BEST OF LMI MOCKS

BY DEB MOHANTY

Before the monthly Sudoku tests started, Logic Masters India (LMI) used to host a series of "Sudoku Mock Tests" as preparation before the World Sudoku Championships. Apart from many Indians, a lot of international players authored and participated in these mock tests from December-2008 to March-2010.

With the number of players increasing multi-fold at LMI in recent times, it is certain that many new players did not get a chance to enjoy these mock tests. In the 2011 December Sudoku Test, we present some of the memorable sudokus that appeared in those tests.

This test has 18 sudokus, one type each from mock test 4 to mock test 21. It was certainly not easy to select just one sudoku out of many interesting variations in each set. It was also important to ensure that the final set has a good mix of all types. It was fun selecting and creating the sudokus, and I hope you enjoy the set as much.

This test is dedicated to all the authors and participants of the mock tests who helped create such a high level of puzzling atmosphere at LMI.

TIMING AND POINTS TABLE

Length of the test : 120 minutes
Total Points : 960 points
Bonus : 8 points per minute if all 18 sudokus submitted correctly

Sum Or Product Frame	95	Odd Even No Touch	25
Linked Mini	75	Windoku	45
Deformable Kropki	40	Diagonal Consecutive	45
Classic 1	25	Pirate	35
Sum 100	40	Outside Killer	100
All Odd Or All Even	45	Neighbours + N	40
Hidden Skyscrapers	70	Non-Consecutive Killer	80
Classic 2	40	Diagonal	45
Symmetric Unequal	65	Series	50

SERBIAN CHAMPIONSHIP 2011

This test will also be used as Serbian Sudoku Championship 2011. If you are planning to participate in the championship, please read this document at Puzzle Serbia website - http://puzzleserbia.com/downfree/sud11/uputstvo.pdf.

Apply classic sudoku rules.

The number outside the grid is either the sum or the product of first 3 digits in the corresponding direction.

	14	15	20	21	20	14	23	15	8	
24										30
15										20
21										13
14										19
64										27
17										13
15										17
36										17
16										24
	13	24	10	18	13	42	35	15	17	

Solution grid:

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

Place the digits 1 through 6 into the empty cells in each of the grids so that each digit appears exactly once in each of the rows, columns, and bold outlined regions

Corresponding cells of different grids must contain different digits.

Partial points : Grid without hints 30, grids with hints 15 points each

Puzzle grids (with hints):

Grid 1:
	2	5	6	3	
	4			2	
	1	2	4		
	6			5	

Grid 2:
	4	1	2	5	
	6			4	
	3			2	
	2	3	4	1	

Grid 3:
		3			6
		5	6	4	3
		4	3	5	1
		1			2

Grid 4:
		4	3		
	2			6	
	5	6	2	4	
	4			3	

Grid 5:
	1			4	
	3	4		1	
	2		3	5	
	5			6	

Grid 6: (empty)

Solution grids:

Solution 1:
1	3	6	5	4	2
4	2	5	6	3	1
6	4	3	1	2	5
5	1	2	4	6	3
3	6	1	2	5	4
2	5	4	3	1	6

Solution 2:
3	5	2	1	6	4
6	4	1	2	5	3
2	6	5	3	4	1
1	3	4	6	2	5
5	2	3	4	1	6
4	1	6	5	3	2

Solution 3:
4	6	1	2	5	3
5	3	2	1	6	4
1	5	6	4	3	2
2	4	3	5	1	6
6	1	4	3	2	5
3	2	5	6	4	1

Solution 4:
5	1	3	4	2	6
2	6	4	3	1	5
4	2	1	5	6	3
3	5	6	2	4	1
1	4	5	3	6	2
6	3	2	1	5	4

Solution 5:
2	4	5	6	3	1
3	1	6	5	4	2
5	3	4	2	1	6
6	2	1	3	5	4
4	5	2	1	6	3
1	6	3	4	2	5

Solution 6:
6	2	4	3	1	5
1	5	3	4	2	6
3	1	2	6	5	4
4	6	5	1	3	2
2	3	6	5	4	1
5	4	1	2	6	3

Apply classic sudoku rules.

If the difference between two adjacent digits is 1 OR if one of the digits is double of the other, there is a circle between them. If there is no circle, none of the two relationships can be true.
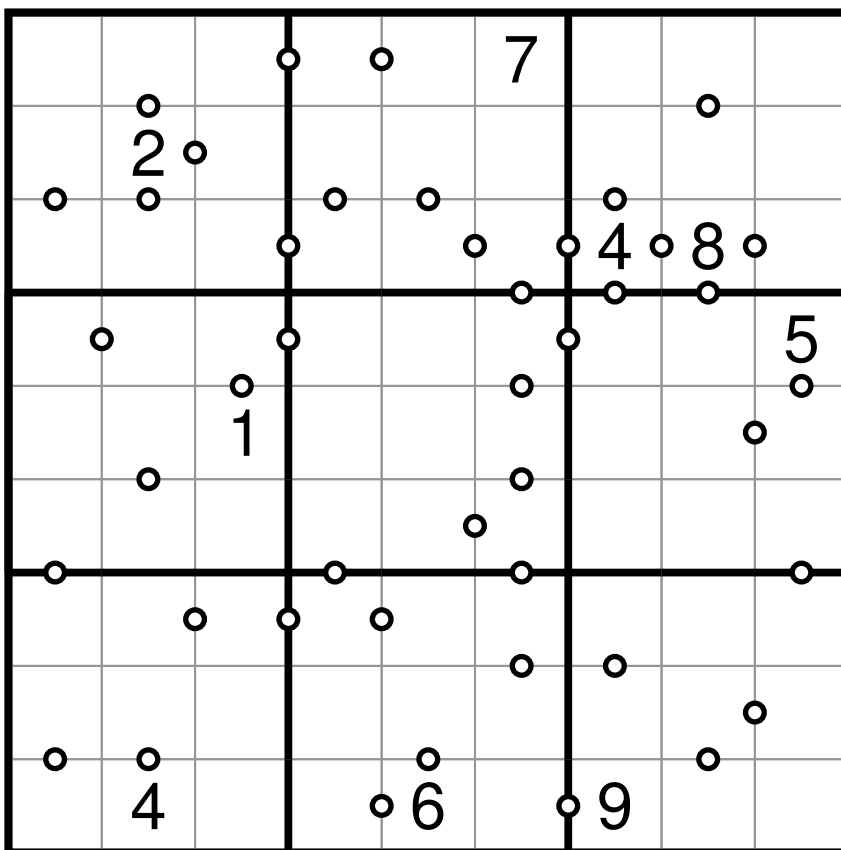
5	3	9	8	4	7	2	6	1
8	2	4	6	1	9	5	3	7
7	1	6	5	2	3	4	8	9
4	8	2	1	9	6	3	7	5
9	6	1	7	3	5	8	2	4
3	7	5	2	8	4	1	9	6
6	9	8	4	5	2	7	1	3
2	5	3	9	7	1	6	4	8
1	4	7	3	6	8	9	5	2

Place the digits 1 through 9 into the empty cells in the grid so that each digit appears exactly once in each of the rows, columns, and bold outlined regions.

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

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

Apply classic sudoku rules.

In each row, sum of number combinations in the shaded cells is exactly 100.

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

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

Sudoku on this page was created by Nikola Zivanovic for Mock Test 8

Apply classic sudoku rules.

All shaded cells in a 3X3 box have the same parity, either all of them are odd or all of them are even.

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

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

Apply classic sudoku rules.

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.

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

Place the digits 1 through 9 into the empty cells in the grid so that each digit appears exactly once in each of the rows, columns, and bold outlined regions.

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

Apply classic sudoku rules.

Cells that are 180^0 symmetric to each other cannot have identical digits.

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

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

Place the digits 1 through 9 into the empty cells in the grid so that each digit appears exactly once in each of the rows, columns, and bold outlined regions.

Shaded cells contain even digits. White cells contain odd digits. Identical digits do not touch each other diagonally.

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

Place the digits 1 through 9 into the empty cells in the grid so that each digit appears exactly once in each of the rows, columns, bold outlined regions, and marked 3X3 boxes.

Puzzle grid (given clues):

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

Solution:

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

Apply classic sudoku rules.

All diagonally adjacent cells having consecutive digits are marked by a line. If there is no line, those two diagonally adjacent cells cannot have consecutive digits.

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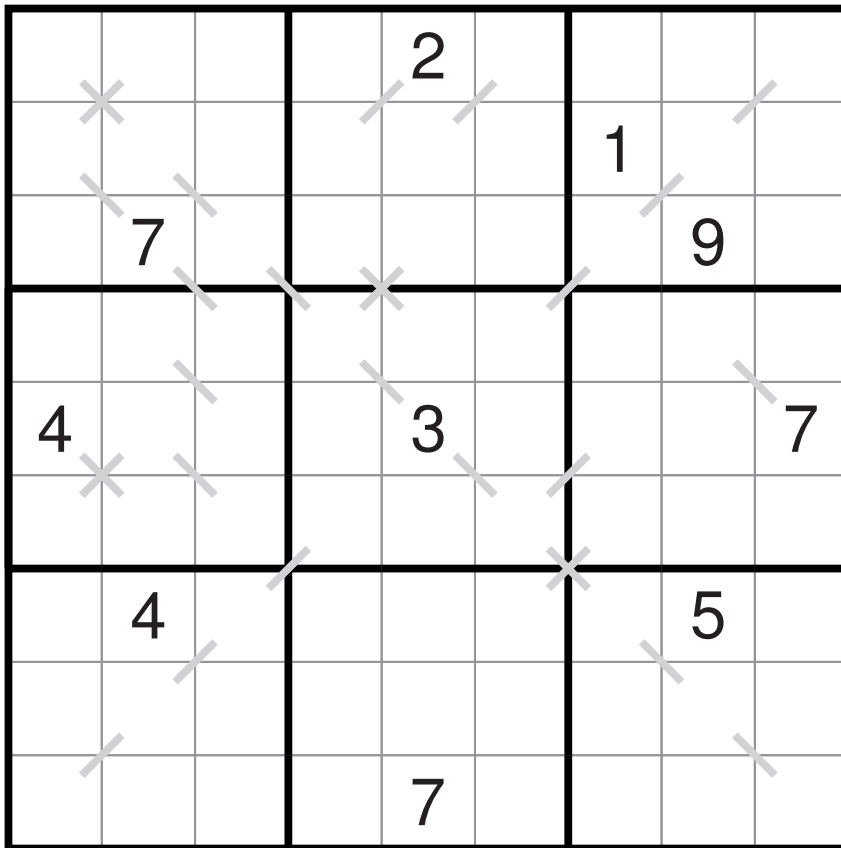
1	9	5	7	2	8	4	3	6
8	2	4	3	9	6	1	7	5
6	7	3	4	1	5	8	9	2
3	1	6	2	5	7	9	8	4
4	8	2	1	3	9	5	6	7
7	5	9	8	6	4	2	1	3
2	4	7	6	8	1	3	5	9
9	6	1	5	4	3	7	2	8
5	3	8	9	7	2	6	4	1

Apply classic sudoku rules.

The 5's represent treasure chests and are completely surrounded by (horizontally and vertically only) pirates (1, 2, 3 and 4). The commoners (6, 7, 8 and 9) cannot be found next to a treasure chest (5).

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

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

Apply classic sudoku rules.

Numbers outside the rows / columns indicate that there is at least one couple of neighboring cells in the corresponding row / column of which the sum is equal to the given number.

	5	15		17			4	7	16
14	1								
		2				5			7
			3			2			5
3				4			8	1	
8					5				
		4	8			6			
15	3			2			7		
	9			5				8	
									9

Solution:

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

Apply classic sudoku rules.

In all cases where vertically or horizontally adjacent cells are contains digits that differ by N, a mark is shown on the edge between those cells.

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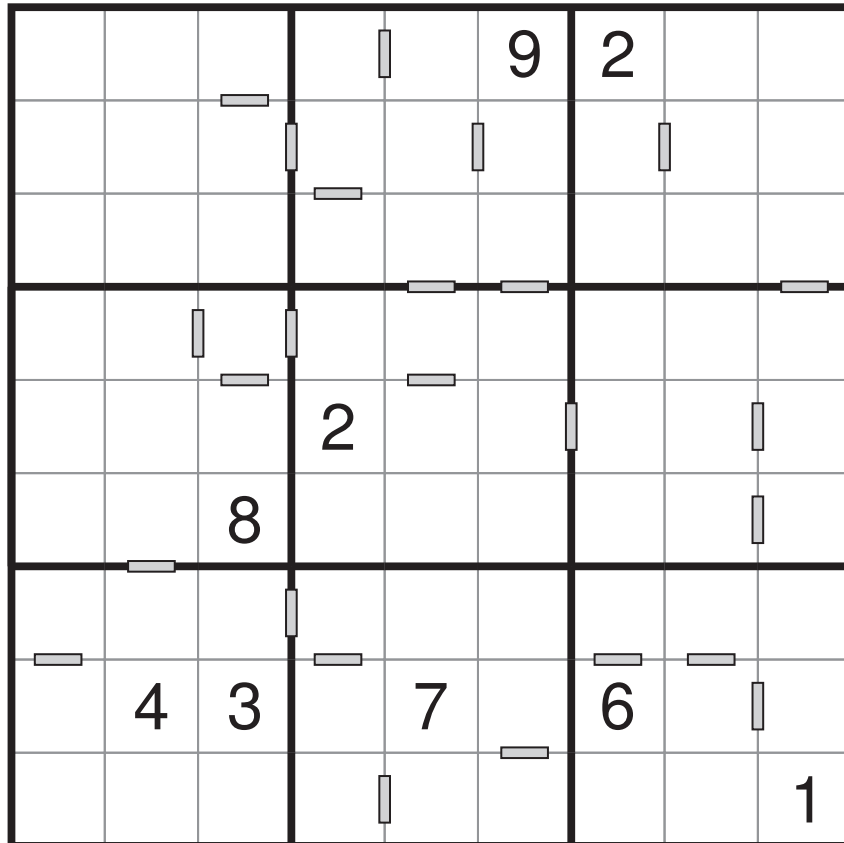
1	6	5	7	4	9	2	8	3
8	7	2	5	6	3	1	4	9
3	9	4	8	2	1	7	6	5
7	3	6	9	5	4	8	1	2
5	1	9	2	8	6	3	7	4
4	2	8	3	1	7	5	9	6
6	5	1	4	3	8	9	2	7
9	4	3	1	7	2	6	5	8
2	8	7	6	9	5	4	3	1

Apply classic sudoku rules.

The sum of the digits within each dotted cage equals the number given in the top left corner of that cage. Digits cannot repeat inside a cage. Additionally the numbers cannot be consecutive between two adjacent cells throughout the grid.

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

Apply classic sudoku rules.

Two marked diagonals must have digits 1 through 9.

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

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

Apply classic sudoku rules.

Shaded cells must contain digits from the given series.

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

3 1 4 1 5 9

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