sup>24</sup>	<b>C</b>	<sup>22</sup>	<sup>2</sup>	<b>F</b>	<b>B</b>	<sup>1</sup>	<sup>12</sup>	<b>5</b>	
<sup>15</sup>	<sup>23</sup>	<b>1</b>	<sup>22</sup>	<sup>23</sup>	<sup>20</sup>	<b>B</b>	<b>8</b>	<b>7</b>	<sup>22</sup>	<sup>2</sup>	<b>E</b>	<sup>9</sup>	<sup>13</sup>	<b>F</b>	<b>D</b>	
<sup>20</sup>	<b>2</b>	<sup>7</sup>	<sup>22</sup>	<b>7</b>	<sup>19</sup>	<sup>22</sup>	<b>E</b>	<b>4</b>	<sup>6</sup>	<sup>4</sup>	<sup>5</sup>	<b>6</b>	<b>3</b>	<sup>13</sup>	<sup>11</sup>	
<sup>2</sup>	<b>C</b>	<sup>6</sup>	<b>E</b>	<sup>7</sup>	<sup>16</sup>	<sup>17</sup>	<b>2</b>	<b>3</b>	<sup>18</sup>	<b>F</b>	<sup>6</sup>	<sup>11</sup>	<sup>2</sup>	<sup>10</sup>	<b>6</b>	<sup>9</sup>
<b>2</b>	<sup>18</sup>	<b>3</b>	<sup>20</sup>	<b>9</b>	<sup>2</sup>	<sup>23</sup>	<sup>25</sup>	<sup>4</sup>	<sup>17</sup>	<b>A</b>	<sup>7</sup>	<b>5</b>	<b>8</b>	<b>0</b>	<sup>24</sup>	
<b>9</b>	<sup>7</sup>	<sup>20</sup>	<sup>19</sup>	<sup>18</sup>	<b>3</b>	<sup>24</sup>	<b>6</b>	<sup>9</sup>	<b>7</b>	<sup>5</sup>	<sup>10</sup>	<sup>17</sup>	<sup>3</sup>	<b>C</b>	<sup>25</sup>	
<sup>10</sup>	<sup>21</sup>	<b>6</b>	<sup>11</sup>	<b>A</b>	<b>5</b>	<sup>20</sup>	<sup>21</sup>	<sup>8</sup>	<b>C</b>	<sup>6</sup>	<b>1</b>	<sup>16</sup>	<sup>1</sup>	<sup>1</sup>	<sup>11</sup>	
<sup>14</sup>	<sup>15</sup>	<sup>10</sup>	<b>7</b>	<sup>16</sup>	<b>F</b>	<sup>3</sup>	<b>5</b>	<sup>13</sup>	<sup>10</sup>	<sup>7</sup>	<b>3</b>	<sup>4</sup>	<sup>8</sup>	<b>E</b>	<sup>3</sup>	<sup>13</sup>
<sup>23</sup>	<sup>22</sup>	<sup>1</sup>	<sup>12</sup>	<b>C</b>	<sup>13</sup>	<b>7</b>	<b>4</b>	<sup>14</sup>	<sup>9</sup>	<b>8</b>	<sup>3</sup>	<b>F</b>	<b>0</b>	<sup>1</sup>	<sup>12</sup>	
<sup>18</sup>	<b>6</b>	<b>8</b>	<sup>19</sup>	<sup>9</sup>	<b>B</b>	<sup>26</sup>	<sup>25</sup>	<b>5</b>	<b>F</b>	<b>0</b>	<sup>11</sup>	<sup>11</sup>	<b>D</b>	<sup>13</sup>	<sup>11</sup>	
<b>5</b>	<sup>14</sup>	<b>F</b>	<b>A</b>	<sup>22</sup>	<sup>9</sup>	<sup>24</sup>	<sup>23</sup>	<sup>15</sup>	<b>E</b>	<sup>1</sup>	<sup>3</sup>	<b>3</b>	<b>4</b>	<sup>2</sup>	<b>B</b>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

Tournament

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There are 26 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.

All 26 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 11 independent moves.

- \* The only spot for 6 in the 1st row is (4, 1).
- \* The only spot for C in the 16th row is (11, 16).
- \* The only spot for 6 in the 4th 4x4 square is (14, 4).
- \* The only spot for B in the 4th 4x4 square is (15, 3).
- \* The only spot for E in the 8th 4x4 square is (14, 6).
- \* The only spot for 3 in the 12th 4x4 square is (15, 12).
- \* The only spot for E in the 13th 4x4 square is (3, 14).
- \* The only spot for 5 in the 16th 4x4 square is (15, 14).
- \* The only spot for 7 in the 1st 4x4 inner square is (3, 4).
- \* The only spot for 4 in the 2nd 4x4 inner square is (11, 4).
- \* The only spot for 7 in the 4th 4x4 inner square is (14, 12).

Step 2: There are 9 independent moves.

- \* The only spot for 7 in the 10th row is (6, 10).
- \* The only spot for 1 in the 11th column is (11, 1).
- \* The only spot for 1 in the 14th column is (14, 9).
- \* The only spot for 3 in the 3rd 4x4 square is (10, 2).
- \* The only spot for 6 in the 7th 4x4 square is (11, 7).
- \* The only spot for 7 in the 9th 4x4 square is (1, 9).
- \* The only spot for 6 in the 16th 4x4 square is (15, 16).
- \* The only spot for 3 in the 2nd 4x4 inner square is (11, 6).
- \* The only spot for 1 in the 2nd 4x4 inner square is (13, 4).

Step 3: There are 9 independent moves.

- \* The only spot for B in the 1st row is (10, 1).
- \* The only spot for 7 in the 16th row is (12, 16).
- \* The only spot for 8 in the 15th column is (15, 2).
- \* The only spot for 6 in the 5th 4x4 square is (1, 5).
- \* The only spot for B in the 12th 4x4 square is (14, 11).
- \* The only spot for 6 in the 14th 4x4 square is (7, 13).
- \* The only spot for 8 in the 16th 4x4 square is (16, 13).
- \* The only spot for C in the 2nd 4x4 inner square is (14, 5).
- \* The only spot for 6 in the 4th 4x4 inner square is (12, 14).

Step 4: There are 5 independent moves.

- \* The only spot for B in the 11th column is (11, 8).
- \* The only spot for 6 in the 11th 4x4 square is (9, 10).
- \* The only spot for 6 in the 1st 4x4 inner square is (6, 6).
- \* The only spot for A in the 2nd 4x4 inner square is (12, 5).
- \* The only spot for C in the 4th 4x4 inner square is (13, 13).

Step 5: There are 3 independent moves.

- \* The only spot for 5 in the 11th column is (11, 11).
- \* The only spot for 5 in the 7th 4x4 square is (12, 8).
- \* The only spot for 0 in the 2nd 4x4 inner square is (12, 3).

Step 6: There are 4 independent moves.

- \* The only spot for E in the 11th column is (11, 12).

- \* The only spot for 8 in the 12th column is (12, 9).
- \* The only spot for 8 in the 7th 4x4 square is (10, 8).
- \* The only spot for 5 in the 9th 4x4 square is (3, 9).

Step 7: There are 6 independent moves.

- \* The only spot for B in the 9th row is (5, 9).
- \* The only spot for A in the 3rd column is (3, 8).
- \* The only spot for 9 in the 11th column is (11, 13).
- \* The only spot for B in the 12th column is (12, 10).
- \* The only spot for E in the 13th column is (13, 1).
- \* The only spot for A in the 9th 4x4 square is (2, 11).

Step 8: There are 4 independent moves.

- \* The only spot for E in the 6th column is (6, 4).
- \* The only spot for 9 in the 9th column is (9, 12).
- \* The only spot for B in the 2nd 4x4 square is (8, 4).
- \* The only spot for A in the 4th 4x4 inner square is (14, 13).

Step 9: There are 6 independent moves.

- \* The only spot for A in the 7th row is (13, 7).
- \* The only spot for E in the 5th column is (5, 15).
- \* The only spot for 8 in the 6th column is (6, 16).
- \* The only spot for 0 in the 9th column is (9, 11).
- \* The only spot for A in the 10th column is (10, 14).
- \* The only spot for E in the 3rd 4x4 square is (9, 3).

Step 10: There are 7 independent moves.

- \* The only spot for 0 in the 3rd column is (3, 13).
- \* The only spot for 0 in the 13th column is (13, 2).
- \* The only spot for 4 in the 8th 4x4 square is (16, 5).
- \* The only spot for 0 in the 9th 4x4 square is (1, 12).
- \* The only spot for 2 in the 11th 4x4 square is (12, 11).
- \* The only spot for A in the 12th 4x4 square is (15, 9).
- \* The only spot for 1 in the 15th 4x4 square is (10, 13).

Step 11: There are 10 independent moves.

- \* The only spot for B in the 3rd column is (3, 5).
- \* The only spot for D in the 12th column is (12, 2).
- \* The only spot for 2 in the 13th column is (13, 15).
- \* The only spot for 7 in the 16th column is (16, 15).
- \* The only spot for 0 in the 8th 4x4 square is (16, 8).
- \* The only spot for 7 in the 8th 4x4 square is (15, 5).
- \* The only spot for B in the 9th 4x4 square is (4, 12).
- \* The only spot for 2 in the 12th 4x4 square is (16, 12).
- \* The only spot for 9 in the 12th 4x4 square is (13, 9).
- \* The only spot for 4 in the 15th 4x4 square is (12, 15).

Step 12: There are 4 independent moves.

- \* The only spot for 2 in the 15th column is (15, 6).
- \* The only spot for 1 in the 16th column is (16, 14).

- \* The only spot for 2 in the 4th 4x4 square is (14, 2).
- \* The only spot for 2 in the 13th 4x4 square is (4, 14).

Step 13: There are 6 independent moves.

- \* The only spot for 2 in the 13th row is (9, 13).
- \* The only spot for 9 in the 14th column is (14, 7).
- \* The only spot for 2 in the 1st 4x4 square is (3, 1).
- \* The only spot for 1 in the 8th 4x4 square is (15, 8).
- \* The only spot for 9 in the 16th 4x4 square is (15, 15).
- \* The only spot for 9 in the 3rd 4x4 inner square is (6, 14).

Step 14: There are 3 independent moves.

- \* The only spot for B in the 13th row is (1, 13).
- \* The only spot for 9 in the 13th 4x4 square is (2, 16).
- \* The only spot for B in the 15th 4x4 square is (9, 14).

Step 15: There are 3 independent moves.

- \* The only spot for 4 in the 1st column is (1, 7).
- \* The only spot for 4 in the 13th 4x4 square is (2, 13).
- \* The only spot for D in the 15th 4x4 square is (9, 16).

Step 16: There are 4 independent moves.

- \* The only spot for 4 in the 12th row is (13, 12).
- \* The only spot for 4 in the 6th column is (6, 9).
- \* The only spot for D in the 14th 4x4 square is (5, 13).
- \* The only spot for 4 in the 1st 4x4 inner square is (5, 6).

Step 17: There are 4 independent moves.

- \* The only spot for 0 in the 10th 4x4 square is (7, 9).
- \* The only spot for 4 in the 11th 4x4 square is (10, 10).
- \* The only spot for 1 in the 1st 4x4 inner square is (4, 3).
- \* The only spot for D in the 4th 4x4 inner square is (13, 11).

Step 18: There are 5 independent moves.

- \* The only spot for 0 in the 2nd 4x4 square is (6, 1).
- \* The only spot for 1 in the 9th 4x4 square is (2, 10).
- \* The only spot for D in the 11th 4x4 square is (10, 9).
- \* The only spot for 1 in the 13th 4x4 square is (1, 15).
- \* The only spot for 1 in the 3rd 4x4 inner square is (5, 11).

Step 19: There are 3 independent moves.

- \* The only spot for D in the 6th column is (6, 8).
- \* The only spot for C in the 13th 4x4 square is (4, 15).
- \* The only spot for 8 in the 3rd 4x4 inner square is (4, 11).

Step 20: There are 9 independent moves.

- \* The only spot for D in the 4th column is (4, 10).
- \* The only spot for 4 in the 4th column is (4, 2).
- \* The only spot for C in the 6th column is (6, 7).
- \* The only spot for 8 in the 1st 4x4 square is (2, 3).
- \* The only spot for C in the 5th 4x4 square is (1, 8).
- \* The only spot for D in the 5th 4x4 square is (3, 6).

- \* The only spot for 8 in the 10th 4x4 square is (7, 12).
- \* The only spot for C in the 1st 4x4 inner square is (3, 3).
- \* The only spot for 4 in the 3rd 4x4 inner square is (3, 11).

Step 21: There are 10 independent moves.

- \* The only spot for 5 in the 2nd row is (7, 2).
- \* The only spot for 9 in the 3rd row is (8, 3).
- \* The only spot for 2 in the 6th column is (6, 5).
- \* The only spot for D in the 7th column is (7, 1).
- \* The only spot for 9 in the 1st 4x4 square is (3, 2).
- \* The only spot for 5 in the 1st 4x4 square is (2, 1).
- \* The only spot for F in the 9th 4x4 square is (2, 12).
- \* The only spot for D in the 10th 4x4 square is (8, 12).
- \* The only spot for 9 in the 1st 4x4 inner square is (4, 5).
- \* The only spot for 8 in the 1st 4x4 inner square is (5, 4).

Step 22: There are 12 independent moves.

- \* The only spot for 9 in the 8th row is (7, 8).
- \* The only spot for D in the 2nd column is (2, 14).
- \* The only spot for 2 in the 5th column is (5, 16).
- \* The only spot for D in the 1st 4x4 square is (1, 3).
- \* The only spot for 2 in the 2nd 4x4 square is (7, 4).
- \* The only spot for 9 in the 4th 4x4 square is (16, 1).
- \* The only spot for F in the 5th 4x4 square is (4, 8).
- \* The only spot for 5 in the 5th 4x4 square is (4, 7).
- \* The only spot for 2 in the 7th 4x4 square is (10, 7).
- \* The only spot for 9 in the 7th 4x4 square is (10, 6).
- \* The only spot for 5 in the 1st 4x4 inner square is (5, 5).
- \* The only spot for 3 in the 1st 4x4 inner square is (4, 4).

Step 23: There are 10 independent moves.

- \* The only spot for C in the 4th row is (16, 4).
- \* The only spot for 0 in the 5th column is (5, 7).
- \* The only spot for C in the 7th column is (7, 10).
- \* The only spot for F in the 1st 4x4 square is (1, 4).
- \* The only spot for C in the 2nd 4x4 square is (8, 2).
- \* The only spot for 3 in the 5th 4x4 square is (2, 7).
- \* The only spot for 0 in the 7th 4x4 square is (10, 5).
- \* The only spot for 3 in the 13th 4x4 square is (1, 14).
- \* The only spot for 0 in the 14th 4x4 square is (8, 16).
- \* The only spot for F in the 1st 4x4 inner square is (5, 3).

Step 24: There are 7 independent moves.

- \* The only spot for A in the 4th row is (9, 4).
- \* The only spot for E in the 10th row is (16, 10).
- \* The only spot for 1 in the 8th column is (8, 6).
- \* The only spot for F in the 3rd 4x4 square is (9, 2).
- \* The only spot for A in the 4th 4x4 square is (16, 2).
- \* The only spot for E in the 10th 4x4 square is (7, 11).

- \* The only spot for 1 in the 14th 4x4 square is (7, 16).

Step 25: There are 5 independent moves.

- \* The only spot for F in the 7th column is (7, 5).
- \* The only spot for A in the 8th column is (8, 15).
- \* The only spot for A in the 6th 4x4 square is (7, 6).
- \* The only spot for F in the 10th 4x4 square is (8, 10).
- \* The only spot for F in the 12th 4x4 square is (16, 11).

Step 26: There are 2 independent moves.

- \* The only spot for 3 in the 6th 4x4 square is (8, 5).
- \* The only spot for 3 in the 14th 4x4 square is (7, 15).

## Solution for Puzzle 58

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

A	5	2	6	3	0	D	7	8	B	1	C	E	F	4	9
E	B	9	4	6	1	5	C	F	3	7	D	0	2	8	A
D	8	C	1	F	A	4	9	E	6	2	0	7	5	B	3
F	0	7	3	8	E	2	B	A	5	4	9	1	6	D	C
6	E	B	9	5	2	F	3	1	0	D	A	8	C	7	4
8	7	D	0	4	6	A	1	C	9	3	F	B	E	2	5
4	3	1	5	0	C	B	8	7	2	6	E	A	9	F	D
C	2	A	F	7	D	9	E	4	8	B	5	6	3	1	0
7	C	5	E	B	4	0	2	3	D	F	8	9	1	A	6
2	1	3	D	9	7	C	F	6	4	A	B	5	8	0	E
9	A	4	8	1	3	E	6	0	7	5	2	D	B	C	F
0	F	6	B	A	5	8	D	9	C	E	1	4	7	3	2
B	4	0	7	D	F	6	5	2	1	9	3	C	A	E	8
3	D	E	2	C	9	7	4	B	A	8	6	F	0	5	1
1	6	8	C	E	B	3	A	5	F	0	4	2	D	9	7
5	9	F	A	2	8	1	0	D	E	C	7	3	4	6	B

Tournament

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## Chapter 32

# Two TournamentPlus HyperSudoku-16 Puzzles

There are two puzzles in this section ranging in difficulty from thirty to thirty-four. The puzzles are arranged by the difficulty level, and within the same difficulty level by the difficulty due to the number of empty cells (in ascending order). The number of empty cells out of the total number of puzzle grid cells are shown for each puzzle as: (*empty/total*).

See page 31 for an explanation of the DiffKey ratings.

**Puzzle 59** (161/256) DiffKey 30 / 95.2354.31D5.7433.4332.2256.6698.8995

**Puzzle 60** (157/256) DiffKey 34 / 95.6335.3111.A111.A124.5214.6785.3399.9955

# HyperSudoku-16 Puzzle 59, TournamentPlus/30

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

161/256

	1	8			D				C	A			5		
2	A			E			B			3					F
5	4						8				D	A	7		2
				A		4			1					B	
		7		F			1	9	B			2			A
		2		4		8		A		6			9		
	E		3			0					2	1			5
F		4						D		8					C
			F	B				0	A	7		D			1
	2		7		9					B		C	E		8
			4				E	C	5			7	0		
	0	9				7	A	E							
			6								3				
	3	0	2		7				4		B			5	
B			5		4		6		7			F		1	
		F			1	E	D				0		B	2	

TournamentPlus

Diff: 30 / 95.2354.31D5.7433.4332.2256.6698.8995

[Next](#); [Prev](#); [TOC](#); [Help](#); [3-steps](#); [All steps](#); [Solution](#).

Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 30 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 59

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

161/256

	1	8			D				C	A			5		
2	A			E			B			3			<sup>1</sup>		F
5	4			<sup>2</sup>			8			<sup>2</sup>	D	A	7		2
	<sup>1</sup>			A		4			1					B	
		7	<sup>1</sup>	F			1	9	B		<sup>2</sup>	2			A
		2		4		8		A		6	<sup>1</sup>	<sup>1</sup>	9		
	E		3			0					2	1			5
F		4	<sup>2</sup>					D		8					C
<sup>2</sup>			F	B				0	A	7		D			1
	2		7		9			<sup>1</sup>		B		C	E		8
		<sup>3</sup>	4				E	C	5			7	0		
	0	9				7	A	E				<sup>1</sup>			
		<sup>1</sup>	6								3				
	3	0	2		7				4		B			5	
B			5		4		6		7		<sup>1</sup>	F		1	
		F	<sup>3</sup>		1	E	D				0		B	2	

TournamentPlus

Diff: 30 / 95.2354.31D5.7433.4332.2256.6698.8995

[Next](#); [Prev](#); [TOC](#); [Help](#); [Puzzle](#); [All steps](#); [Solution](#).

There are 30 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 59

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

161/256

<sup>27</sup>	<b>1</b>	<b>8</b>	<sup>23</sup>	<sup>23</sup>	<b>D</b>	<sup>14</sup>	<sup>13</sup>	<sup>6</sup>	<b>C</b>	<b>A</b>	<sup>20</sup>	<sup>26</sup>	<b>5</b>	<sup>26</sup>	<sup>27</sup>	<sup>1</sup>
<b>2</b>	<b>A</b>	<sup>27</sup>	<sup>28</sup>	<b>E</b>	<sup>28</sup>	<sup>26</sup>	<b>B</b>	<sup>10</sup>	<sup>12</sup>	<b>3</b>	<sup>11</sup>	<sup>23</sup>	<sup>1</sup>	<sup>24</sup>	<b>F</b>	
<b>5</b>	<b>4</b>	<sup>6</sup>	<sup>22</sup>	<sup>2</sup>	<sup>29</sup>	<sup>28</sup>	<b>8</b>	<sup>9</sup>	<sup>19</sup>	<sup>2</sup>	<b>D</b>	<b>A</b>	<b>7</b>	<sup>23</sup>	<b>2</b>	
<sup>23</sup>	<sup>1</sup>	<sup>28</sup>	<sup>27</sup>	<b>A</b>	<sup>28</sup>	<b>4</b>	<sup>22</sup>	<sup>7</sup>	<b>1</b>	<sup>18</sup>	<sup>17</sup>	<sup>29</sup>	<sup>29</sup>	<b>B</b>	<sup>25</sup>	
<sup>26</sup>	<sup>25</sup>	<b>7</b>	<sup>1</sup>	<b>F</b>	<sup>24</sup>	<sup>13</sup>	<b>1</b>	<b>9</b>	<b>B</b>	<sup>19</sup>	<sup>2</sup>	<b>2</b>	<sup>10</sup>	<sup>25</sup>	<b>A</b>	<sup>5</sup>
<sup>27</sup>	<sup>28</sup>	<b>2</b>	<sup>26</sup>	<b>4</b>	<sup>25</sup>	<b>8</b>	<sup>25</sup>	<b>A</b>	<sup>25</sup>	<b>6</b>	<sup>1</sup>	<sup>1</sup>	<b>9</b>	<sup>10</sup>	<sup>24</sup>	
<sup>7</sup>	<b>E</b>	<sup>8</sup>	<b>3</b>	<sup>24</sup>	<sup>7</sup>	<b>0</b>	<sup>25</sup>	<sup>11</sup>	<sup>9</sup>	<sup>9</sup>	<b>2</b>	<b>1</b>	<sup>30</sup>	<sup>29</sup>	<b>5</b>	
<b>F</b>	<sup>6</sup>	<b>4</b>	<sup>2</sup>	<sup>22</sup>	<sup>12</sup>	<sup>5</sup>	<sup>26</sup>	<b>D</b>	<sup>24</sup>	<b>8</b>	<sup>18</sup>	<sup>26</sup>	<sup>25</sup>	<sup>25</sup>	<b>C</b>	
<sup>2</sup>	<sup>29</sup>	<sup>28</sup>	<b>F</b>	<b>B</b>	<sup>29</sup>	<sup>27</sup>	<sup>29</sup>	<b>0</b>	<b>A</b>	<b>7</b>	<sup>28</sup>	<b>D</b>	<sup>11</sup>	<sup>21</sup>	<b>1</b>	<sup>9</sup>
<sup>30</sup>	<b>2</b>	<sup>29</sup>	<b>7</b>	<sup>15</sup>	<b>9</b>	<sup>4</sup>	<sup>29</sup>	<sup>1</sup>	<sup>21</sup>	<b>B</b>	<sup>11</sup>	<b>C</b>	<b>E</b>	<sup>29</sup>	<b>8</b>	
<sup>29</sup>	<sup>28</sup>	<sup>3</sup>	<b>4</b>	<sup>27</sup>	<sup>11</sup>	<sup>12</sup>	<b>E</b>	<b>C</b>	<b>5</b>	<sup>21</sup>	<sup>30</sup>	<b>7</b>	<b>0</b>	<sup>30</sup>	<sup>6</sup>	
<sup>29</sup>	<b>0</b>	<b>9</b>	<sup>5</sup>	<sup>28</sup>	<sup>30</sup>	<b>7</b>	<b>A</b>	<b>E</b>	<sup>11</sup>	<sup>4</sup>	<sup>29</sup>	<sup>1</sup>	<sup>10</sup>	<sup>28</sup>	<sup>26</sup>	
<sup>16</sup>	<sup>28</sup>	<sup>1</sup>	<b>6</b>	<sup>5</sup>	<sup>4</sup>	<sup>5</sup>	<sup>14</sup>	<sup>15</sup>	<sup>20</sup>	<sup>12</sup>	<b>3</b>	<sup>27</sup>	<sup>22</sup>	<sup>29</sup>	<sup>25</sup>	<sup>13</sup>
<sup>29</sup>	<b>3</b>	<b>0</b>	<b>2</b>	<sup>29</sup>	<b>7</b>	<sup>21</sup>	<sup>15</sup>	<sup>16</sup>	<b>4</b>	<sup>21</sup>	<b>B</b>	<sup>16</sup>	<sup>5</sup>	<b>5</b>	<sup>17</sup>	
<b>B</b>	<sup>22</sup>	<sup>29</sup>	<b>5</b>	<sup>13</sup>	<b>4</b>	<sup>28</sup>	<b>6</b>	<sup>9</sup>	<b>7</b>	<sup>15</sup>	<sup>1</sup>	<b>F</b>	<sup>28</sup>	<b>1</b>	<sup>14</sup>	
<sup>17</sup>	<sup>24</sup>	<b>F</b>	<sup>3</sup>	<sup>29</sup>	<b>1</b>	<b>E</b>	<b>D</b>	<sup>11</sup>	<sup>10</sup>	<sup>22</sup>	<b>0</b>	<sup>28</sup>	<b>B</b>	<b>2</b>	<sup>23</sup>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

TournamentPlus

Diff: 30 / 95.2354.31D5.7433.4332.2256.6698.8995

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There are 30 steps required to solve the puzzle above with a total of 161 empty locations that must be determined, out of a total puzzle size of 256.

All 30 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 9 independent moves.

- \* The only spot for 3 in the 9th column is (9, 10).
- \* The only spot for F in the 1st 4x4 square is (2, 4).
- \* The only spot for 1 in the 4th 4x4 square is (14, 2).
- \* The only spot for 5 in the 12th 4x4 square is (13, 12).
- \* The only spot for A in the 15th 4x4 square is (12, 15).
- \* The only spot for 8 in the 1st 4x4 inner square is (4, 5).
- \* The only spot for B in the 2nd 4x4 inner square is (13, 6).
- \* The only spot for 1 in the 2nd 4x4 inner square is (12, 6).
- \* The only spot for E in the 3rd 4x4 inner square is (3, 13).

Step 2: There are 5 independent moves.

- \* The only spot for C in the 12th column is (12, 5).
- \* The only spot for 1 in the 5th 4x4 square is (4, 8).
- \* The only spot for E in the 9th 4x4 square is (1, 9).
- \* The only spot for 1 in the 1st 4x4 inner square is (5, 3).
- \* The only spot for F in the 2nd 4x4 inner square is (11, 3).

Step 3: There are 2 independent moves.

- \* The only spot for A in the 4th column is (4, 16).
- \* The only spot for 1 in the 3rd 4x4 inner square is (3, 11).

Step 4: There are 3 independent moves.

- \* The only spot for 1 in the 10th 4x4 square is (7, 10).
- \* The only spot for 1 in the 11th 4x4 square is (11, 12).
- \* The only spot for A in the 3rd 4x4 inner square is (6, 13).

Step 5: There are 5 independent moves.

- \* The only spot for A in the 6th 4x4 square is (7, 8).
- \* The only spot for B in the 14th 4x4 square is (7, 13).
- \* The only spot for 5 in the 3rd 4x4 inner square is (5, 13).
- \* The only spot for B in the 3rd 4x4 inner square is (4, 12).
- \* The only spot for A in the 4th 4x4 inner square is (14, 14).

Step 6: There are 4 independent moves.

- \* The only spot for B in the 1st row is (9, 1).
- \* The only spot for B in the 2nd column is (2, 8).
- \* The only spot for B in the 12th 4x4 square is (16, 11).
- \* The only spot for B in the 1st 4x4 inner square is (3, 3).

Step 7: There are 3 independent moves.

- \* The only spot for 2 in the 3rd 4x4 square is (9, 4).
- \* The only spot for 9 in the 5th 4x4 square is (1, 7).
- \* The only spot for B in the 6th 4x4 square is (6, 7).

Step 8: There is 1 independent move.

- \* The only spot for A in the 5th 4x4 square is (3, 7).

Step 9: There are 4 independent moves.

- \* 8 must be placed at (9, 15) because it is the only value left that is not already in the 15th row, the 9th column or the 15th 4x4 square.
- \* 4 must be placed at (11, 7) because it is the only value left that is not already in the 7th row, the 11th column or the 7th 4x4 square.

- \* F must be placed at (10, 7) because it is the only value left that is not already in the 7th row, the 10th column or the 7th 4x4 square.
- \* 6 must be placed at (9, 3) because it is the only value left that is not already in the 3rd row, the 9th column or the 3rd 4x4 square.

Step 10: There are 5 independent moves.

- \* The only spot for 4 in the 9th column is (9, 2).
- \* The only spot for F in the 14th column is (14, 12).
- \* The only spot for F in the 8th 4x4 square is (15, 6).
- \* The only spot for 6 in the 15th 4x4 square is (10, 16).
- \* The only spot for 4 in the 2nd 4x4 inner square is (14, 5).

Step 11: There are 7 independent moves.

- \* The only spot for 7 in the 2nd row is (12, 2).
- \* The only spot for 2 in the 12th row is (10, 12).
- \* The only spot for 5 in the 9th column is (9, 16).
- \* The only spot for 7 in the 9th column is (9, 7).
- \* The only spot for F in the 11th 4x4 square is (12, 10).
- \* The only spot for 2 in the 12th 4x4 square is (14, 9).
- \* The only spot for F in the 3rd 4x4 inner square is (6, 11).

Step 12: There are 4 independent moves.

- \* The only spot for 2 in the 6th column is (6, 8).
- \* The only spot for 8 in the 10th column is (10, 2).
- \* The only spot for 2 in the 10th 4x4 square is (7, 11).
- \* The only spot for 2 in the 4th 4x4 inner square is (11, 13).

Step 13: There are 3 independent moves.

- \* The only spot for D in the 7th column is (7, 5).
- \* The only spot for 2 in the 8th column is (8, 1).
- \* The only spot for 2 in the 14th 4x4 square is (5, 15).

Step 14: There are 3 independent moves.

- \* The only spot for 0 in the 15th row is (16, 15).
- \* The only spot for F in the 2nd 4x4 square is (7, 1).
- \* The only spot for 0 in the 14th 4x4 square is (8, 13).

Step 15: There are 4 independent moves.

- \* The only spot for F in the 13th row is (9, 13).
- \* The only spot for E in the 15th row is (11, 15).
- \* The only spot for 0 in the 10th 4x4 square is (5, 10).
- \* The only spot for F in the 14th 4x4 square is (8, 14).

Step 16: There are 3 independent moves.

- \* The only spot for 1 in the 13th row is (1, 13).
- \* The only spot for 1 in the 15th 4x4 square is (9, 14).
- \* The only spot for E in the 4th 4x4 inner square is (13, 14).

Step 17: There are 3 independent moves.

- \* The only spot for 4 in the 13th 4x4 square is (1, 16).
- \* The only spot for 6 in the 16th 4x4 square is (16, 14).
- \* The only spot for E in the 2nd 4x4 inner square is (12, 4).

Step 18: There are 2 independent moves.

- \* The only spot for 5 in the 12th column is (12, 8).
- \* The only spot for 5 in the 3rd 4x4 square is (11, 4).

Step 19: There are 2 independent moves.

- \* The only spot for 0 in the 11th column is (11, 5).
- \* The only spot for 0 in the 3rd 4x4 square is (10, 3).

Step 20: There are 2 independent moves.

- \* The only spot for 9 in the 10th column is (10, 13).
- \* The only spot for 9 in the 3rd 4x4 square is (12, 1).

Step 21: There are 5 independent moves.

- \* The only spot for 9 in the 9th row is (15, 9).
- \* The only spot for 9 in the 14th row is (7, 14).
- \* The only spot for D in the 10th column is (10, 10).
- \* The only spot for D in the 15th 4x4 square is (11, 14).
- \* The only spot for 9 in the 4th 4x4 inner square is (11, 11).

Step 22: There are 6 independent moves.

- \* The only spot for 9 in the 3rd row is (4, 3).
- \* The only spot for 9 in the 15th row is (2, 15).
- \* The only spot for 9 in the 5th column is (5, 8).
- \* The only spot for 9 in the 2nd 4x4 square is (8, 4).
- \* The only spot for C in the 15th 4x4 square is (11, 16).
- \* The only spot for C in the 4th 4x4 inner square is (14, 13).

Step 23: There are 6 independent moves.

- \* The only spot for E in the 3rd row is (15, 3).
- \* The only spot for 7 in the 4th row is (1, 4).
- \* The only spot for 9 in the 16th column is (16, 16).
- \* The only spot for E in the 1st 4x4 square is (4, 1).
- \* The only spot for 7 in the 2nd 4x4 square is (5, 1).
- \* The only spot for 9 in the 4th 4x4 square is (13, 2).

Step 24: There are 6 independent moves.

- \* The only spot for E in the 5th row is (6, 5).
- \* The only spot for E in the 8th row is (10, 8).
- \* The only spot for 7 in the 16th row is (2, 16).
- \* The only spot for 6 in the 5th column is (5, 7).
- \* The only spot for C in the 4th 4x4 square is (15, 2).
- \* The only spot for E in the 8th 4x4 square is (16, 6).

Step 25: There are 10 independent moves.

- \* The only spot for 3 in the 5th row is (15, 5).
- \* The only spot for 5 in the 5th row is (2, 5).
- \* The only spot for 7 in the 6th row is (8, 6).
- \* The only spot for C in the 7th row is (8, 7).
- \* The only spot for 6 in the 14th column is (14, 8).
- \* The only spot for 7 in the 16th column is (16, 13).
- \* The only spot for D in the 4th 4x4 square is (16, 4).

- \* The only spot for 3 in the 7th 4x4 square is (10, 6).
- \* The only spot for 7 in the 8th 4x4 square is (15, 8).
- \* The only spot for 5 in the 1st 4x4 inner square is (6, 6).

Step 26: There are 8 independent moves.

- \* The only spot for 6 in the 13th column is (13, 1).
- \* The only spot for 0 in the 15th column is (15, 1).
- \* The only spot for 5 in the 2nd 4x4 square is (7, 2).
- \* The only spot for 6 in the 5th 4x4 square is (1, 5).
- \* The only spot for 3 in the 6th 4x4 square is (8, 8).
- \* The only spot for 0 in the 8th 4x4 square is (13, 8).
- \* The only spot for 3 in the 12th 4x4 square is (16, 12).
- \* The only spot for D in the 1st 4x4 inner square is (4, 6).

Step 27: There are 8 independent moves.

- \* The only spot for 3 in the 1st row is (1, 1).
- \* The only spot for C in the 4th column is (4, 4).
- \* The only spot for 6 in the 7th column is (7, 9).
- \* The only spot for 4 in the 13th column is (13, 13).
- \* The only spot for D in the 1st 4x4 square is (3, 2).
- \* The only spot for 4 in the 4th 4x4 square is (16, 1).
- \* The only spot for 0 in the 5th 4x4 square is (1, 6).
- \* The only spot for 3 in the 3rd 4x4 inner square is (5, 11).

Step 28: There are 15 independent moves.

- \* The only spot for 6 in the 2nd row is (6, 2).
- \* The only spot for 4 in the 12th row is (15, 12).
- \* The only spot for D in the 15th row is (14, 15).
- \* The only spot for 3 in the 16th row is (13, 16).
- \* The only spot for 6 in the 2nd column is (2, 11).
- \* The only spot for 6 in the 1st 4x4 square is (3, 4).
- \* The only spot for 0 in the 1st 4x4 square is (4, 2).
- \* The only spot for C in the 2nd 4x4 square is (7, 3).
- \* The only spot for C in the 5th 4x4 square is (2, 6).
- \* The only spot for 3 in the 9th 4x4 square is (3, 9).
- \* The only spot for 4 in the 11th 4x4 square is (12, 9).
- \* The only spot for D in the 13th 4x4 square is (2, 13).
- \* The only spot for 3 in the 14th 4x4 square is (7, 15).
- \* The only spot for 0 in the 1st 4x4 inner square is (6, 4).
- \* The only spot for D in the 3rd 4x4 inner square is (5, 12).

Step 29: There are 18 independent moves.

- \* The only spot for 5 in the 9th row is (8, 9).
- \* The only spot for C in the 9th row is (6, 9).
- \* The only spot for 8 in the 16th row is (5, 16).
- \* The only spot for 8 in the 2nd column is (2, 9).
- \* The only spot for C in the 3rd column is (3, 15).
- \* The only spot for 8 in the 13th column is (13, 4).
- \* The only spot for D in the 8th 4x4 square is (15, 7).



- \* The only spot for C in the 9th 4x4 square is (1, 12).
- \* The only spot for D in the 9th 4x4 square is (1, 11).
- \* The only spot for 5 in the 9th 4x4 square is (3, 10).
- \* The only spot for 4 in the 10th 4x4 square is (8, 10).
- \* The only spot for 6 in the 12th 4x4 square is (15, 10).
- \* The only spot for 8 in the 13th 4x4 square is (1, 14).
- \* The only spot for C in the 14th 4x4 square is (5, 14).
- \* The only spot for 8 in the 16th 4x4 square is (15, 13).
- \* The only spot for 3 in the 1st 4x4 inner square is (6, 3).
- \* The only spot for 3 in the 2nd 4x4 inner square is (14, 4).
- \* The only spot for 6 in the 4th 4x4 inner square is (12, 12).

Step 30: There are 5 independent moves.

- \* The only spot for 8 in the 8th 4x4 square is (14, 7).
- \* The only spot for A in the 9th 4x4 square is (1, 10).
- \* The only spot for A in the 12th 4x4 square is (15, 11).
- \* The only spot for 8 in the 3rd 4x4 inner square is (6, 12).
- \* The only spot for 8 in the 4th 4x4 inner square is (12, 11).

## Solution for Puzzle 59

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

3	1	8	E	7	D	F	2	B	C	A	9	6	5	0	4
2	A	D	0	E	6	5	B	4	8	3	7	9	1	C	F
5	4	B	9	1	3	C	8	6	0	F	D	A	7	E	2
7	F	6	C	A	0	4	9	2	1	5	E	8	3	B	D
6	5	7	8	F	E	D	1	9	B	0	C	2	4	3	A
0	C	2	D	4	5	8	7	A	3	6	1	B	9	F	E
9	E	A	3	6	B	0	C	7	F	4	2	1	8	D	5
F	B	4	1	9	2	A	3	D	E	8	5	0	6	7	C
E	8	3	F	B	C	6	5	0	A	7	4	D	2	9	1
A	2	5	7	0	9	1	4	3	D	B	F	C	E	6	8
D	6	1	4	3	F	2	E	C	5	9	8	7	0	A	B
C	0	9	B	D	8	7	A	E	2	1	6	5	F	4	3
1	D	E	6	5	A	B	0	F	9	2	3	4	C	8	7
8	3	0	2	C	7	9	F	1	4	D	B	E	A	5	6
B	9	C	5	2	4	3	6	8	7	E	A	F	D	1	0
4	7	F	A	8	1	E	D	5	6	C	0	3	B	2	9

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# HyperSudoku-16 Puzzle 60, TournamentPlus/34

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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6		8	E		F	0					D				3
F				C	3		A	B							D
9	4				8			5	3			C			E
		C				6			8	9	2		1		
		F					3			5				A	
E		D	B		4	5	2						7		
	0	A					F		7	D	8		5		
				D	6			2		0			4	1	
						1	7		5			6	9	C	
	9				2	4		E			F	3			5
	5	B				3			6	A				2	
	6		F	A							1	8			
A	F					8				6	9				2
B			1				0	A	4				3	9	
	C		8	3						7		A		4	6
2				6	A						B			D	

TournamentPlus

Diff: 34 / 95.6335.3111.A111.A124.5214.6785.3399.9955

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Place each element of the group (0 1 2 3 4 5 6 7 8 9 A B C D E F) exactly once in each row, each column, each 4x4 square, and each 4x4 inner square.

There are 34 steps required to solve the puzzle above with a total of 157 empty locations that must be determined, out of a total puzzle size of 256.

## First Three Steps to Solve Puzzle 60

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

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6		8	E		F	0			<sup>3</sup>		D				3
F				C	3		A	B						<sup>2</sup>	D
9	4		<sup>2</sup>		8			5	3			C			E
		C	<sup>1</sup>			6			8	9	2		1		<sup>3</sup>
	<sup>2</sup>	F	<sup>1</sup>				3			5	<sup>3</sup>	<sup>2</sup>	<sup>1</sup>	A	
E	<sup>2</sup>	D	B		4	5	2				<sup>3</sup>		7		
	0	A					F		7	D	8		<sup>1</sup>	5	
				D	6	<sup>1</sup>	<sup>1</sup>	2		0			4	1	
	<sup>3</sup>			<sup>1</sup>		1	7		5			6	9	C	
	9				2	4	<sup>1</sup>	E			F	3	<sup>3</sup>		5
	5	B		<sup>1</sup>		3			6	A				2	<sup>1</sup>
	6		F	A							1	8			
A	F					8				6	9				2
B		<sup>1</sup>	1				0	A	4				3	9	<sup>1</sup>
	C		8	3						7		A		4	6
2				6	A						B	<sup>1</sup>		D	

TournamentPlus

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There are 34 steps required to solve the puzzle above with a total of 157 empty locations that must be determined, out of a total puzzle size of 256.

The first 3 steps are marked in empty spaces in the puzzle above with superscripts showing the step number.

## Deductive Steps to Solve Puzzle 60

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6	<sup>25</sup>	8	E	<sup>23</sup>	F	0	<sup>24</sup>	<sup>26</sup>	3	<sup>25</sup>	D	<sup>19</sup>	7	<sup>19</sup>	3	<sup>1</sup>
F	<sup>26</sup>	<sup>29</sup>	<sup>30</sup>	C	3	<sup>23</sup>	A	B	<sup>24</sup>	<sup>24</sup>	<sup>24</sup>	<sup>20</sup>	6	<sup>2</sup>	D	
9	4	<sup>22</sup>	<sup>2</sup>	<sup>31</sup>	8	<sup>32</sup>	<sup>31</sup>	5	3	<sup>8</sup>	<sup>6</sup>	C	<sup>5</sup>	<sup>10</sup>	E	
<sup>34</sup>	<sup>33</sup>	C	<sup>1</sup>	18	19	6	<sup>25</sup>	<sup>25</sup>	8	9	2	<sup>4</sup>	1	<sup>9</sup>	<sup>3</sup>	
<sup>31</sup>	<sup>2</sup>	F	<sup>1</sup>	<sup>32</sup>	<sup>29</sup>	<sup>31</sup>	3	<sup>7</sup>	<sup>32</sup>	5	<sup>3</sup>	<sup>2</sup>	<sup>1</sup>	A	<sup>25</sup>	<sup>5</sup>
E	<sup>2</sup>	D	B	<sup>32</sup>	4	5	2	<sup>32</sup>	<sup>31</sup>	<sup>4</sup>	<sup>3</sup>	<sup>7</sup>	7	<sup>6</sup>	<sup>12</sup>	
<sup>30</sup>	0	A	<sup>31</sup>	<sup>24</sup>	<sup>30</sup>	<sup>23</sup>	F	<sup>6</sup>	7	D	8	<sup>1</sup>	5	<sup>5</sup>	<sup>26</sup>	
<sup>33</sup>	<sup>25</sup>	<sup>34</sup>	<sup>31</sup>	D	6	<sup>1</sup>	<sup>1</sup>	2	<sup>14</sup>	0	<sup>11</sup>	<sup>4</sup>	4	1	<sup>13</sup>	
<sup>31</sup>	<sup>3</sup>	18	<sup>20</sup>	<sup>1</sup>	<sup>28</sup>	1	7	<sup>29</sup>	5	<sup>19</sup>	<sup>5</sup>	6	9	C	<sup>30</sup>	<sup>9</sup>
<sup>30</sup>	9	<sup>27</sup>	<sup>31</sup>	<sup>29</sup>	2	4	<sup>1</sup>	E	<sup>30</sup>	<sup>30</sup>	F	3	<sup>3</sup>	<sup>18</sup>	5	
<sup>30</sup>	5	B	<sup>29</sup>	<sup>1</sup>	18	3	<sup>19</sup>	<sup>32</sup>	6	A	<sup>23</sup>	<sup>32</sup>	<sup>31</sup>	2	<sup>1</sup>	
<sup>26</sup>	6	<sup>29</sup>	F	A	<sup>17</sup>	<sup>26</sup>	<sup>27</sup>	<sup>31</sup>	<sup>30</sup>	<sup>22</sup>	1	8	<sup>30</sup>	<sup>17</sup>	<sup>32</sup>	
A	F	<sup>27</sup>	<sup>28</sup>	<sup>22</sup>	<sup>29</sup>	8	<sup>29</sup>	<sup>31</sup>	<sup>32</sup>	6	9	<sup>6</sup>	<sup>24</sup>	<sup>16</sup>	2	<sup>13</sup>
B	<sup>34</sup>	<sup>1</sup>	1	<sup>21</sup>	<sup>30</sup>	<sup>33</sup>	0	A	4	<sup>23</sup>	<sup>15</sup>	<sup>32</sup>	3	9	<sup>1</sup>	
<sup>34</sup>	C	<sup>33</sup>	8	3	<sup>25</sup>	<sup>34</sup>	<sup>30</sup>	<sup>31</sup>	<sup>22</sup>	7	<sup>25</sup>	A	<sup>23</sup>	4	6	
2	<sup>24</sup>	<sup>32</sup>	<sup>30</sup>	6	A	<sup>33</sup>	<sup>31</sup>	<sup>28</sup>	<sup>30</sup>	<sup>29</sup>	B	<sup>1</sup>	<sup>32</sup>	D	<sup>31</sup>	
<sup>1</sup>				<sup>5</sup>				<sup>9</sup>				<sup>13</sup>				

TournamentPlus

Diff: 34 / 95.6335.3111.A111.A124.5214.6785.3399.9955

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There are 34 steps required to solve the puzzle above with a total of 157 empty locations that must be determined, out of a total puzzle size of 256.

All 34 steps are marked in empty spaces in the puzzle above with superscripts showing the step number. The moves within each step may be done in any order.

All of the moves within a particular step must be done before all of the moves in the subsequent step can be completed.

Rows are numbered top to bottom, columns from left to right, and rectangles from left to right and then top to bottom. Coordinates are (col, row). Precise details on numbering within each group is specified in the [instructions](#).

Step 1: There are 13 independent moves.

- \* The only spot for 8 in the 14th row is (16, 14).
- \* The only spot for 1 in the 13th column is (13, 16).
- \* The only spot for 8 in the 6th 4x4 square is (8, 8).
- \* The only spot for A in the 6th 4x4 square is (7, 8).
- \* The only spot for 2 in the 8th 4x4 square is (13, 7).
- \* The only spot for 6 in the 10th 4x4 square is (8, 10).
- \* The only spot for F in the 10th 4x4 square is (5, 9).
- \* The only spot for 1 in the 12th 4x4 square is (16, 11).
- \* The only spot for 6 in the 1st 4x4 inner square is (4, 5).
- \* The only spot for 3 in the 1st 4x4 inner square is (4, 4).
- \* The only spot for 8 in the 2nd 4x4 inner square is (14, 5).
- \* The only spot for 6 in the 3rd 4x4 inner square is (3, 14).
- \* The only spot for 8 in the 3rd 4x4 inner square is (5, 11).

Step 2: There are 5 independent moves.

- \* The only spot for 8 in the 4th 4x4 square is (15, 2).
- \* The only spot for 8 in the 5th 4x4 square is (2, 6).
- \* The only spot for 2 in the 5th 4x4 square is (2, 5).
- \* The only spot for A in the 1st 4x4 inner square is (4, 3).
- \* The only spot for D in the 2nd 4x4 inner square is (13, 5).

Step 3: There are 6 independent moves.

- \* The only spot for A in the 4th row is (16, 4).
- \* The only spot for A in the 10th row is (14, 10).
- \* The only spot for A in the 3rd 4x4 square is (10, 1).
- \* The only spot for A in the 9th 4x4 square is (2, 9).
- \* The only spot for A in the 2nd 4x4 inner square is (12, 6).
- \* The only spot for E in the 2nd 4x4 inner square is (12, 5).

Step 4: There are 3 independent moves.

- \* The only spot for E in the 8th row is (13, 8).
- \* The only spot for 3 in the 2nd 4x4 inner square is (11, 6).
- \* The only spot for 4 in the 2nd 4x4 inner square is (13, 4).

Step 5: There are 3 independent moves.

- \* The only spot for 3 in the 12th column is (12, 9).
- \* The only spot for 3 in the 8th 4x4 square is (15, 7).
- \* The only spot for B in the 2nd 4x4 inner square is (14, 3).

Step 6: There are 5 independent moves.

- \* The only spot for 6 in the 7th row is (9, 7).
- \* The only spot for B in the 13th column is (13, 13).
- \* The only spot for 6 in the 14th column is (14, 2).
- \* The only spot for 6 in the 8th 4x4 square is (15, 6).
- \* The only spot for 6 in the 2nd 4x4 inner square is (12, 3).

Step 7: There are 3 independent moves.

- \* The only spot for 2 in the 4th 4x4 square is (14, 1).
- \* The only spot for 4 in the 7th 4x4 square is (9, 5).

- \* The only spot for 0 in the 2nd 4x4 inner square is (13, 6).
- Step 8: There is 1 independent move.
- \* The only spot for F in the 2nd 4x4 inner square is (11, 3).
- Step 9: There is 1 independent move.
- \* The only spot for F in the 4th 4x4 square is (15, 4).
- Step 10: There is 1 independent move.
- \* The only spot for 0 in the 4th 4x4 square is (15, 3).
- Step 11: There is 1 independent move.
- \* C must be placed at (12, 8) because it is the only value left that is not already in the 8th row, the 12th column or the 7th 4x4 square.
- Step 12: There is 1 independent move.
- \* The only spot for C in the 6th row is (16, 6).
- Step 13: There is 1 independent move.
- \* The only spot for F in the 8th 4x4 square is (16, 8).
- Step 14: There is 1 independent move.
- \* The only spot for B in the 8th row is (10, 8).
- Step 15: There is 1 independent move.
- \* 5 must be placed at (12, 14) because it is the only value left that is not already in the 14th row, the 12th column, the 15th 4x4 square or the 4th 4x4 inner square.
- Step 16: There is 1 independent move.
- \* The only spot for 5 in the 16th 4x4 square is (15, 13).
- Step 17: There are 2 independent moves.
- \* The only spot for E in the 15th column is (15, 12).
  - \* The only spot for 5 in the 3rd 4x4 inner square is (6, 12).
- Step 18: There are 4 independent moves.
- \* The only spot for B in the 15th column is (15, 10).
  - \* The only spot for E in the 9th 4x4 square is (3, 9).
  - \* The only spot for 5 in the 1st 4x4 inner square is (5, 4).
  - \* The only spot for 9 in the 3rd 4x4 inner square is (6, 11).
- Step 19: There are 5 independent moves.
- \* The only spot for 5 in the 1st row is (13, 1).
  - \* The only spot for 7 in the 15th column is (15, 1).
  - \* The only spot for E in the 10th 4x4 square is (8, 11).
  - \* The only spot for B in the 11th 4x4 square is (11, 9).
  - \* The only spot for E in the 1st 4x4 inner square is (6, 4).
- Step 20: There are 2 independent moves.
- \* The only spot for 2 in the 9th row is (4, 9).
  - \* The only spot for 9 in the 4th 4x4 square is (13, 2).
- Step 21: There is 1 independent move.
- \* The only spot for 2 in the 3rd 4x4 inner square is (5, 14).
- Step 22: There are 4 independent moves.
- \* The only spot for 2 in the 15th 4x4 square is (10, 15).
  - \* The only spot for 2 in the 1st 4x4 inner square is (3, 3).
  - \* The only spot for E in the 3rd 4x4 inner square is (5, 13).

- \* The only spot for 2 in the 4th 4x4 inner square is (11, 12).

Step 23: There are 6 independent moves.

- \* The only spot for E in the 15th row is (14, 15).
- \* The only spot for 4 in the 5th column is (5, 1).
- \* The only spot for 2 in the 2nd 4x4 square is (7, 2).
- \* The only spot for E in the 6th 4x4 square is (7, 7).
- \* The only spot for E in the 4th 4x4 inner square is (11, 14).
- \* The only spot for 4 in the 4th 4x4 inner square is (12, 11).

Step 24: There are 7 independent moves.

- \* The only spot for B in the 5th column is (5, 7).
- \* The only spot for 7 in the 12th column is (12, 2).
- \* The only spot for 9 in the 2nd 4x4 square is (8, 1).
- \* The only spot for 4 in the 3rd 4x4 square is (11, 2).
- \* The only spot for E in the 3rd 4x4 square is (10, 2).
- \* The only spot for E in the 13th 4x4 square is (2, 16).
- \* The only spot for C in the 4th 4x4 inner square is (14, 13).

Step 25: There are 8 independent moves.

- \* The only spot for B in the 1st row is (2, 1).
- \* The only spot for 3 in the 2nd column is (2, 8).
- \* The only spot for B in the 6th column is (6, 15).
- \* The only spot for 1 in the 11th column is (11, 1).
- \* The only spot for 0 in the 12th column is (12, 15).
- \* The only spot for B in the 2nd 4x4 square is (8, 4).
- \* The only spot for 0 in the 3rd 4x4 square is (9, 4).
- \* The only spot for B in the 8th 4x4 square is (16, 5).

Step 26: There are 5 independent moves.

- \* The only spot for 3 in the 1st column is (1, 12).
- \* The only spot for 1 in the 2nd column is (2, 2).
- \* The only spot for C in the 3rd 4x4 square is (9, 1).
- \* The only spot for 9 in the 8th 4x4 square is (16, 7).
- \* The only spot for B in the 10th 4x4 square is (7, 12).

Step 27: There are 3 independent moves.

- \* The only spot for 1 in the 3rd column is (3, 10).
- \* The only spot for C in the 10th 4x4 square is (8, 12).
- \* The only spot for 3 in the 3rd 4x4 inner square is (3, 13).

Step 28: There are 3 independent moves.

- \* The only spot for 0 in the 13th row is (4, 13).
- \* The only spot for D in the 10th 4x4 square is (6, 9).
- \* The only spot for 3 in the 15th 4x4 square is (9, 16).

Step 29: There are 9 independent moves.

- \* The only spot for 4 in the 13th row is (8, 13).
- \* The only spot for 7 in the 13th row is (6, 13).
- \* The only spot for 0 in the 6th column is (6, 5).
- \* The only spot for 8 in the 9th column is (9, 9).



- \* The only spot for 0 in the 1st 4x4 square is (3, 2).
- \* The only spot for 0 in the 10th 4x4 square is (5, 10).
- \* The only spot for 8 in the 15th 4x4 square is (11, 16).
- \* The only spot for 4 in the 3rd 4x4 inner square is (3, 12).
- \* The only spot for D in the 3rd 4x4 inner square is (4, 11).

Step 30: There are 14 independent moves.

- \* The only spot for D in the 10th row is (10, 10).
- \* The only spot for C in the 11th row is (1, 11).
- \* The only spot for 4 in the 1st column is (1, 7).
- \* The only spot for 1 in the 6th column is (6, 7).
- \* The only spot for C in the 11th column is (11, 10).
- \* The only spot for 5 in the 1st 4x4 square is (4, 2).
- \* The only spot for 8 in the 9th 4x4 square is (1, 10).
- \* The only spot for 0 in the 11th 4x4 square is (10, 12).
- \* The only spot for 4 in the 12th 4x4 square is (16, 9).
- \* The only spot for 4 in the 13th 4x4 square is (4, 16).
- \* The only spot for 1 in the 14th 4x4 square is (8, 15).
- \* The only spot for C in the 15th 4x4 square is (10, 16).
- \* The only spot for C in the 3rd 4x4 inner square is (6, 14).
- \* The only spot for D in the 4th 4x4 inner square is (14, 12).

Step 31: There are 15 independent moves.

- \* The only spot for D in the 13th row is (9, 13).
- \* The only spot for 9 in the 4th column is (4, 8).
- \* The only spot for D in the 8th column is (8, 3).
- \* The only spot for F in the 10th column is (10, 6).
- \* The only spot for 0 in the 16th column is (16, 16).
- \* The only spot for C in the 5th 4x4 square is (4, 7).
- \* The only spot for 1 in the 5th 4x4 square is (1, 5).
- \* The only spot for C in the 6th 4x4 square is (7, 5).
- \* The only spot for 7 in the 9th 4x4 square is (4, 10).
- \* The only spot for 0 in the 9th 4x4 square is (1, 9).
- \* The only spot for 9 in the 11th 4x4 square is (9, 12).
- \* The only spot for 5 in the 14th 4x4 square is (8, 16).
- \* The only spot for F in the 15th 4x4 square is (9, 15).
- \* The only spot for 1 in the 1st 4x4 inner square is (5, 3).
- \* The only spot for 0 in the 4th 4x4 inner square is (14, 11).

Step 32: There are 12 independent moves.

- \* The only spot for 9 in the 6th row is (5, 6).
- \* The only spot for 7 in the 16th row is (3, 16).
- \* The only spot for F in the 14th column is (14, 16).
- \* The only spot for 7 in the 16th column is (16, 12).
- \* The only spot for 7 in the 2nd 4x4 square is (7, 3).
- \* The only spot for 1 in the 7th 4x4 square is (9, 6).
- \* The only spot for 9 in the 7th 4x4 square is (10, 5).
- \* The only spot for 7 in the 11th 4x4 square is (9, 11).

- \* The only spot for F in the 12th 4x4 square is (13, 11).
- \* The only spot for 1 in the 15th 4x4 square is (10, 13).
- \* The only spot for 7 in the 16th 4x4 square is (13, 14).
- \* The only spot for 7 in the 1st 4x4 inner square is (5, 5).

Step 33: There are 5 independent moves.

- \* The only spot for 9 in the 16th row is (7, 16).
- \* The only spot for 7 in the 2nd column is (2, 4).
- \* The only spot for 7 in the 5th 4x4 square is (1, 8).
- \* The only spot for 9 in the 13th 4x4 square is (3, 15).
- \* The only spot for F in the 14th 4x4 square is (7, 14).

Step 34: There are 5 independent moves.

- \* The only spot for D in the 2nd column is (2, 14).
- \* The only spot for D in the 1st 4x4 square is (1, 4).
- \* The only spot for 5 in the 5th 4x4 square is (3, 8).
- \* The only spot for 5 in the 13th 4x4 square is (1, 15).
- \* The only spot for D in the 14th 4x4 square is (7, 15).

## Solution for Puzzle 60

Variations on Harder Advanced Sudoku Logic Puzzles (Vol 1)

6	B	8	E	4	F	0	9	C	A	1	D	5	2	7	3
F	1	0	5	C	3	2	A	B	E	4	7	9	6	8	D
9	4	2	A	1	8	7	D	5	3	F	6	C	B	0	E
D	7	C	3	5	E	6	B	0	8	9	2	4	1	F	A
1	2	F	6	7	0	C	3	4	9	5	E	D	8	A	B
E	8	D	B	9	4	5	2	1	F	3	A	0	7	6	C
4	0	A	C	B	1	E	F	6	7	D	8	2	5	3	9
7	3	5	9	D	6	A	8	2	B	0	C	E	4	1	F
0	A	E	2	F	D	1	7	8	5	B	3	6	9	C	4
8	9	1	7	0	2	4	6	E	D	C	F	3	A	B	5
C	5	B	D	8	9	3	E	7	6	A	4	F	0	2	1
3	6	4	F	A	5	B	C	9	0	2	1	8	D	E	7
A	F	3	0	E	7	8	4	D	1	6	9	B	C	5	2
B	D	6	1	2	C	F	0	A	4	E	5	7	3	9	8
5	C	9	8	3	B	D	1	F	2	7	0	A	E	4	6
2	E	7	4	6	A	9	5	3	C	8	B	1	F	D	0

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