

Indian Sudoku Championship 2014

01-June-2014

<http://logicmastersindia.com/2014/ISC/>

Important Links

Submission: <http://logicmastersindia.com/2014/ISC/>

Discussion: <http://logicmastersindia.com/t/?tid=831>

Results: <http://logicmastersindia.com/2014/ISC/score.asp>

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

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

About Indian Sudoku Championship (ISC) 2014

The Indian Sudoku Championship 2014 will be held online on 1st June, 2014. Participation is free of cost and everyone is invited to participate in the event irrespective of age. There are no prerequisites/requirements for participation. All you will need to do is register at Logic Masters India (LMI).

How to participate?

- Participants must be a registered member at <http://logicmastersindia.com> (LMI)
- Understand the rules of different Sudokus that will appear in the championship
- Download the password protected Sudoku booklet (will be uploaded before ISC starts)
- This booklet contains the actual Sudokus that will appear in ISC. It is password protected, so you won't be able to open it.
- On 1st June at 14:00 IST, Login at the submission page using your LMI user-id and password
- Click on "Start ISC". 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 a row and a column
- If solving on paper
 - Fill the answer form with digits from marked row and column
 - Click submit button (there is only 1 submit button for all Sudokus)
- If solving online
 - After solving the Sudoku, click on "Submit" button below the grid
 - Each Sudoku grid has different submit buttons

The Sudoku booklet will have approximately 13 pages. If you are planning to solve on paper, we advise you to have a printer accessible with enough paper.

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

Timings

The length of the championship is 150 minutes. So, after getting the password, you have 150 minutes to print the Sudokus, solve them, find the answer keys and submit your answers. Submissions will not be accepted after 150 minutes.

ISC 2014 will start on 1st June at 14:00 hours IST. Answer submissions will not be accepted after 16:45 hours (or 150 minutes after you start, whichever is earlier). You must start accordingly to allow yourself full solving time.

International Participation

ISC will be open for a longer period for international players to participate at their own convenience. Indians participating out of the official period will not be considered for official Indian rankings.

Outside Help

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

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



Judging

All entries and scores are subject to review for rules compliance. Winners may be asked to sign an affidavit confirming that they did, in fact, abide by the rules of the competition. 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 judges is final.

Only for Indian Participants

1. Submissions until 16:45 IST on 1st June will be considered for official scoring.
2. The organizers do not anticipate any technical problems during the championship. However, if you face any problems while submitting the answers, you may email your answers to logicmasteradmin@gmail.com before 16:45 pm. Submissions via email is discouraged and will be accepted only in exceptional cases.

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.

Instant Grading: This test uses Instant Grading where a solver can submit any individual puzzle once finished and receive confirmation on whether it's correct or not. The first, second, third and fourth incorrect submission reduces the potential score to 90%, 70%, 40% and 0% respectively (and remains at 0% after this).

Section 1		Section 2	
Classic 1	25	Odd	30
Classic 2	30	Killer	60
Classic 3	35	Arrow	35
Classic 4	90	Thermo	55
Expanded	35	Fortress	30
6X6 Sudoku	105	Consecutive	65
Irregular	40	XV	55
Mirror	20	Search 9	40
Diagonal	30	Inside Skyscraper	120
Untouch	35	Descriptive Pairs	65

Note: The 6x6 Sudoku mini-section will contain 2 Classics, 2 Irregulars, an Odd, a Diagonal, an Untouch and a Fortress, with the points distributed as 5+5+10+10+40+20+5+10 in the same order as above.

Bonus

Players submitting all Sudokus will get **seven** points per minute saved as bonus. Bonus will be computed upto seconds.

There will not be any "Claim Bonus" button.

Tie Breaker

Players having same scores will be ranked based on the following tie-breakers.

1. Most points in Section 2 – Puzzles 11~20.
2. Least submission time of last correctly submitted Sudoku

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 (Classic), or other shapes (Irregular).

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.

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

Acknowledgements

Logic Masters India thanks the following Sudoku solvers and makers for helping us organize Indian Sudoku Championship 2014.

Bastien Vial-Jaime
Fred Stalder
Nikola Zivanovic
Zuzana Hromcová

1,2,3,4) Classic Sudoku

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

This example was written by Deb Mohanty for Sudoku Grand Prix 2013 – Indian Round.

5) Expanded Sudoku

↪ Standard Sudoku rules apply to 2 overlapping grids.

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

This example was written by Bram de Laat and is taken from his blog <http://puzzleparasite.blogspot.com>

6) 6X6 Sudoku

- ↪ Standard Sudoku rules apply.
- ↪ There will be 8 Sudokus, each of them being independently solvable.
- ↪ 4 of these will be classic/irregular, and the other 4 will be variations among those that are mentioned in this instruction booklet. Below are some examples of 6x6 Classics/Irregulars to illustrate the basic change of 1-6 instead of 1-9.

1	5			3	
				6	
			1		
		3			
	6				
	4			1	2

		2	4		
	2			1	5
6	4			3	
		3	1		

				5	1
			6		
3					
					4
		1			
2	3				

These examples were written by nonzero for Sudoku Grand Prix 2013 – Italian Round.

7) Irregular Sudoku

- ↪ Standard Sudoku rules apply but the regions are irregular shapes containing 9 cells instead of 3x3 boxes.

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

8) Mirror Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ The four corner boxes (top left, top right, bottom left, bottom right) all contain the same digit in symmetrical positions with respect to the center of the grid.

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

9) Diagonal Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Additionally, digits do not repeat across main (marked) diagonals.

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

10) Untouch Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Same digits cannot touch even 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

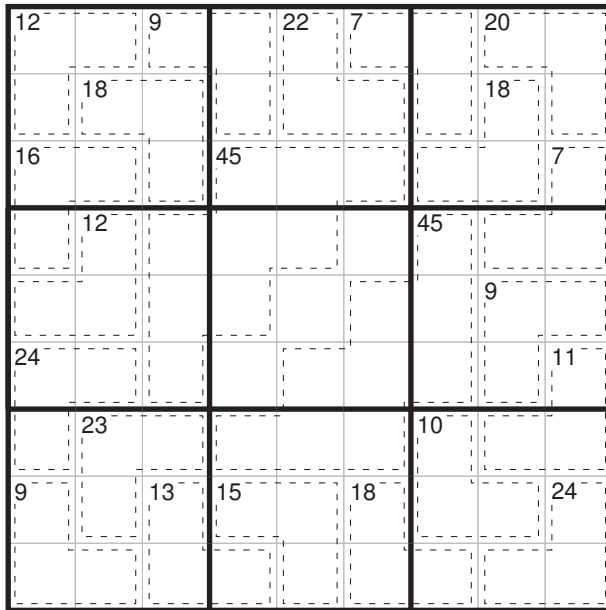
11) Odd Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Additionally, shaded cells contain only odd digits (1, 3, 5, 7, and 9).

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

12) Killer Sudoku

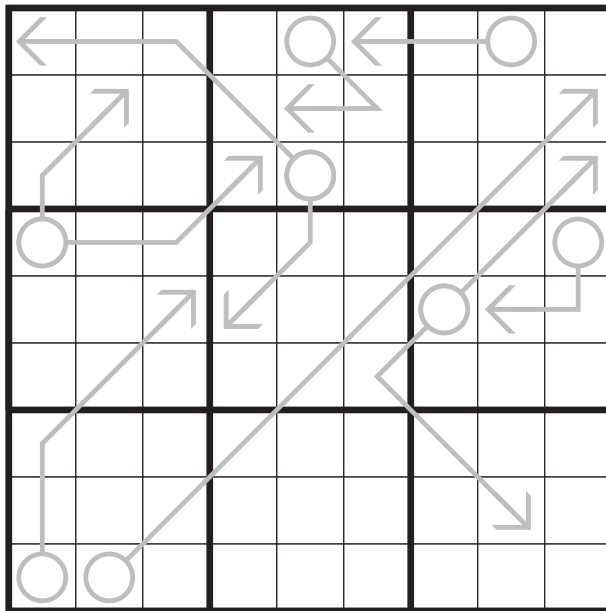
- ↻ Standard Sudoku rules apply.
- ↻ The sum of digits in cells inside every cage must equal the total given for the cage at the upper left cell.
- ↻ Digits do not repeat inside a cage.



This example was written by Deb Mohanty for Sudoku Grand Prix 2013 – Indian Round.

13) Arrow Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ The sum of the digits along the path of each arrow must equal the digit in the circled cell.
- ↻ Digits can repeat within an arrow shape.



This example was written by Rohan Rao for LMI monthly test "Crazy Arrows".

14) Thermo Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ 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

This example was written by Deb Mohanty for 24 hours championship, 2012.

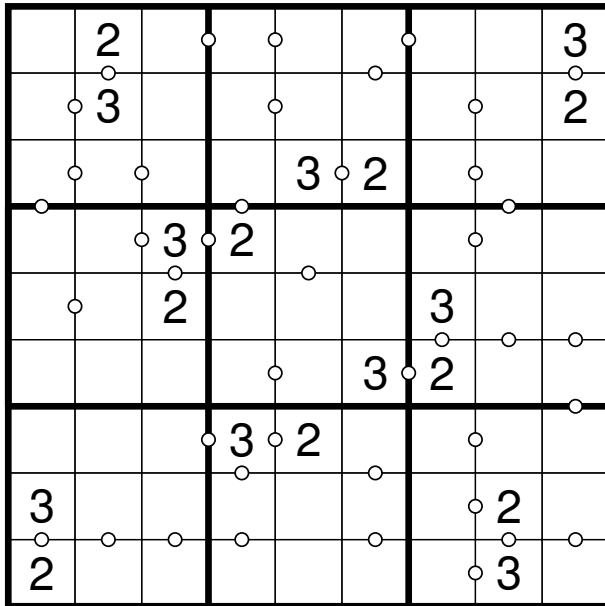
15) Fortress Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ A digit in a shaded cell must be higher than digits in all orthogonally adjacent white cells.

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

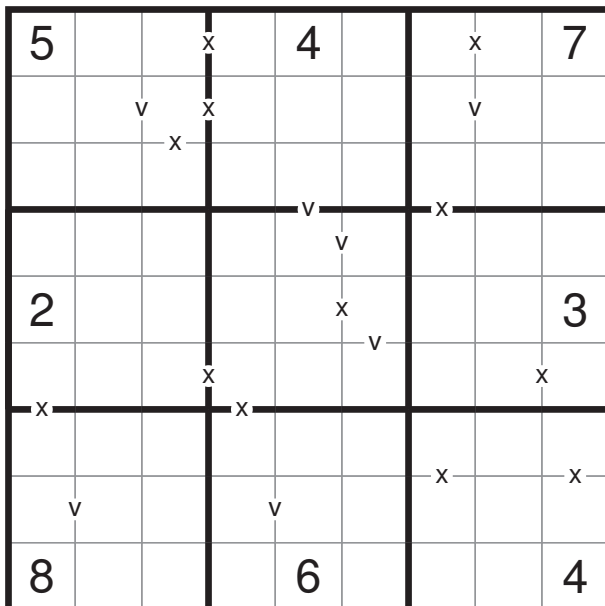
16) Consecutive Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Orthogonally adjacent cells which contain consecutive digits are marked by white dots. All possible dots are marked.



17) XV Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ All 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.



18) Search 9 Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Each arrow points to the 9 in the respective row or column.
- ↻ The number in the cell with the arrow is the distance from the cell to the 9 in this row or column.

↓	↓	↓				↓	↓	↓
					1			
				↓		8		
2	1		→	7				
			←		←			7
7	4			8	←			
				←		4		
					4			
→	→	→				↑	↑	↑

19) Inside Skyscraper Sudoku

- ↻ Standard Sudoku rules apply.
- ↻ Digits correspond to heights of skyscrapers. If there is an arrow in a cell, then the corresponding digit in the cell is same as the number of skyscrapers visible from the cell in the direction of the arrow.
- ↻ Not all possible arrows are marked.

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

20) Descriptive Pairs Sudoku

↻ Standard Sudoku rules apply.

↻ for every pair of outside clues X and Y, at least one of these cases is true :

- 1) X is in the Yth position in that direction.
- 2) Y is in the Xth position in that direction.

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

Solutions

The remaining pages contain the solutions to the examples. However, you are encouraged to first try solving the examples with the given rules, without looking up the solution. However, note that the difficulties may not be consistent with the competition Sudokus.

Classic Sudoku

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

Expanded Sudoku

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

6X6 Sudoku

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

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

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

Irregular Sudoku

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

Mirror Sudoku

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

Diagonal Sudoku

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

Untouch Sudoku

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

Odd Sudoku

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

Killer Sudoku

¹² 6	⁹ 5	4	3	²² 9	⁷ 1	2	²⁰ 7	8
1	¹⁸ 3	8	2	6	7	4	¹⁸ 9	5
¹⁶ 9	2	7	⁴⁵ 5	4	8	3	6	⁷ 1
5	¹² 1	3	9	7	6	⁴⁵ 8	2	4
4	7	6	1	8	2	9	⁹ 5	3
²⁴ 8	9	2	4	3	5	7	1	¹¹ 6
7	²³ 8	9	6	1	4	¹⁰ 5	3	2
⁹ 3	6	¹² 5	¹⁵ 8	2	¹⁸ 9	1	4	²⁴ 7
2	4	1	7	5	3	6	8	9

Arrow Sudoku

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

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

Fortress Sudoku

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

Consecutive Sudoku

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

XV Sudoku

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

Search 9 Sudoku

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

Inside Skyscraper Sudoku

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

Descriptive Pairs Sudoku

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