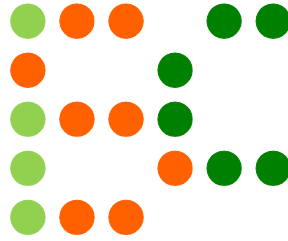


इयतरेकेय ललहलतलरलत



Episode – 5
1st – 6th May 2020

Converse and Odd-Even Variations
By
Harmeet Singh and Ramesh Swarnakar

Sudoku Mahabharat rounds will also serve as qualifiers for Indian Sudoku Championship for year 2020. Please check <http://logicmastersindia.com/SM/2020sm.asp> for details.

Important Links

Submission Page : <http://logicmastersindia.com/SM/202005>

Discussion Thread : <http://logicmastersindia.com/t/?tid=2740>

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

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

About this Episode

This episode has the following Sudokus:

- Mini Classic Sudoku (4)
- Classic Sudoku (4)
- Consecutive Sudoku (2)
- Anti-Knight Sudoku (2)
- Odd Even Sudoku (2)
- Odd Even Bridge Sudoku (2)
- Odd Even Queen Sudoku (2)

How to participate?

- Understand the rules of different Sudokus that will appear in this episode. This Instruction Booklet has rules and examples 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 1st May (but on or before 6th May), 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.

Mini Classic 1-6	1, 1, 1, 1
Classic 1-9	6, 4, 4, 3
Consecutive 1-6, 1-9	2, 10
Anti Knight 1-6,1-9	1, 16
Odd Even 1-6,1-9	1, 11
Odd Even Bridge 1-6,1-9	4, 15
Odd Even Queen 1-6,1-9	4, 15

This test uses instant grading where a solver confirmation that the solution is correct or sudoku's potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively.

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 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.

1-4 Mini Classic Sudoku

1+1+1+1 points

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	2				
		3	4		
				5	6
3	5				
		1	5		
				1	3

5-8 Classic Sudoku

6+4+4+3 points

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 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	

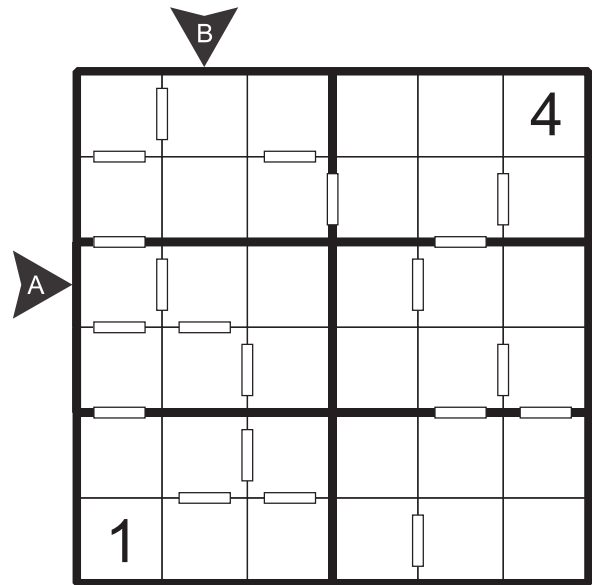
Consecutive Sudoku - 1

2 points

Apply mini classic Sudoku rules.

Orthogonally adjacent cells containing consecutive numbers are separated by bars.

All possible bars are marked.



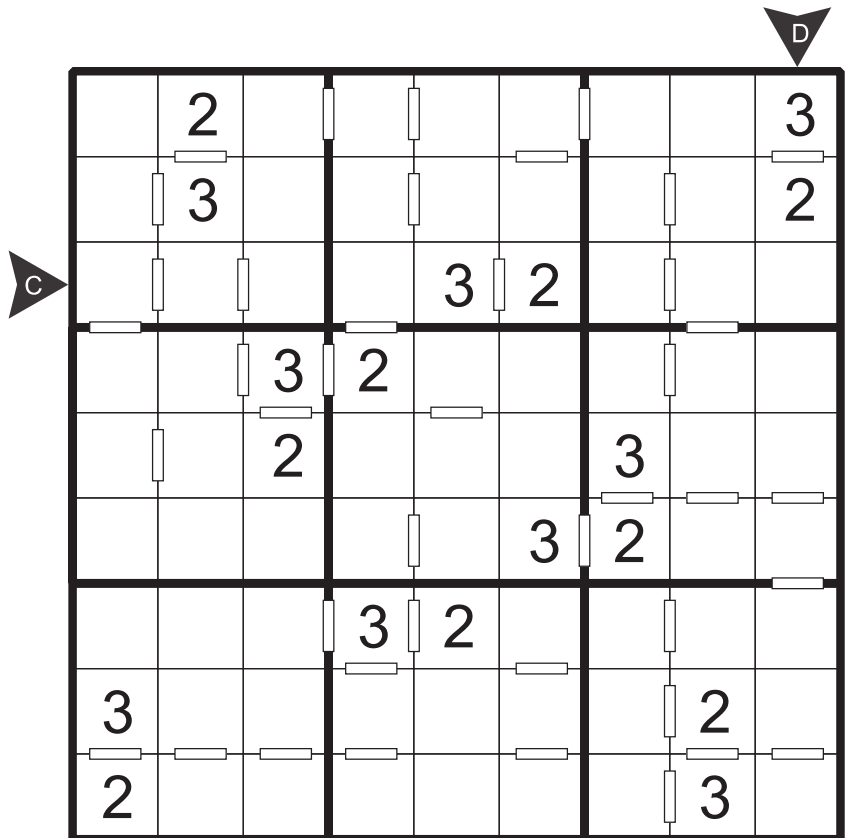
Consecutive Sudoku - 2

10 points

Apply classic Sudoku rules.

Orthogonally adjacent cells containing consecutive numbers are separated by bars.

All possible bars are marked.



Anti-Knight Sudoku - 1

1 points

Apply mini classic Sudoku rules.

No cell that is a knight-step away can contain the same digit.

In chess, a knight moves two squares forward followed by one sideways.

	X		X	
X				X
		•		
X				X
	X		X	

1	2			3	4
5	6			4	1

Anti-Knight Sudoku - 2

16 points

Apply classic Sudoku rules.

No cell that is a knight-step away can contain the same digit.

In chess, a knight moves two squares forward followed by one sideways.

	X		X	
X				X
		•		
X				X
	X		X	

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

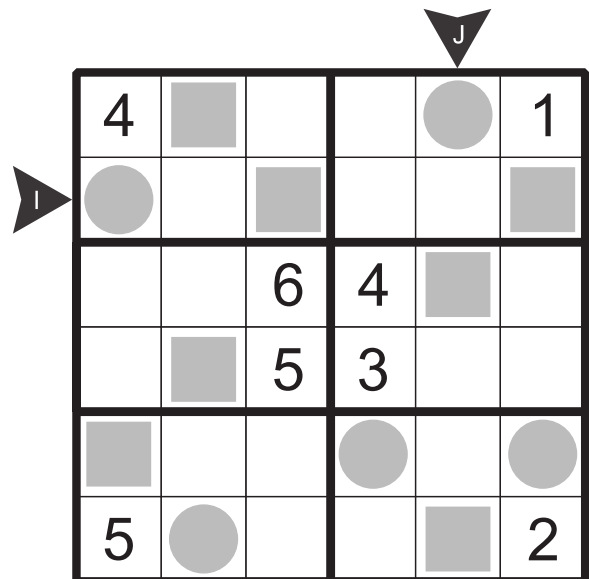
Odd Even Sudoku - 1

1 points

Apply mini classic Sudoku rules.

Additionally, shaded squares should contain even digits (2,4,6) while shaded circles should contain odd digits (1,3,5).

A cell which is not shaded can contain digit of any parity.



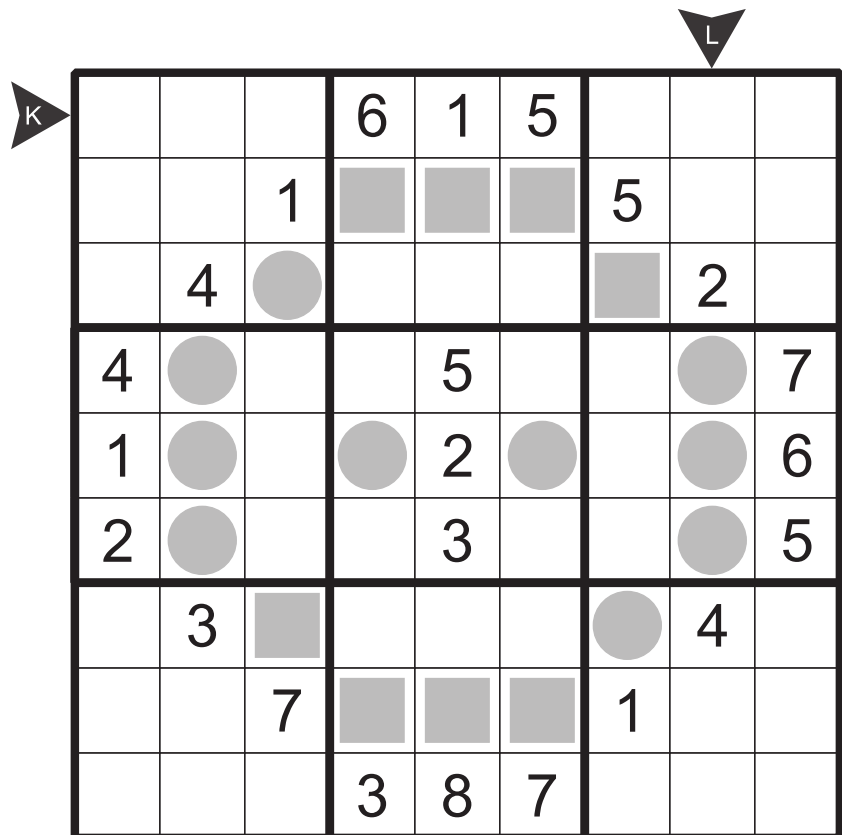
Odd Even Sudoku - 2

11 points

Apply classic Sudoku rules.

Additionally, shaded squares should contain even digits (2,4,6,8) while shaded circles should contain odd digits (1,3,5,7,9).

A cell which is not shaded can contain digit of any parity.



Odd Even Bridge Sudoku - 1

4 points

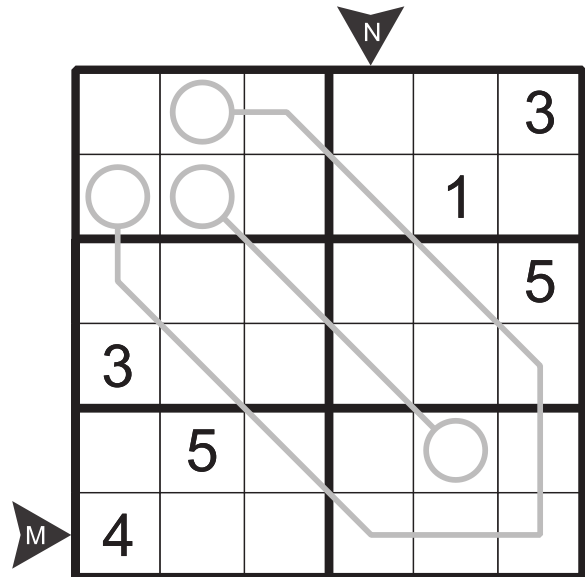
Apply mini classic Sudoku rules.

Additionally, some circled cells are connected by a bridge.

An odd digit in a circle equals the number of odd digits on the bridge. An even digit in a circle equals the number of even digits on the bridge.

The digits on the circles are not counted.

It is possible for digits in both circles on a bridge to have the same parity.



Odd Even Bridge Sudoku - 2

15 points

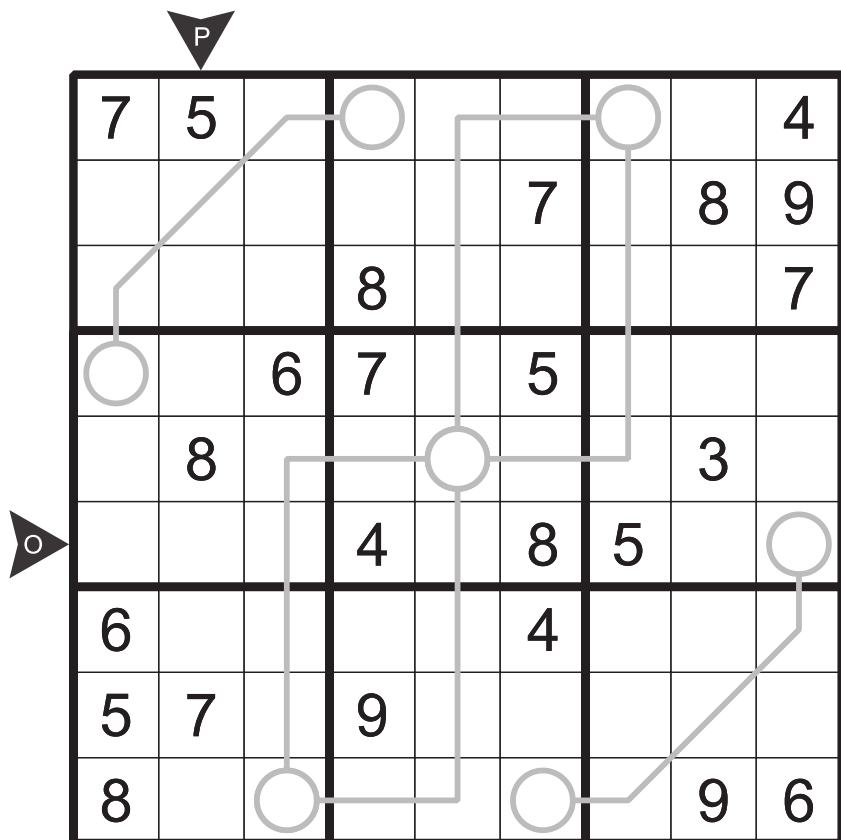
Apply classic Sudoku rules.

Additionally, some circled cells are connected by a bridge.

An odd digit in a circle equals the number of odd digits on the bridge. An even digit in a circle equals the number of even digits on the bridge.

The digits on the circles are not counted.

It is possible for digits in both circles on a bridge to have the same parity.



Odd Even Queen Sudoku - 1

4 points

Apply mini classic Sudoku rules.

Additionally, exactly "two" numbers (one odd and one even) behave like chess Queens.

Two Queens of the same parity CANNOT be placed along the same row, column or diagonal of any length.

The Queens should be determined as part of solving.

3					2
		4			
		3	2		
4			5	1	
		6			5

Odd Even Queen Sudoku - 2

15 points

Apply classic Sudoku rules.

Additionally, exactly "two" numbers (one odd and one even) behave like chess Queens.

Two Queens of the same parity CANNOT be placed along the same row, column or diagonal of any length.

The Queens should be determined as part of solving.

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

Mini Classic

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

Classic

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

Consecutive - 1

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

Anti-Knight-1

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

Consecutive - 2

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

Anti-Knight-2

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

Odd Even - 1

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

Odd Even Bridge - 1

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

Odd Even - 2

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

Odd Even Bridge - 2

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

Odd Even Queen - 1

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

Odd Even Queen - 2

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