LogicMastersIndia July'2010 Sudoku Test

Classic Look-Alikes

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INSTRUCTION BOOKLET

Submission Link: http://logicmastersindia.com/M201007S

Forum Discussion Link: http://logicmastersindia.com/forum/forums/thread-view.asp?tid=69

Points Table

Sudoku Type		Size	Points
Classic Sudoku	1	9X9	18
	2	9X9	15
	3	9X9	26
	4	9X9	27
	5	9X9	30
Diagonal Sudoku		9X9	29
		6X6	7
Quadro Sudoku		9X9	24
		6X6	4
No Touch Sudoku		9X9	46
		6X6	10
AntiKnight Sudoku		9X9	33
		6X6	7
Non-Consecutive Sudoku		9X9	43
		6X6	6
Between Sudoku		9X9	22
		6X6	5
No 3 odd/even in line Sudoku		9X9	55
		6X6	5
Symmetric unequal Sudoku		9X9	36
		6X6	6
Touchy Sudoku		9X9	38
		6X6	8
Total			500

Classic Look-Alikes

Time limit: 120 minutes.

In this contest it will appear variants, that looks like classic sudoku (including classic one;), but some of them will have additional rule.

For all puzzles the following rule is right:

Place the digits 1 through 9 (or 1 through 6) into the empty cells in the grid (a single digit per cell) so that each digit appears exactly once in each row, column, and each outlined 3×3 (or 2x3) region.

Besides it will be given only additional rules for each type. There will be 23 tasks, 5 classics 9x9 of different difficulty, and 2 tasks for each of 9 variants: one quite easy – on diagram 6x6, and one harder on regular 9x9 diagram, so the choice of level of difficulty for each type is up to You.

1-5. Classic sudoku

Any additional rules. ;)
Do not be surprised, that each of classic puzzle will have own name, because, the layout of given digits will remind some shapes.

Example: Solution:

6-7. Diagonal sudoku.

It should occur 9(6) different digits in each of main diagonals.

Example:

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

Solution:

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

8-9. Quadro sudoku.

In any 2x2 square it cannot be all odd or all even digits.

Example:

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

Solution:

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

10-11. No touch sudoku.

The same digits cannot touch each other diagonally.

Example:

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

Solution:

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

12-13. Antiknight sudoku.

Same numbers cannot be placed in a (chess) knight's step away.

Example:

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

Solution:

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

14-15. Non-consecutive sudoku.

In horizontally or vertically neighbouring cells cannot occur consecutive digits.

Example:

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

Solution:

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

16-17. Between sudoku.

If there is more than one cell between two given digits in the same row, or column, in these cells must be placed only digits between these two given digits (for example between 1 and 6 in 5 column, it must appear 3 of 4 digits: 2,3,4,5).

Example:

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

Solution:

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

18-19. No 3 odd/even in line.

In any vertical or horizontal sequence of 3 cells cannot occur neither 3 odd nor 3 even digits.

Example: Solution:

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

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

20-21. Symmetric unequal sudoku.

Cells that are 180° symmetric to each other cannot have same digits.

Example: Solution:

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

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

22-23. Touchy sudoku.

Each digit touches vertically or horizontally, at least one consecutive digit. For example, every 3 touches at least one cell containing 2 or 4.

Example:

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

Solution:

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