



Indian Round
of
WPF Sudoku Grand Prix 2013
at
Logic Masters India
(<http://logicmastersindia.com/2013/02S/>)

Dates : 9th Feb – 11th Feb

Sudokus by Deb Mohanty



WPF Sudoku Grand Prix

This competition will be used as Indian round of WPF Sudoku Grand Prix (Sudoku GP). You can read more about the GP at WPF website (<http://www.worldpuzzle.org/sudokugp/>). If you want your results to be considered for Sudoku GP, you must have yourself registered at the same page, if you have not done so earlier.

This competition will also be used as LMI February monthly Sudoku test. You have the option for participating only for the Sudoku GP, and not for LMI ratings.

How to participate?

This instruction booklet lists all the Sudoku types that will appear in the competition. It is most important to read and understand the rules of all the types. If you have any questions, please ask the organizers at <http://logicmastersindia.com/t/?tid=571>, preferably before the competition starts.

If you are participating at LMI for first time, you must check the F.A.Q. at <http://logicmastersindia.com/t/?tid=381>.

List of Sudoku types

The list of Sudoku types are shown in the right and the rules are explained in next pages. You will have 120 minutes (2 hours) to solve as many sudokus as possible.

Points typically indicate difficulty of the sudokus and time required to solve them. While the organizers have made best efforts to match them, your personal

experience and preference may differ. Players submitting all sudokus with maximum 4 wrong cells will get five points per minute saved as bonus. Please note that GP considers only your rank (and not your score).

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Size of the grid specified, if it is not 9X9

General Rules

To make the rules less repetitive, you will see following line “Apply standard Sudoku rules” in most Sudoku rules. This means “Place a digit from 1 to N, where N is the size of the grid, in each empty cell so that each digit appears exactly once in each row, column and outlined region.”

Each Sudoku will be marked with, at max, 2 lettered arrows. If you are solving on paper, you need to submit the digits in these arrows, in order, including the givens. For example, the answer key for the Sudoku at the right is 162897453, 517698432.

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

Play Fair

Outside help of any kind for solving is not permitted. This includes but is not limited to: assistance of any kind from any other person; prepared notes, books, calculators, computers, mobiles / handheld devices or tools other than items explicitly permitted below.

You are allowed to use writing implements, eraser, blank paper (including commercial graph paper), ruler, scissors, tape, and LMI's flash solving interface.

All entries and scores are subject to review for compliance of rules. The organizers reserve the right to disqualify any contestant if, in their sole judgment, they believe the rules have been violated.

In case of a dispute, protest, or other judgment, the decision of the organizers is final.

Classic Sudoku

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region.

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

Classic Sudoku

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region.

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

Sudoku XV

Apply standard Sudoku rules.

Adjacent cells with two digits summing to 5 are marked by V, while those summing to 10 are marked by X. All possible X and V are marked.

5			x	4		x	7
		v	x			v	
			x				
				v		x	
2				x			3
					v		
			x				x
x			x				
						x	x
	v			v			
8				6			4

Diagonal Sudoku

Apply standard Sudoku rules.

Additionally, digits do not repeat across main (marked) diagonals.

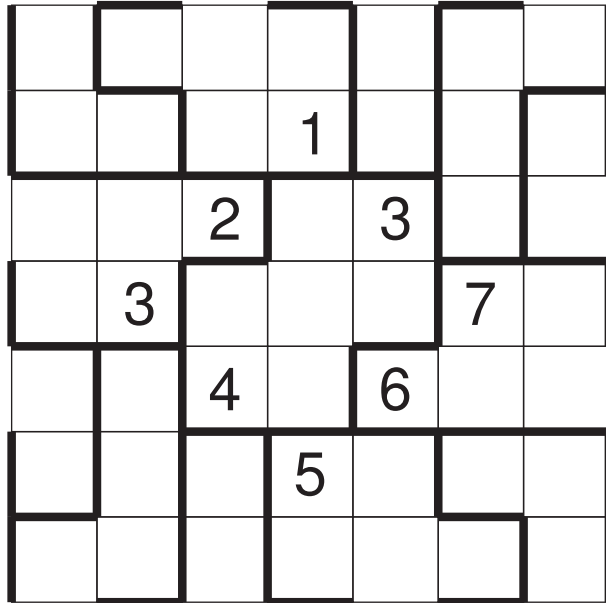
	4					1	5
8					6		7
7				2			
	5			1			
		6	8		2	5	
				9			7
				8			2
6			2				5
	8	2					3

Toroidal Sudoku

Apply standard Sudoku rules.

Some of the outlined regions wrap around the top and bottom edges, and/or the left and right edges of the grid.

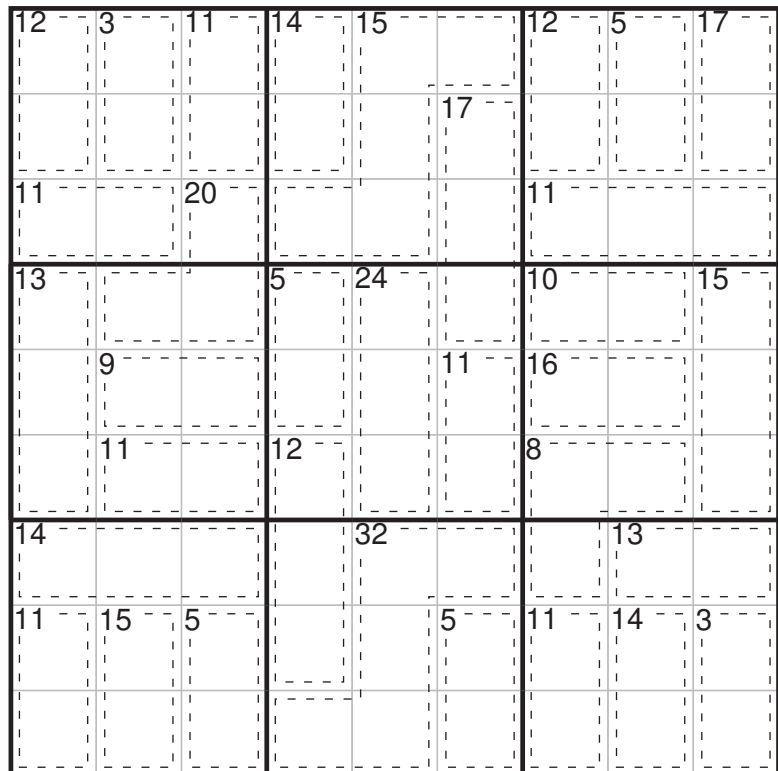
(The example uses 1 to 7)



Killer Sudoku

Apply standard Sudoku rules.

The sum of digits in cells inside every cage must equal the total given for the cage at the upper left cell. Each digit in the cage must be unique.



Odd Sudoku

Apply standard Sudoku rules.

Additionally, shaded cells must contain odd (1 3 5 7 9) digits.

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

7

Renban Groups

Apply standard Sudoku rules.

Additionally, shaded cells in each 3X3 box must contain consecutive digits.

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

8

Coded Pair

Apply standard Sudoku rules.

Some letters are given between two adjacent cells. Same letter represents same pair of digits across the grid. Different letters must represent different pairs. Ordering of digits inside the pair does not matter.

	1	2	3			4	5	
	4	5	6		A	3	2	
	7	8	9					
		C			D			A
						1	2	3
	2	3			A	4	5	6
	5	4				7	8	9
A				D			B	

Quad Sum Sudoku

Apply standard Sudoku rules.

A circle at a corner implies that one digit is sum of remaining 3 digits at that corner.

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

Repeated Neighbours

Apply standard Sudoku rules.

Each shaded cell must have repeating orthogonal neighbours (neighbours sharing an edge). White cells must have distinct orthogonal neighbours.

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

Braille Sudoku

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

Apply standard Sudoku rules, except that 6 of 1-9 will be used in the grid. It is part of solving to figure out the 6 digits.

The Braille digits for 1 to 9 are given. Form the digits in Braille by adding dots to the diagram as needed. An extra work grid is provided.

●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●

Thermo Sudoku

Apply standard Sudoku rules.

The digits in each "thermometer" shaped region must be strictly increasing from the circular "bulb" to the other end(s).

4								2
9		2	5				4	
	4				5	2		9
2								4

13

Odd Even Big Small

Apply standard Sudoku rules.

Four different symbols outside the grid indicate four different properties of the first two cells in the along that row or column. The properties are
 odd (1 3 5 7)
 even (2 4 6 8)
 big (5 6 7 8)
 small (1 2 3 4).

大偶 小
 big even small
 奇 odd
 偶 even
 奇 odd
 奇 odd
 大 big
 小 small
 小 small
 奇 odd

14

Disjoint Groups

Apply standard Sudoku rules.

Additionally, no digit can appear in the same position in different 3X3 boxes.

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

15

Odd Even Frame

Apply standard Sudoku rules.

Clue outside is either the sum of all odd digits in the first 3 cells or sum of all even digits in the first 3 cells.

	12	10		10	13	5		2	8	
12										6
11										14
			9	4	1	8	5			
12			7				9			8
15			5				8			3
8			6				7			13
			2	8	4	3	1			
10										14
10										5
	9	13		8	12	19		8	9	

16

Point To Next

Apply standard Sudoku rules.

If digit 'n' is placed in a cell with arrow, digit 'n+1' must be placed in one of the cells pointed by the arrow.

				→	←			
	1	2	3			4	5	
	4	5	6			3	2	
	7	8	9				↑	↓
↓	→						↑	↑
↑	→				1	2	3	
	2	3			4	5	6	
	5	4			7	8	9	
				→	←			

17

Linked Classics

Apply standard Sudoku rules.

The two grids are linked: every row has an exact duplicate in the other grid.

(The example uses 6X6 grid.)

					5
				1	
			5		4
		4		3	
	2		4		

1					
	4				
3		5			
	6		2		
		3		2	

18

Classic 1

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

Classic 2

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

Sudoku XV

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

Diagonal Sudoku

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

Toroidal

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

Killer Sudoku

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

Odd Sudoku

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

Renban Groups

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

Coded Pair

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

Quad Sum

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

Repeated Neighbours

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

Braille Sudoku

7	6	4	5	9	8
9	8	5	4	7	6
6	4	7	9	8	5
5	9	8	6	4	7
8	5	9	7	6	4
4	7	6	8	5	9

Thermo Sudoku

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

Odd Even Big Small

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

Disjoint Groups

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

Odd Even Frame

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

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

Linked Classics

1	3	2	6	4	5
5	4	6	3	1	2
6	1	3	5	2	4
2	5	4	1	3	6
3	2	5	4	6	1
4	6	1	2	5	3
1	3	2	6	4	5
5	4	6	3	1	2
3	2	5	4	6	1
4	6	1	2	5	3
6	1	3	5	2	4
2	5	4	1	3	6