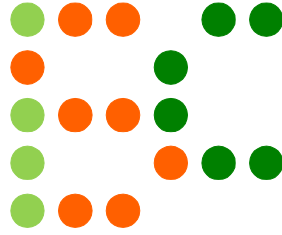


इयवठकय ललहलठलरलत



Episode – 2
9th – 12th February 2018
Standard
By Hemant Kumar Malani and Swaroop Guggilam

Sudoku Mahabharat rounds will also serve as qualifiers for Indian Sudoku Championship for year 2018. Please check <http://logicmastersindia.com/SM/2018sm.asp> for details.

Important Links

Submission Page : <http://logicmastersindia.com/SM/201802>

Discussion Thread : <http://logicmastersindia.com/t/?tid=1628>

F. A. Q. : <http://logicmastersindia.com/t/?tid=381>

Registration, if required : <http://logicmastersindia.com/register.asp>

About this Episode

Apart from Classic Sudokus of different sizes, this episode has the following five variants

- Diagonal Sudoku
- Untouch Sudoku
- Extra Region Sudoku
- Palindrome Sudoku.
- Quadruple Sudoku

How to participate?

- Understand the rules of different Sudokus that will appear in this episode. This Instruction Booklet has rules for each Sudoku.
- Download the password protected Sudoku booklet (will be uploaded before the test starts). The Sudoku booklet contains the actual Sudokus to be solved. It is password protected, so you won't be able to open it.
- Any time on or after 9th February (but on or before 12th February), login at the submission page using your LMI userid and password.
- Please check the submission page for exact timing.
- Click on "Start". At this time, password for pdf will be shown and timer will start.
- You can either solve online using flash interface or print the pdf and solve on paper.
- Each Sudoku will be marked with two arrows
- If solving on paper
 - Fill the answer form with digits along the marked arrow(s)
 - Click submit button
- If solving online
 - After solving the Sudoku, click on "Submit" button below the grid
 - Each Sudoku grid has different submit buttons

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

Points Table and Scoring

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.

This test uses instant grading where a solver can submit any individual Sudoku and receive confirmation that the solution is correct or not. Each incorrect submission reduces the sudoku's potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively.

Standard 1-6	1, 1, 1, 1
Standard 1-8	3
Standard 1-9	6, 4, 8
Diagonal 1-6, 1-9	6, 12
Untouch 1-6, 1-9	2, 14
Extra Region 1-6, 1-9	3, 8
Palindrome 1-6, 1-9	2, 12
Quadruple 1-6, 1-9	9, 7

Bonus

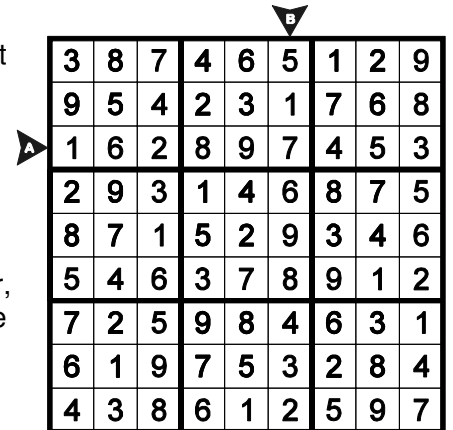
If you submitted all Sudokus correctly, you can have bonus points 1 point per minute saved, computed up to seconds.

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.”

These outlined regions could be 3X3 boxes, or other shapes.

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

About the Sudoku Booklet

The password protected Sudoku booklet will have about 8 pages. If you are planning to solve on paper, we advise you to have a printer accessible with enough paper.

The Sudoku booklet will look similar to the next pages in this instruction booklet. The font sizes, cell sizes, colors, borders, shading, margin will be similar. We recommend you to print few pages of this instruction booklet. You can avoid any last minute surprise during the test.

Standard Sudoku

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and 2X3 box.

Standard Sudoku - 1

1 point

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

Standard Sudoku - 2

1 point

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

Standard Sudoku - 3

1 point

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

Standard Sudoku - 4

1 point

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

Standard Sudoku - 5

3 points

Place a digit from 1 to 8 in each empty cell so that each digit appears exactly once in each row, column and 2x4 box.

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

Standard Sudoku - 6

6 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and 3X3 box.

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

Standard Sudoku - 7

4 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and 3X3 box.

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	

Standard Sudoku - 8

8 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and 3X3 box.

	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	

Diagonal Sudoku - 1

6 points

Apply standard Sudoku rules.

Additionally, each main diagonal (marked by dotted lines) must contain digits from 1-6.

				2	3
1	2				
2		1			
	4	5			

Diagonal Sudoku - 2

12 points

Apply standard Sudoku rules.

Additionally, each main diagonal (marked by dotted lines) must contain digits from 1-9.

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

Untouch Sudoku - 1

2 points

Apply standard Sudoku rules.

Additionally, identical digits do not touch each other diagonally.

	4	2	3		
	3	1	5		



Untouch Sudoku - 2

14 points

Apply standard Sudoku rules.

Additionally, identical digits do not touch each other diagonally.

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



Extra Region Sudoku - 1

3 points

Apply standard Sudoku rules.

Additionally, each extra region must contain digits from 1-6. The extra regions are of 6 cells each and are shaded in the grid.

	4			3	
	6			5	
	1	2	3	4	

Extra Region Sudoku - 2

8 points

Apply standard Sudoku rules.

Additionally, each extra region must contain digits from 1-9. The extra regions are of 9 cells each and are shaded in the grid.

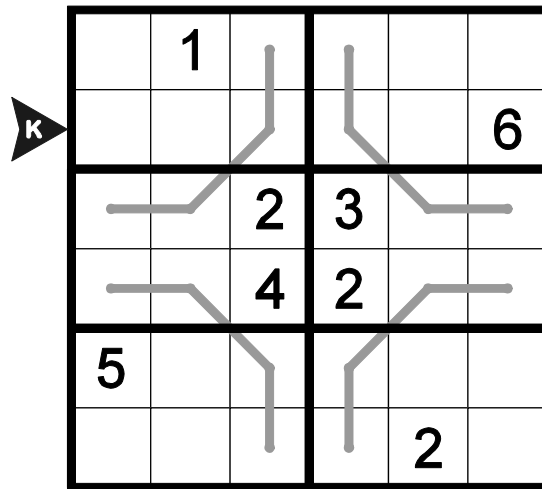
					8			
	2	5	4	7	1			
	4							
	3					1	8	
	1			2		5		
6	9					4		
						8		
			3	4	6	5	9	
			9					

Palindrome Sudoku - 1

2 points

Apply standard Sudoku rules.

Additionally, the digits in the cells with the line form palindromes, i.e. they read the same from both the directions.

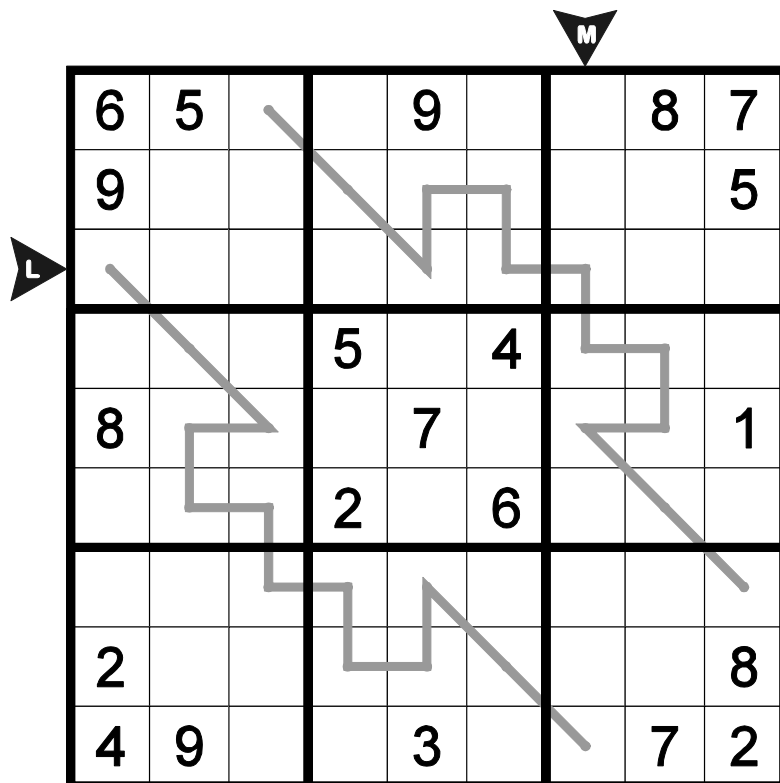


Palindrome Sudoku - 2

12 points

Apply standard Sudoku rules.

Additionally, the digits in the cells with the line form palindromes, i.e. they read the same from both the directions.

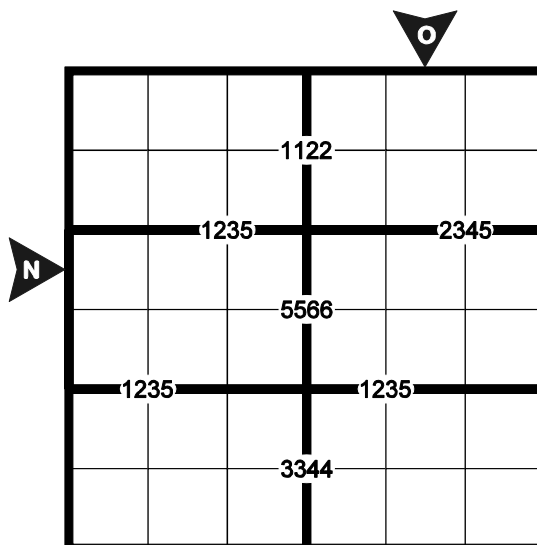


Quadruple Sudoku - 1

9 points

Apply standard Sudoku rules.

Additionally, each small digit inside the grid should appear at least once in the four neighbouring cells of the grid.

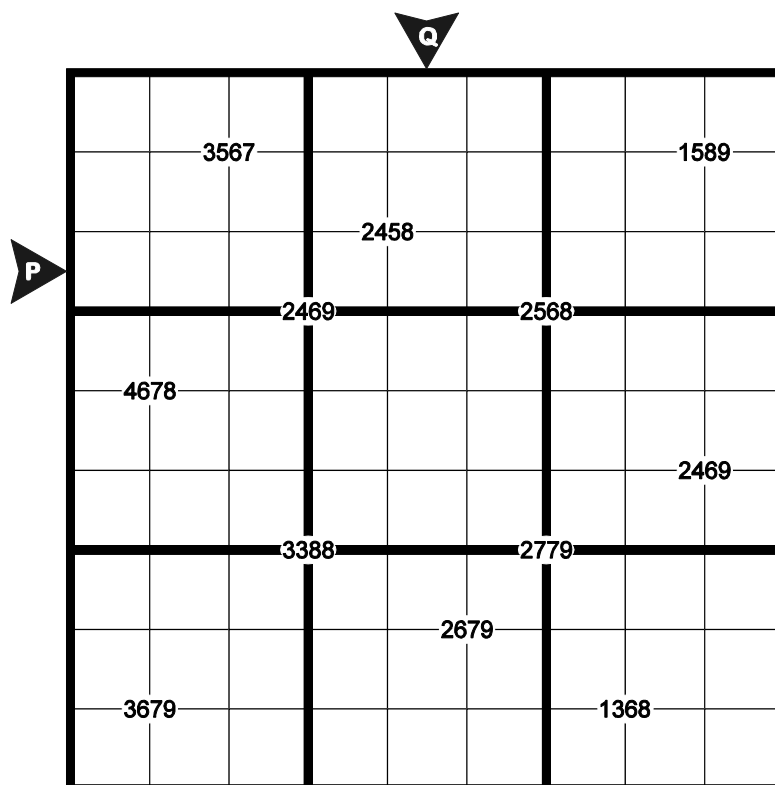


Quadruple Sudoku - 2

7 points

Apply standard Sudoku rules.

Additionally, each small digit inside the grid should appear at least once in the four neighbouring cells of the grid.



Standard - 1

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

Standard - 2

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

Standard - 3

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

Standard - 4

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

Standard - 5

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

Standard - 6

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

Standard - 7

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

Standard - 8

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

Diagonal - 1

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

Untouch - 1

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

Diagonal - 2

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

Extra Region - 1

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

Extra Region - 2

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

Quadruple - 1

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

Untouch - 2

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

Palindrome - 1

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

Palindrome - 2

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

Quadruple - 2

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