

INDIAN SUDOKU CHAMPIONSHIP 2010

**Preliminary Round
23rd January 2010**

11:30 – 13:00

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. The points are applicable for all rounds on both the days of the event. 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

XXXXXXXXXX

Note that 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 during the test.

If the 9 digits are correct, full marks will be given, else no marks will be given.

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						
			5					

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

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

Name:

Id:

Email:

Phone:

INDIAN SUDOKU CHAMPIONSHIP 2010

(Preliminary Round 23rd January 2010)

90 minutes

	Answer	Points	Check1	Check2
Classic1	<input type="text"/>	30		
Classic2	<input type="text"/>	35		
Classic3	<input type="text"/>	40		
Classic4	<input type="text"/>	45		
Classic5	<input type="text"/>	50		
Classic6	<input type="text"/>	55		
Classic7	<input type="text"/>	60		
Classic8	<input type="text"/>	65		
Odd Even	<input type="text"/>	60		
Diagonal	<input type="text"/>	60		
Consecutive	<input type="text"/>	80		
Sudoku XV	<input type="text"/>	75		
Quadruple	<input type="text"/>	70		
GroupSum	<input type="text"/>	100		
No Knight Step	<input type="text"/>	65		
Irregular	<input type="text"/>	110		

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Classic Sudoku – 1

30 points

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

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

Classic Sudoku – 2

35 points

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

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

Classic Sudoku – 3

40 points

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

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

Classic Sudoku – 4

45 points

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

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

Classic Sudoku – 5

50 points

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

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

Classic Sudoku – 6

55 points

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

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

Classic Sudoku – 7

60 points

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

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

Classic Sudoku – 8

65 points

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

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

Odd Even

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.

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

Diagonal

60 points

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

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

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.

4								2
7								1

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			V					5
	X		V			X		X
			X					
X				X				X
V	2				V	5		
				V		V		X
				V		X		
							X	
3						X		4

Quadruple

70 points

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

Group Sum

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.

No Knight Step

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.



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

Classic 1 – 786 124 593

Classic 2 – 217 569 384

Classic 3 – 369 542 817

Classic 4 – 183 267 459

Classic 5 – 974 258 316

Classic 6 – 583 269 714

Classic 7 – 136 254 789

Classic 8 – 451 763 298

Odd Even – 461 835 297

Diagonal – 958 327 461

Consecutive – 213 976 458

Sudoku XV – 549 138 726

Quadraple – 531 248 679

GroupSum – 983 764 521

KnightStep – 742 539 186

Irregular – 924 653 817

Classic 1

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

Classic 2

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

Classic 3

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

Classic 4

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

Classic 5

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

Classic 6

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

Classic 7

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

Classic 8

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

Classic 1 – 786 124 593

Classic 2 – 217 569 384

Classic 3 – 369 542 817

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Sudoku XV – 549 138 726

Quadraple – 531 248 679

GroupSum – 983 764 521

KnightStep – 742 539 186

Irregular – 924 653 817

Odd Even

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

Diagonal

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

Consecutive

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

Sudoku XV

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

Quadraple

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

GroupSum

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

No Knight Step

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

Irregular

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