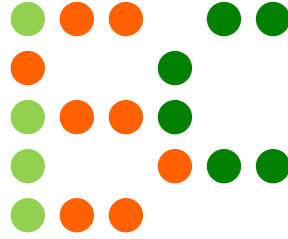


इयवठेकय mahabharat



Episode – 8
12th – 14th March

90 minutes

Irregular Variations
by
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Sudoku Mahabharat rounds will also serve as qualifiers for Indian Sudoku Championship for year 2016. Please check <http://logicmastersindia.com/SM/2015-16.asp> for details.

Important Links

Submission Page : <http://logicmastersindia.com/SM/201603/>

Discussion Thread : <http://logicmastersindia.com/SM/201603/discuss.asp>

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 five variants based on irregular regions, namely Irregular Sudoku, Scattered Sudoku, Toroidal Sudoku and Deficit Sudoku. There is one Instructionless Sudoku as well – you need to determine the rules of that Sudoku by inspecting the grid.

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 during the given weekend, 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 submission reduces the potential score to 90%, 70%, 40%, and 0% respectively.

Standard 1-6	1, 1, 1, 1
Standard 1-8	3
Standard 1-9	5, 6, 10
Irregular Sudoku 1-6, 1-9	2, 6
Toroidal Sudoku 1-6, 1-9	2, 15
Scattered Sudoku 1-6, 1-9	2, 12
Deficit Sudoku 1-6, 1-9	5, 8
Instructionsless 1-6, 1-9	4, 16

Bonus

If you submitted all Sudokus correctly, you can have bonus points 1 point per minute saved, computed upto 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 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 exactly like next 8 pages in this instruction booklet. The font sizes, cell sizes, colors, borders, shading, margin will be identical. We recommend you to print few pages of this instruction booklet. You can avoid any last minute surprise during the test.

Also, we strongly advise you to save the pdf file on your computer, open the pdf (with the password) using Adobe Acrobat Reader and then print. If you print directly from the browser (for example Google Chrome), unintentional printing problems may arise.

(See this post for details <http://logicmastersindia.com/t/?tid=1189>).

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.

1 point

A

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

1 point

B

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

1 point

C

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

1 point

D

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

Standard Sudoku

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

5 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

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.

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

10 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	

Irregular Sudoku

2 points

Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Each outlined region is marked by thick borders.

1		2			
					3
4					
5					
					6

Irregular Sudoku

6 points

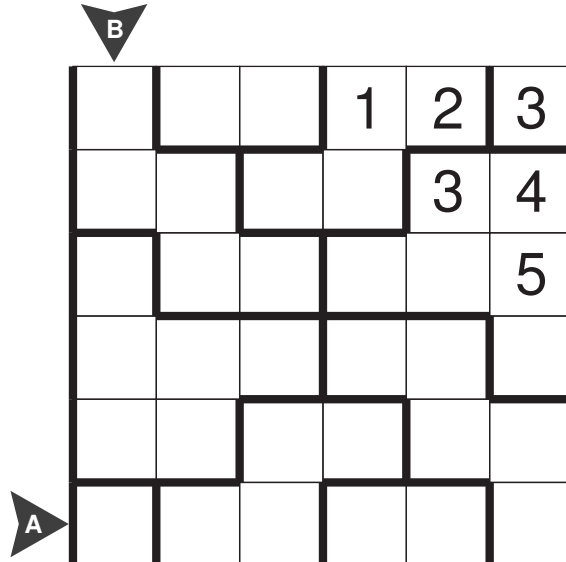
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Each outlined region is marked by thick borders.

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

Toroidal Sudoku

2 points

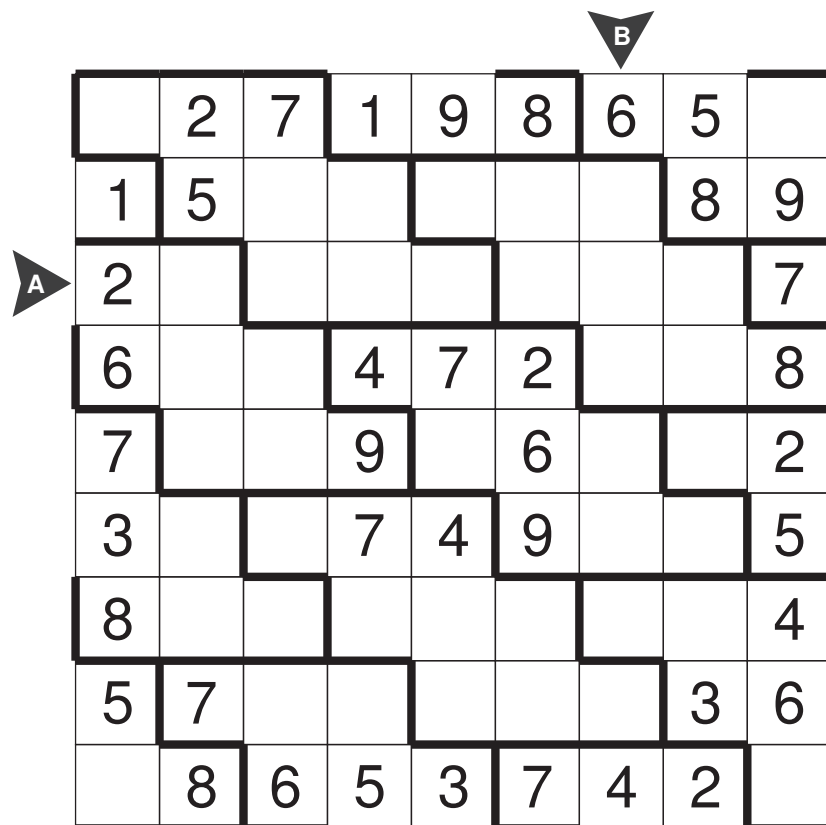
Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Some of the outlined regions wrap between the top and bottom edges, and/or the left and right edges of the grid.



Toroidal Sudoku

15 points

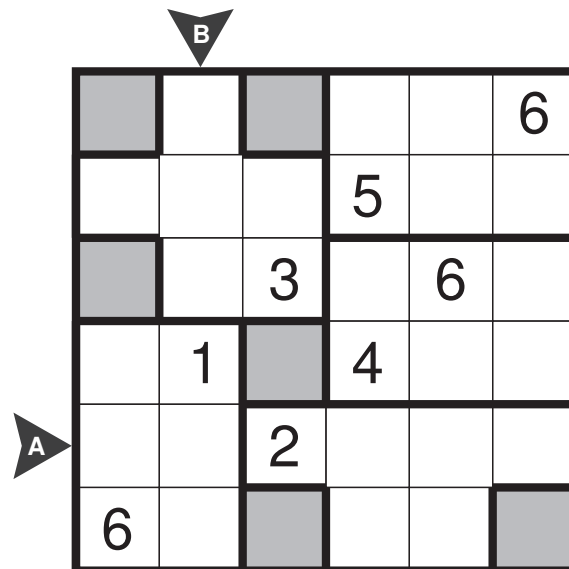
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and outlined region. Some of the outlined regions wrap between the top and bottom edges, and/or the left and right edges of the grid.



Scattered Sudoku

2 points

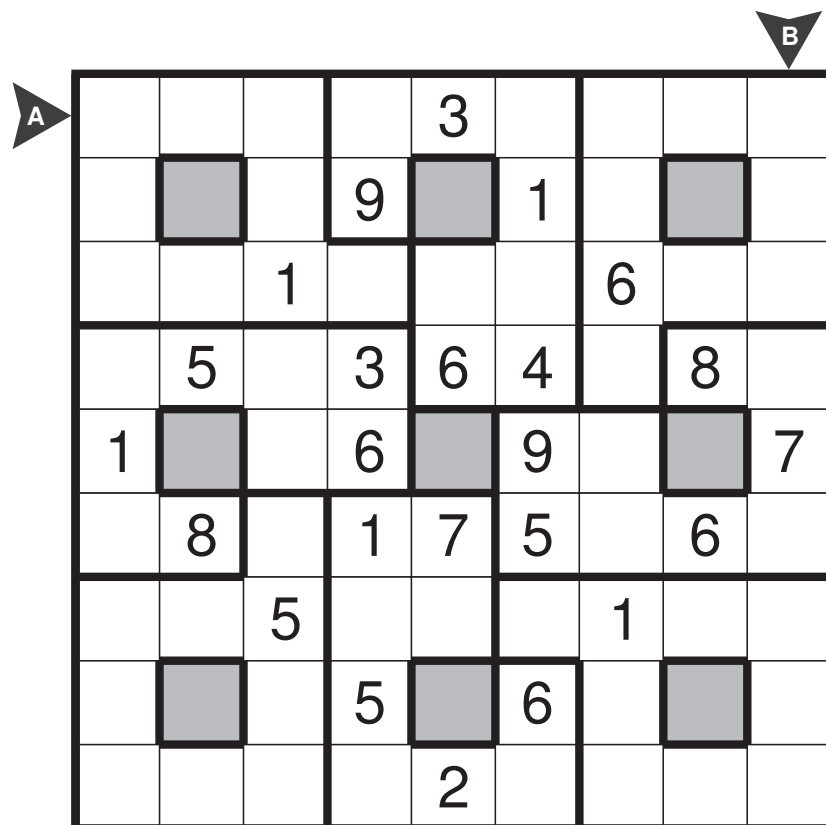
Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row, column, outlined region. Grey cells are not part of any regions.



Scattered Sudoku

12 points

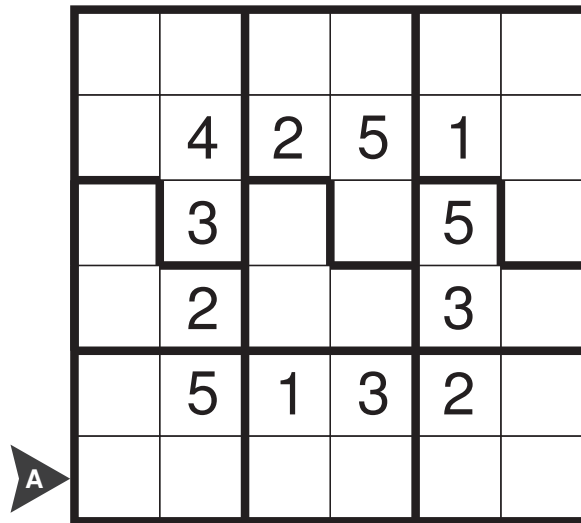
Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column, outlined region. Grey cells are not part of any regions.



Deficit Sudoku

5 points

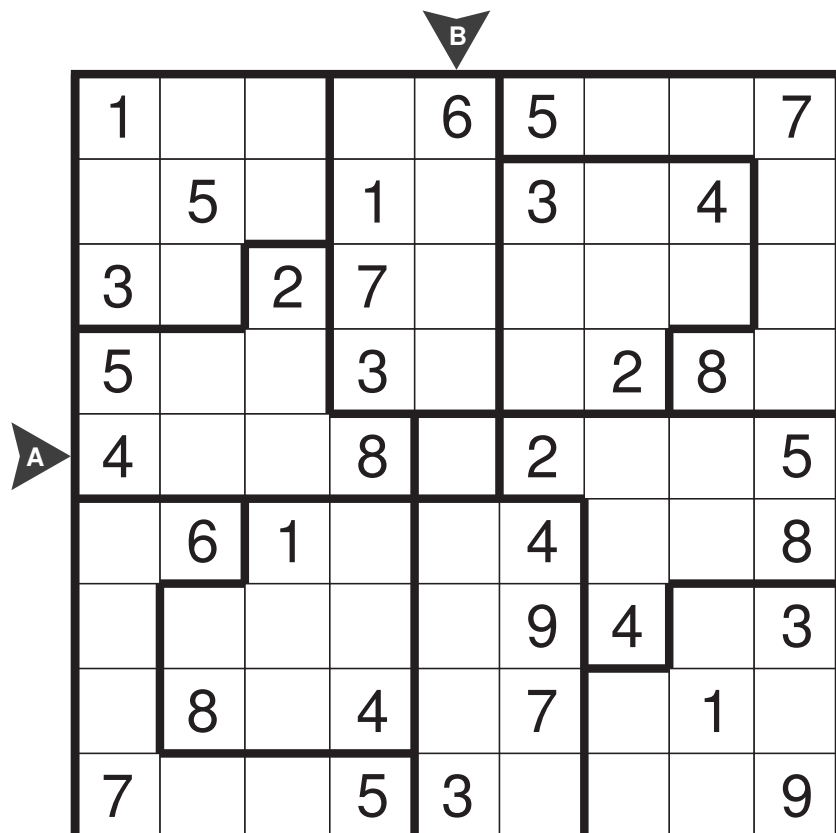
Place a digit from 1 to 6 in each empty cell so that each digit appears exactly once in each row and column. Digits should not repeat in the outlined regions.



Deficit Sudoku

8 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row and column. Digits should not repeat in the outlined regions.



**Instruction-
less
1-6****4 points**

There will not be any instructions for this Sudoku. Rules need to be determined by inspecting the grid.

**Instruction-
less
1-9****16 points**

There will not be any instructions for this Sudoku. Rules need to be determined by inspecting the grid.



Irregular

			B			
	1	3	2	4	6	5
A	6	2	5	1	3	4
	2	4	6	5	1	3
	4	1	3	6	5	2
	5	6	4	3	2	1
	3	5	1	2	4	6

Toroidal

			B			
	6	4	5	1	2	3
	2	1	6	5	3	4
	1	3	4	2	6	5
	3	6	2	4	5	1
	4	5	3	6	1	2
A	5	2	1	3	4	6

Irregular

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

Toroidal

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

Scattered

			B			
	3	2	5	1	4	6
	1	6	4	5	2	3
	4	5	3	2	6	1
	2	1	6	4	3	5
A	5	3	2	6	1	4
	6	4	1	3	5	2

Deficit

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

Scattered

B

A

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

Deficit

B

A

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