

Lockdown Sudoku Test

28th August – 2nd September 2020

Author: R Kumaresan

Important Links

Submission Page : <http://logicmastersindia.com/2020/085/>

Discussion Thread : <http://logicmastersindia.com/t/?tid=2754>

F. A. Q. : <http://logicmastersindia.com/t/?tid=381>

Registration, if required : <http://logicmastersindia.com/register.asp>

About this Test

This test has thirteen Sudokus, including four classic Sudokus.
The duration of the test is 90 minutes.

How to participate?

- Understand the rules of different Sudokus that will appear in this test. This Instruction Booklet has rules and examples for each Sudoku.
- Download the password protected Sudoku booklet (will be uploaded before the test starts). The Sudoku booklet contains the actual Sudokus to be solved. It is password protected, so you won't be able to open it.
- Any time on or after 28th August (but on or before 2nd September), login at the submission page using your LMI userid and password.
- Please check the submission page for exact timing.
- Click on "Start". 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 two arrows
- If solving on paper
 - Fill the answer form with digits along the marked arrow(s)
 - Click submit button
- If solving online
 - After solving the Sudoku, click on "Submit" button below the grid
 - Each Sudoku grid has different submit buttons

If you are participating at LMI for first time, you must check the F.A.Q. at:
<http://logicmastersindia.com/t/?tid=381>.

Points Table and Scoring

Points typically indicate difficulty of the Sudokus and time required to solve them. While the organizers have made best efforts to match them, your personal experience and preference may differ.

This test uses instant grading where a solver can submit any individual Sudoku and receive confirmation that the solution is correct or not. Each incorrect submission reduces the sudoku's potential score. The first, second, third, and fourth incorrect submissions reduce the potential score to 90%, 70%, 40%, and 0% respectively.

Sudoku	Points
Classic 1 (9x9)	25
Classic 2 (9x9)	35
Classic 3 (9x9)	40
Classic 4 (9x9)	60
Little Killer Non Consecutive (9x9)	45
Consecutive Pairs (9x9)	70
Parity Skyscrapers (9x9)	70
Anti-XV (9x9)	80
Four in One (9x9)	100
Diagonal (9x9)	105
X Anti Windoku (9x9)	105
Arrow Thermo 50-50 (9x9)	140
Three is a Crowd (9x9)	125
TOTAL	1000

Bonus

If you submitted all Sudokus correctly, you can have bonus points 10 points per minute saved, computed up to seconds.

General Rules

To make the rules less repetitive, you will see following line “Apply standard Sudoku rules” in most Sudoku rules. This means “Place a digit from 1 to N, where N is the size of the grid, in each empty cell so that each digit appears exactly once in each row, column and outlined region.” These outlined regions could be 3X3 boxes, or other shapes.

Each Sudoku will be marked with, at max, 2 lettered arrows. If you are solving on paper, you need to submit the digits in these arrows, in order, including the givens. For example, the answer key for the Sudoku at the right is 162897453, 517698432.

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

About the Sudoku Booklet

The password protected Sudoku booklet will have 7 pages. If you are planning to solve on paper, we advise you to have a printer accessible with enough paper.

The Sudoku booklet will look similar to the next pages in this instruction booklet. The font sizes, cell sizes, colors, borders, shading, margin will be similar. We recommend you to print few pages of this instruction booklet. You can avoid any last minute surprise during the test.

Example Credits

- <http://lifeinsudoku.blogspot.com> (Parity Skyscrapers, Anti-XV)
- <http://logic-masters.de> (Three is a Crowd)
- <https://asc2020.sudokumaniacs.com/> (X Anti Windoku, Arrow-Thermo 50-50)

01-04 Classic Sudoku

25+35+40+60 points

Place a digit from 1 to 9 in each empty cell so that each digit appears exactly once in each row, column and 3X3 box.

B

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

05 Little Killer Non Consecutive Sudoku

45 points

Apply classic Sudoku rules.

Little Killer rules: The numbers with arrows outside the grid indicate the sum of the digits appearing in the cells in the corresponding direction. Digits can repeat in the direction of the arrow.

Non Consecutive rules: Two horizontally or vertically adjacent cells cannot contain consecutive digits.

I

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

9

9

06 Consecutive Pairs Sudoku

70 points

Apply classic Sudoku rules.

Additionally, the numbers placed in marked adjacent cells must be consecutive. Not all such pairs of cells are marked.

07 Parity Skyscrapers Sudoku

70 points

Apply classic Sudoku rules.

Additionally, consider each number to be the height of a building. The clues outside the grid indicate the parity (O means Odd, and E means Even) of the number of buildings that can be seen when looking in that direction (taller buildings conceal smaller or equal height buildings behind them).

08 Anti-XV Sudoku

80 points

Apply classic Sudoku rules.

Additionally, two horizontally or vertically adjacent cells cannot contain digits that add up to 5 or 10.



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

09 Four in One Sudoku

100 points

Apply classic Sudoku rules.

Four in One rule: Each of the below variant rules should be satisfied by a different grey line.

Equal Parity rules: The count of odd and even digits on the line is the same.

Meandering diagonal rules: Digits should not repeat on the line.

Renban rules: The line contains a set of distinct consecutive digits.

Palindrome rules: The digits on the line form a palindrome, i.e. they read the same from both the directions.



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

10 Diagonal Sudoku

105 points

Apply classic Sudoku rules.

Additionally, each main diagonal (marked by dotted lines) must contain digits from 1-9.

T

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

S

11 X Anti Windoku Sudoku

105 points

Apply classic Sudoku rules.

Additionally, each shaded 3x3 box contains 5 digits, of which 4 numbers will appear twice.

One number which is called X will appear exactly once in each shaded 3x3 box.

V

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

U

12 Arrow Thermo 50-50 Sudoku

140 points

Apply classic Sudoku rules.

50-50 rule: Exactly 50% of the grey lines follow Thermo rules and the other 50% follow Arrow rules.

Arrow rules: The sum of the digits along the path of each arrow must equal the digit in the circled cell. Digits can repeat within an arrow shape.

Thermo rules: Digits are strictly increasing from the circled cell to the other end.

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

13 Three is a Crowd Sudoku

125 points

Apply classic Sudoku rules.

Clues outside the grid show the three digits that have to be placed in the first three cells from that side. However, exactly one digit of each triplet is wrong. On each side of the grid (top, bottom, left, right) all of the wrong clues are different.

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

Classic Sudoku

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

Little Killer Non Consecutive Sudoku

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

Consecutive Pairs Sudoku

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

Parity Skyscrapers Sudoku

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

Anti-XV Sudoku

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

Four in One Sudoku

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

Diagonal Sudoku

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

X Anti Windoku Sudoku

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

Arrow Thermo 50-50 Sudoku

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

Three is a Crowd Sduoku

8	2	7	3	9	7	1	4	3		
1	4	3	4	8	6	9	5	8		
5	6	9	5	1	2	6	2	7		
182	8	3	1	4	5	2	9	6	7	789
547	5	4	9	7	1	6	8	2	3	368
675	2	6	7	3	8	9	1	5	4	134
396	3	9	4	1	6	8	2	7	5	925
273	7	2	6	9	4	5	3	8	1	137
154	1	8	5	2	3	7	4	9	6	416
241	4	7	2	6	9	1	5	3	8	258
938	9	5	3	8	7	4	6	1	2	642
689	6	1	8	5	2	3	7	4	9	579
4	1	2	8	7	6	5	3	9		
5	3	8	9	1	6	4	7			
6	7	9	5	4	3	1	8	2		