

# Indian Sudoku Championship 2011

## Online Qualification Round

23-Apr-2011

<http://logicmastersindia.com/ISC2011/onlineQ.asp>

### Timing

- 120 minutes
- Online round will start at 23-Apr-2011 14:00 IST
- **To qualify for ISC finals, all submissions before 23-Apr-2011 16:30 IST will be considered. So if you are aiming to qualify for ISC finals, start online round accordingly**
- The round will be open for 48 hours, and results will be used by LMI ratings and UKPA ratings

### Points Table

VARIANTS	1	Odd Even Sudoku	18	Points are generally indicative of the difficulty of the Sudoku and time required to solve it. However, your personal experience and preference might differ.
	2	Diagonal Sudoku	27	
	3	Extra Region Sudoku	32	
	4	Sudoku XV	34	
	5	Consecutive Sudoku	36	
	6	Sudoku Trio	41	
	7	Outside Sudoku	45	
	8	Inequality Sudoku	53	
	9	Irregular-Scattered Sudoku	59	
	10	Killer Sudoku	72	
	11	Product Frame Sudoku	75	
	12	Classic Sudoku 1	8	The point values of classic Sudokus are much less than that of Variants. To get maximum points, it is advisable to spend more time on variants. Point Value = Approximate point you get for spending one minute on a Sudoku
	13	Classic Sudoku 2	10	
	14	Classic Sudoku 3	12	
	15	Classic Sudoku 4	34	
+	Bonus = number of Variants solved * number of Classics solved			
+	Position Bonus = 5 points per position			Participants who solve all Sudokus within the time period will get position bonus. For example, if 10 players complete all Sudokus, the 1 <sup>st</sup> player will get 50 points, the 2 <sup>nd</sup> player will get 45 points, so on...

### Results

- Results will be published at LMI site on or before 26-Apr-2011 (Tuesday)
- External help of any kind is not allowed. LMI reserves the right to withhold results of participants, if we feel unfair means have been used to achieve the results.



## How to participate

- Participants must be a registered member at <http://logicmastersindia.com> (LMI)
- Download the password protected Sudoku booklet (will be uploaded before round starts)
- Login at the submission page ( <http://logicmastersindia.com/ISC2011/onlineQ.asp> ) using your LMI userid and password (and fill the country)
- Click on “Start Online Round”. 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
- You can submit as many times as you want, your last submitted answer (using paper mode or online mode) will be used for results.

## Classic Sudoku

Every digit from 1 through 9 has to appear exactly once in every row, every column, and every 3X3 box.

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

  

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

The grid above shows how one row and one column will be marked. In this case, the answer key for the marked row is 184679253, the answer key for the marked column is 869273154

## Sudoku Types

Apart from Classic Sudoku, several variations will appear in this round. The rules for each type are explained in remaining pages.

## Sudoku XV

Apply classic Sudoku rules.

All horizontally and vertically neighbouring digits with the sum 10 are marked with X, all horizontally and vertically neighbouring digits with the sum 5 are marked with V.

v								x
	v							
		v						
						x	1	
x						x	1	v
				x	x		7	
v							9	
			x					
		x			x		3	
				x				
		v				7	5	9
						x		
x								x
								v

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

## Consecutive Sudoku

Apply classic Sudoku rules.

Neighboring cells which contain digits differing by 1 are separated by white bars. If there is no white bar between two cells, the digits can not be consecutive.

		9	1	7				
		3				7		
		8				9		
		2				3		
		1	3	8				

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

## Diagonal Sudoku

Apply classic Sudoku rules.

Every digit from 1 through 9 has to appear exactly once across the 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	

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 Sudoku

Apply classic Sudoku rules.

Each extra region must contain digits from 1-9. The extra regions are of 9 cells each and are shaded with different colors in the grid.

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

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

## Inequality Sudoku

Apply classic Sudoku rules.

Digits must be placed according to the given inequality symbols (< or >).

			2			
2			8			1
			7			

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

## Irregular-Scattered Sudoku

Every digit from 1 through 9 has to appear exactly once in every row, every column, all boldly outlined shapes, and group of single grey cells.

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

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

## Killer Sudoku

Apply classic Sudoku rules.

The number on the top left of each cage denotes the sum of the digits inside the cage.

All digits inside a cage must be different.

21		11		13	10			26
	5				7			
11			16			21		
6			17	22		22		
12		23			6		6	
20						11		
			9	9		15		
16				13	19	7		15
	16							

21	9	7	11	8	2	13	10	6	3	1	26	4	
	5	3	2		1	8	7	4	6	9		7	
11	6	4	1		16	7	9	3	21	2	5	8	
6	2	1	3		17	9	22	4	7	22	5	8	6
12	7	5	23		8	3	6	1	9	6	4	2	
20	4	8	9		6	2	5		11	7	3	1	
	3	6	7		9	5	9	1	8	15	4	2	9
16	8	2	5		4	7	13	19	7	1	6	15	3
	1	9	4		3	6	2		8	7	5		

## Odd Even Sudoku

Apply classic Sudoku rules.

The greyed cells must contain even digits. The white cells must contain odd digits.

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

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

## Sudoku Trio

Apply classic Sudoku rules.

Cells with circles must contain the digits 1, 2 and 3. Cells with squares must contain the digits 4, 5 and 6. Blank cells must contain the digits 7, 8 and 9.

□	○				□	○	○	□
○	□		○	4	○	□		
○		6	□	○		2	□	
	○	□		○	□		○	□
	9	○	○	□	○		5	□
□	□	○	□			○		○
		3	○	□	□	7	□	○
○	○	□	□	8		□	○	
□	□			○	○	□		○

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

## Outside Sudoku

Apply classic Sudoku rules.

The digits outside the grid must appear in one of the first three cells encountered from that edge of the grid

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

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

*Product Frame Sudoku*

Apply classic Sudoku rules.

Numbers outside the grid equal the product of the first three digits in the row or column in the corresponding direction.

	6		54		40	64		45	
40									
									28
42									30
84									
									14
10									
									24
56									
54									
	80	12		45	36		45	64	

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