

INDIAN SUDOKU CHAMPIONSHIP 2010

**Preliminary Round
23rd January 2010**

**13:00-14:30
(90 minutes)**

**INSTRUCTION
BOOKLET**

Points Distribution

The tables below indicate the points awarded for correctly solving the sudokus which will appear in the online rounds of ISC 2010. Points are generally indicative of the difficulty of the sudoku and time required to solve it. However your personal experience and preference might be different.

Sudoku	Points
Classic 1	30
Classic 2	35
Classic 3	40
Classic 4	45
Classic 5	50
Classic 6	55
Classic 7	60
Classic 8	65
Odd Even	60
Diagonal	60
Consecutive	80
Sudoku XV	75
Quadraple	70
No Knight Step	65
Group Sum	100
Irregular	110
Total	1000

Instructions for Submission

Every Sudoku will have one row or one column marked. After solving the Sudoku, the participants have to copy the 9 digits in the corresponding row or column to the specified space provided for each puzzle on the first page of the answer sheet.

Participants are expected to solve the puzzle completely and not just the marked row/column. The row/column will be used to shortlist the top participants whose answer sheets will be corrected for completed solutions.

In case ties, the following tie breaker will be used.

1. Number of completely solved correct Sudokus
2. Number of correctly filled cells in incomplete Sudokus

Conducted by TechFest, IIT Bombay
in association with www.logicmastersindia.com

Classic Sudoku (30+35+40+45+50+55+60+65 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9.

↓

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

↓

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

In this example, the answer key is 741683952.

Odd/Even Sudoku (60 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. Shaded cells contain the even digits while the others contain the odd digits.

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

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

Sudoku XV (75 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. All the adjacent cell pairs (sharing an edge) with two digits summing to 5 are marked by V, while those summing to 10 are marked by X. The cells edges which do not contain an X or a V cannot have digits summing to 5 or 10.

			6	X	V		
		X		V			X
5		X		X			6
			V	V			
			V	X			
X	V	X	V				V
			X				
2	X			X		X	4
	X		X	X			
	V					X	X
		X					

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

Diagonal Sudoku (60 points)

Fill in the grid so that every row, every column, every diagonal and every 3x3 box contains the digits 1 through 9.

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

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

Consecutive Sudoku (80 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. Neighboring cells which contain consecutive digits are separated by white bars. Cells which are not separated by white bars cannot contain consecutive digits.

	1			9			2	
		5				7		
1								5
		4				9		
	5			7			1	

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

Group Sum Sudoku (100 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. The numbers in each circle indicates the sum of the digits in the cells covered by the corresponding circle.

23			15	18				29
	25		22	30			13	
		24			25			
11	17		30	26		14	17	
23	25		18	15		12	21	
		21			20			
	11		23	19		29		
25			18	19			16	

7	4	5	2	3	1	6	9	8
3	23	9	2	15	18	4	6	8
1	6	25	8	22	30	5	7	9
2	1	4	7	9	5	24	25	8
5	11	17	30	26	7	8	3	6
8	23	25	6	18	15	2	14	17
4	5	3	21	3	1	2	12	21
6	2	1	9	2	6	20	5	4
9	8	7	1	5	3	7	29	8

Irregular (110 points)

Fill in the grid with digits from 1 through 9 so that every row, every column and every outlined region contains distinct digits.

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

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

No Knight Step Sudoku (65 points)

Fill in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. No cell that is a knight-step away can contain the same digit.

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

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

Quadruple Sudoku (70 points)

Fill in the grid so that every row, every column and the 3x3 boxes contain the digits 1 through 9. Some intersections list the digits from the four adjacent cells.

				1469				
			3567		6789			
			1356	1367	4578			
			1378		3456		4689	
				1389		4589		
			3469		1278			2357
				2458		1468		
							3789	

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