

MIT Sudoku Open 2024

Individual Round 3: Variants II

50 Minutes – 1000 Points

Authors: Tyler Chen, Can Erturan

3.1 Arrow Sudoku.....	28 Points	✓	1	2	X
3.2 Arrow Sudoku.....	120 Points	✓	1	2	X
3.3 Distanced Alternating Lines Sudoku	20 Points	✓	1	2	X
3.4 Distanced Alternating Lines Sudoku	112 Points	✓	1	2	X
3.5 Equal Sums Sudoku	36 Points	✓	1	2	X
3.6 Equal Sums Sudoku	60 Points	✓	1	2	X
3.7 Hidden Dihedral Shape Sudoku.....	40 Points	✓	1	2	X
3.8 Hidden Dihedral Shape Sudoku.....	72 Points	✓	1	2	X
3.9 Palindrome Sudoku.....	28 Points	✓	1	2	X
3.10 Palindrome Sudoku.....	50 Points	✓	1	2	X
3.11 Quadruples Sudoku	50 Points	✓	1	2	X
3.12 Quadruples Sudoku	48 Points	✓	1	2	X
3.13 Thermo Sudoku.....	40 Points	✓	1	2	X
3.14 Thermo Sudoku.....	80 Points	✓	1	2	X
3.15 Untouch Sudoku	20 Points	✓	1	2	X
3.16 Untouch Sudoku	36 Points	✓	1	2	X
3.17 Twin Clones Sudoku.....	160 Points	✓	1	2	X

Total

Name: _____

Division:

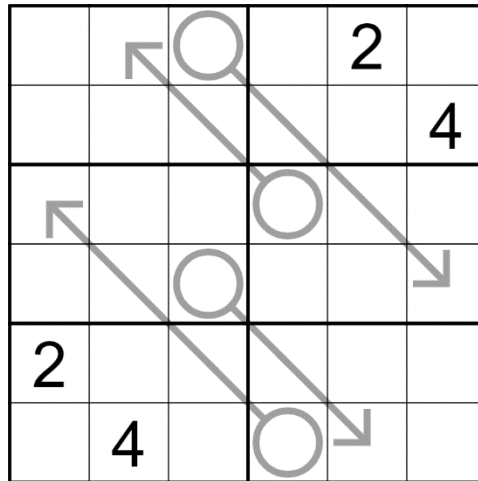
Beginner

Experienced

3.1: Arrow Sudoku

28 Points

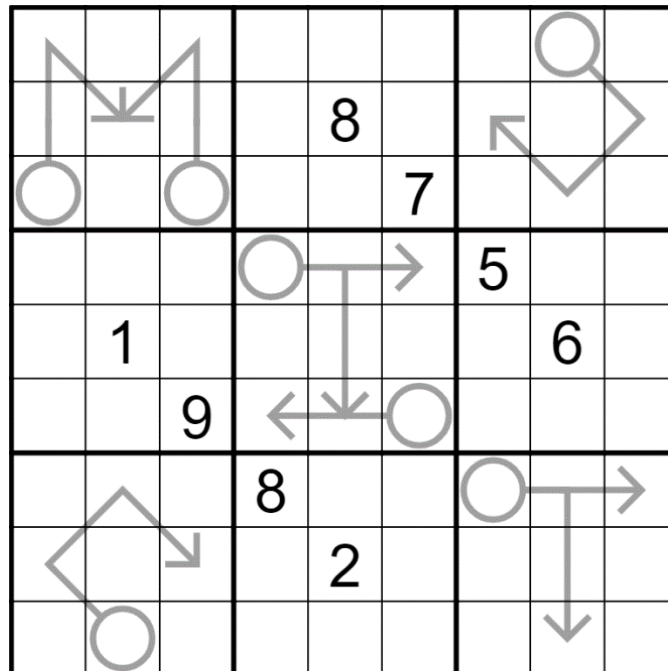
Rules: Apply Classic Sudoku rules. Each digit placed in a cell with a circle must be the sum of the digits placed in the cells that the adjoining arrow passes through. Digits may repeat on arrow.



3.2: Arrow Sudoku

120 Points

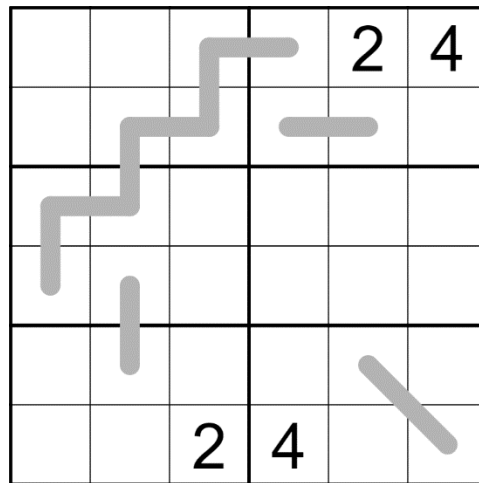
Rules: Apply Classic Sudoku rules. Each digit placed in a cell with a circle must be the sum of the digits placed in the cells that the adjoining arrow passes through. Digits may repeat on arrow.



3.3: Distanced Alternating Lines Sudoku

20 Points

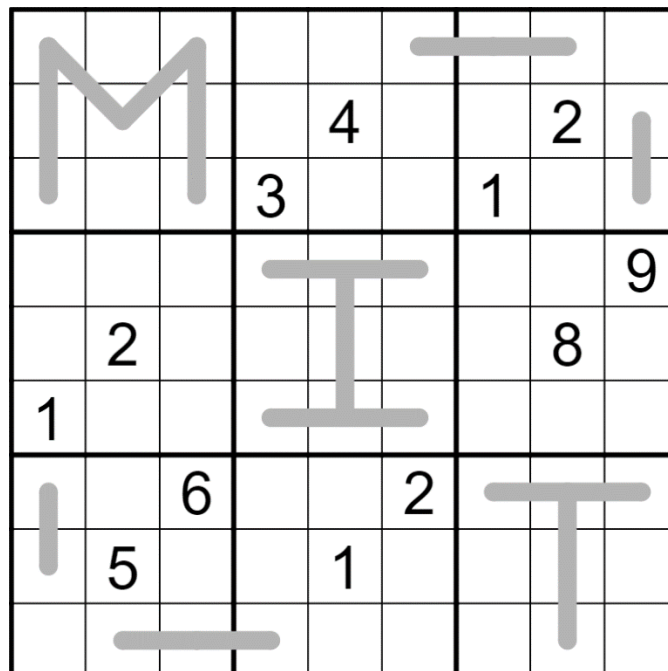
Rules: Apply Classic Sudoku rules. Adjacent digits on grey lines must have different parity, and have a difference of at least 3.



3.4: Distanced Alternating Lines Sudoku

112 Points

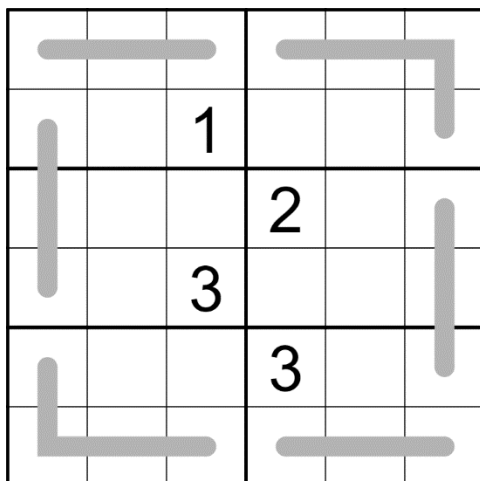
Rules: Apply Classic Sudoku rules. Adjacent digits on grey lines must have different parity, and have a difference of at least 3.



3.5: Equal Sums Sudoku

36 Points

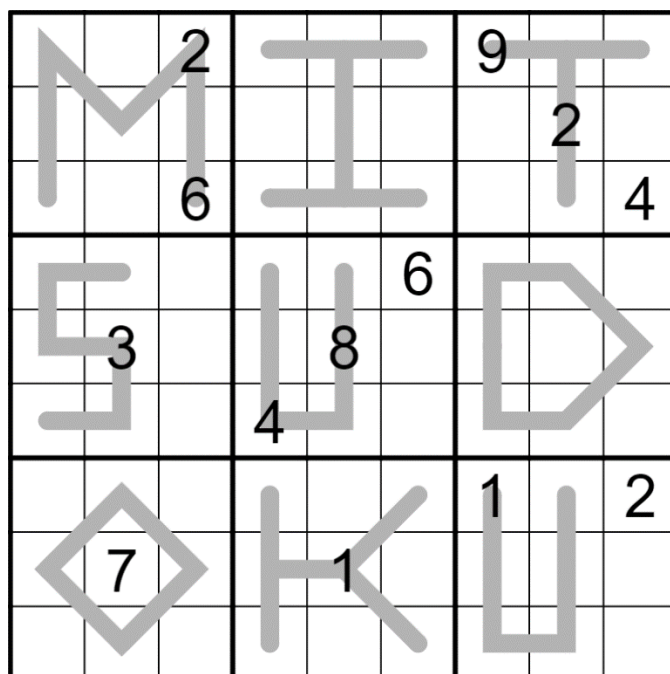
Rules: Apply Classic Sudoku rules. The sum of the digits on each shape are the same for each all shapes.



3.6: Equal Sums Sudoku

60 Points

Rules: Apply Classic Sudoku rules. The sum of the digits on each shape are the same for each all shapes.

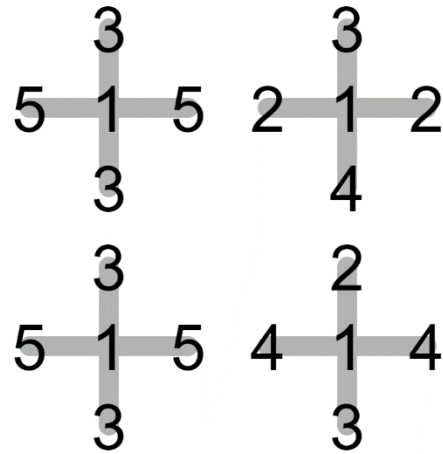


3.7: Hidden Dihedral Shape Sudoku

40 Points

Rules: Classic sudoku rules apply. There are some numbered shapes that must be put into the grid. Shapes can be rotated (in 45 degree increments) AND reflected. Different shapes may not intersect each other or share cells. There may be multiple ways to place shapes.

					1
		2			
			4		
1					

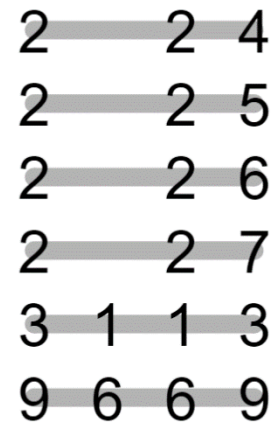


3.8: Hidden Dihedral Shape Sudoku

72 Points

Rules: Classic sudoku rules apply. There are some numbered shapes that must be put into the grid. Shapes can be rotated (in 45 degree increments) AND reflected. Different shapes may not intersect each other or share cells. There may be multiple ways to place shapes.

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



3.9: Palindrome Sudoku

28 Points

Rules: Classic sudoku rules apply. Numbers along shaded lines must be the same forwards and backwards.

2	4				
					3
5					
			1	2	

3.10: Palindrome Sudoku

50 Points

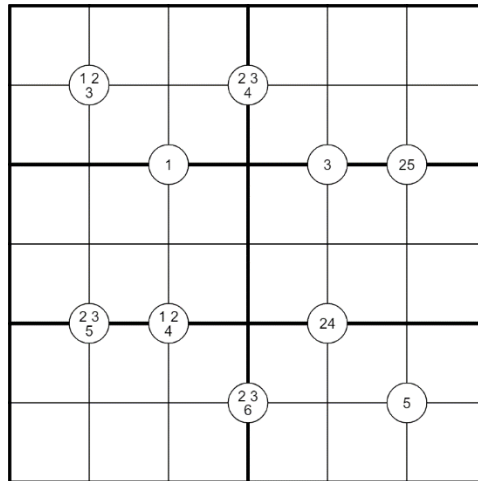
Rules: Classic sudoku rules apply. Numbers along shaded lines must be the same forwards and backwards. ****The junction in the letter T is the intersection of two straight palindrome lines****

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

3.11: Quadruples Sudoku

50 Points

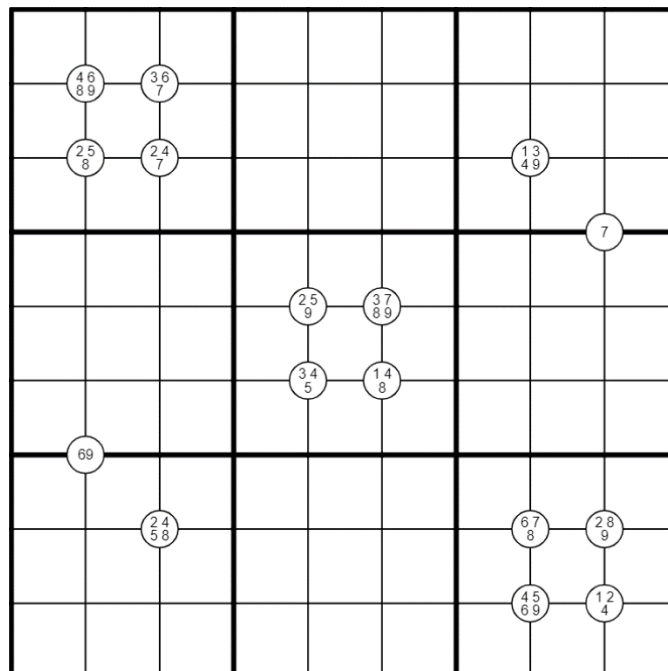
Rules: Classic sudoku rules apply. Digits in the white circles must appear somewhere in the four cells immediately surrounding their circle.



3.12: Quadruples Sudoku

48 Points

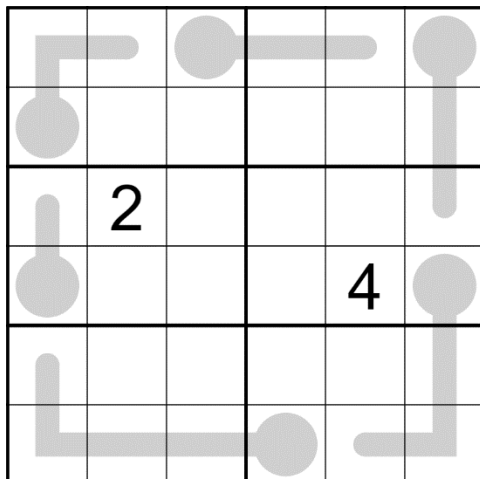
Rules: Classic sudoku rules apply. Digits in the white circles must appear somewhere in the four cells immediately surrounding their circle.



3.13: Thermo Sudoku

40 Points

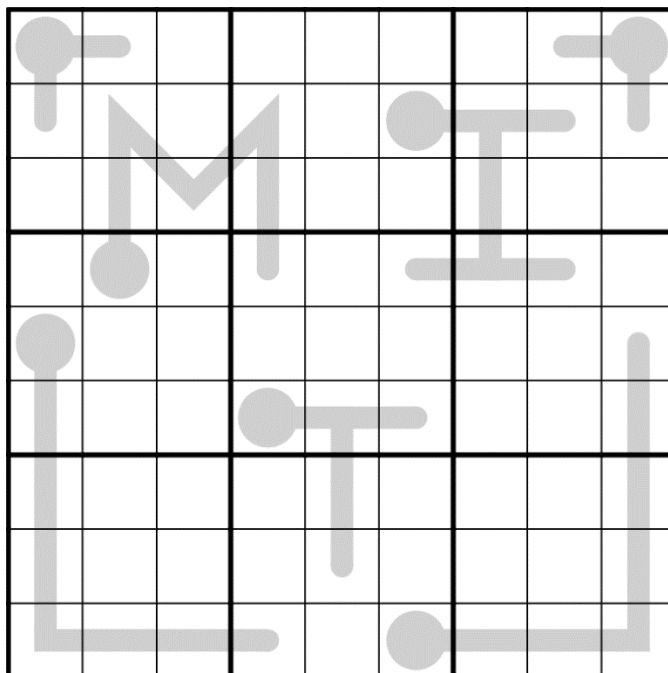
Rules: Classic sudoku rules apply. Some thermometer shapes are placed in the grid. Digits are strictly increasing from the round bulb of each thermometer to each flat end.



3.14: Thermo Sudoku

80 Points

Rules: Classic sudoku rules apply. Some thermometer shapes are placed in the grid. Digits are strictly increasing from the round bulb of each thermometer to each flat end.



3.15: Untouch Sudoku

20 Points

Rules: Classic sudoku rules apply. Diagonally adjacent digits must be different.

		3	4		
	2			5	
	4			2	
					1

3.16: Untouch Sudoku

36 Points

Rules: Classic sudoku rules apply. Diagonally adjacent digits must be different.

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

3.17: Twin Clones Sudoku

160 Points

Rules: Classic sudoku rules apply. Additionally, the numbers in each shaded region in the first grid must correspond to another shaded region in the second grid. The correspondence of which regions match to which other regions must be determined when solving the puzzle. Regions cannot be rotated or reflected. 75% of total points will be awarded for 1 of the 2 grids fully and correctly completed.

			2	6	9	1		
M	I	I	T				3	
							5	
5							6	
6							9	
3		M	I	I	T			
4								
	9	2	5	6				

T	I	M	M				5	
						7		
				9	1			
			6					
		4	5					
	8	T	I	M				
2								