

1 Battleship

Points:

Locate the position of the 10-ship fleet in the grid by standard rules. The ships do not touch each other, not even diagonally. The numbers outside the grid indicate how many cells in that row or column contain parts of ships. The ship can not occupy the cell with given digits. Then write the numbers into the ships. These numbers can go from left to right and from right to left, from top to bottom and from bottom to top. The given digits and digits in ships will help you to solve sudoku. Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions. **50 points**

4		1								1	(8 3 5 1)
	2									3	(2 4 7) (2 4 7)
		7								4	(1 5) (1 5) (1 5)
										0	(8) (8) (8) (8)
							1			1	
								2		1	
									5	4	
9				3						1	
	7		6		2					3	
1		2								3	
1	3	1	1	3	2	3	2	4			

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

			7			6			1	(4 3 8 5)
							3		5	(1 7 9) (1 7 9)
									0	(8 3) (8 3) (8 3)
									2	(2) (2) (2) (2)
									3	
		5							3	
6						9			3	
4						6			1	
								9	2	
9								1	3	
2	5	1	3	1	1	4	2	1		

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2 Double

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns, nine outlined 3x3 regions and each of the two main diagonals. **60 points**

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

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

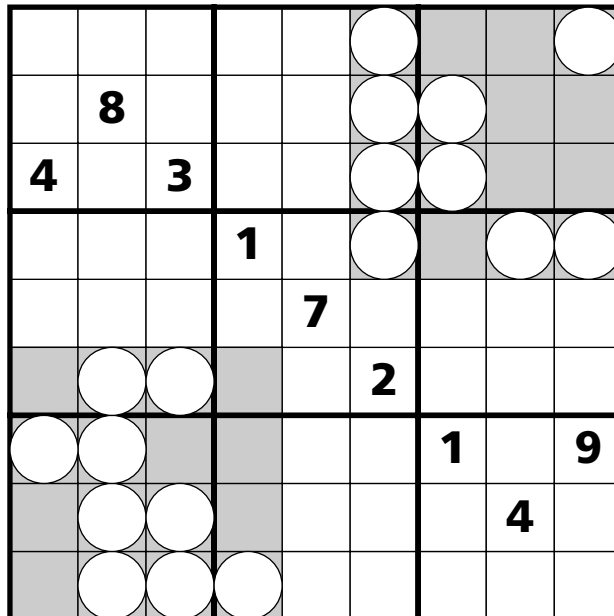
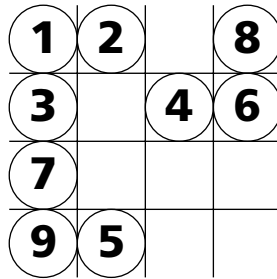
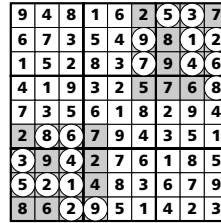
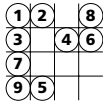
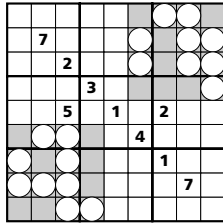
	7					3	9					5		8			
9		6				1		8				7		3			
	2					7		6				4	2				
8		5				6		4				1		5			
	4		5		8	9	3			5		9		6	8		1
			6		2				6		1				7		9
			2		5				8		9				5		7
			1		4				7		5				2		8
				8						2						4	

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4 Increase Distance

Points:

Solve both grey squares in the „increase distance“ puzzle. Put the digits 1–9 into the circles so that the distance between circles increases one after another: $|1, 2| < |2, 3| < \dots < |8, 9|$. Then using written and given digits solve sudoku. Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions. **50 points**



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5 Figure

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine 3x3 regions. All occurrences of each outlined shape (rotated and/or mirrored) must contain the same set of digits but each digit needn't be used exactly once. The sets can be the same for different shapes. **80 points**

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

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

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

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6 Sssssssudoku Ssssssssnake

Points:

First solve the puzzle Snake. Draw the snake 32 long, the parts of the body do not touch, not even diagonally. The numbers outside the grid show number of squares occupied by a snake in a certain row or column. You can place only digits 8 or 9 in the cells with snake turning (including head and tail). Then solve sudoku. Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions. **40 points**

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

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

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

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7 Buildings

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions.

Each row and column contain buildings of different heights. The numbers outside the grid indicate how many buildings are visible from that direction (the higher buildings hide the lower ones behind them).

80 points

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

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

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

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8 Irregular

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the irregularly shaped regions. **30 points**

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

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

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

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9 Number 5 Still Alive

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions. Sum of digits in all dotted areas must end with 5. The digits in these areas can be the same. **70 points**

								1
				6				
		3						
				9				
3				4				9
				2				
				8				
								2

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

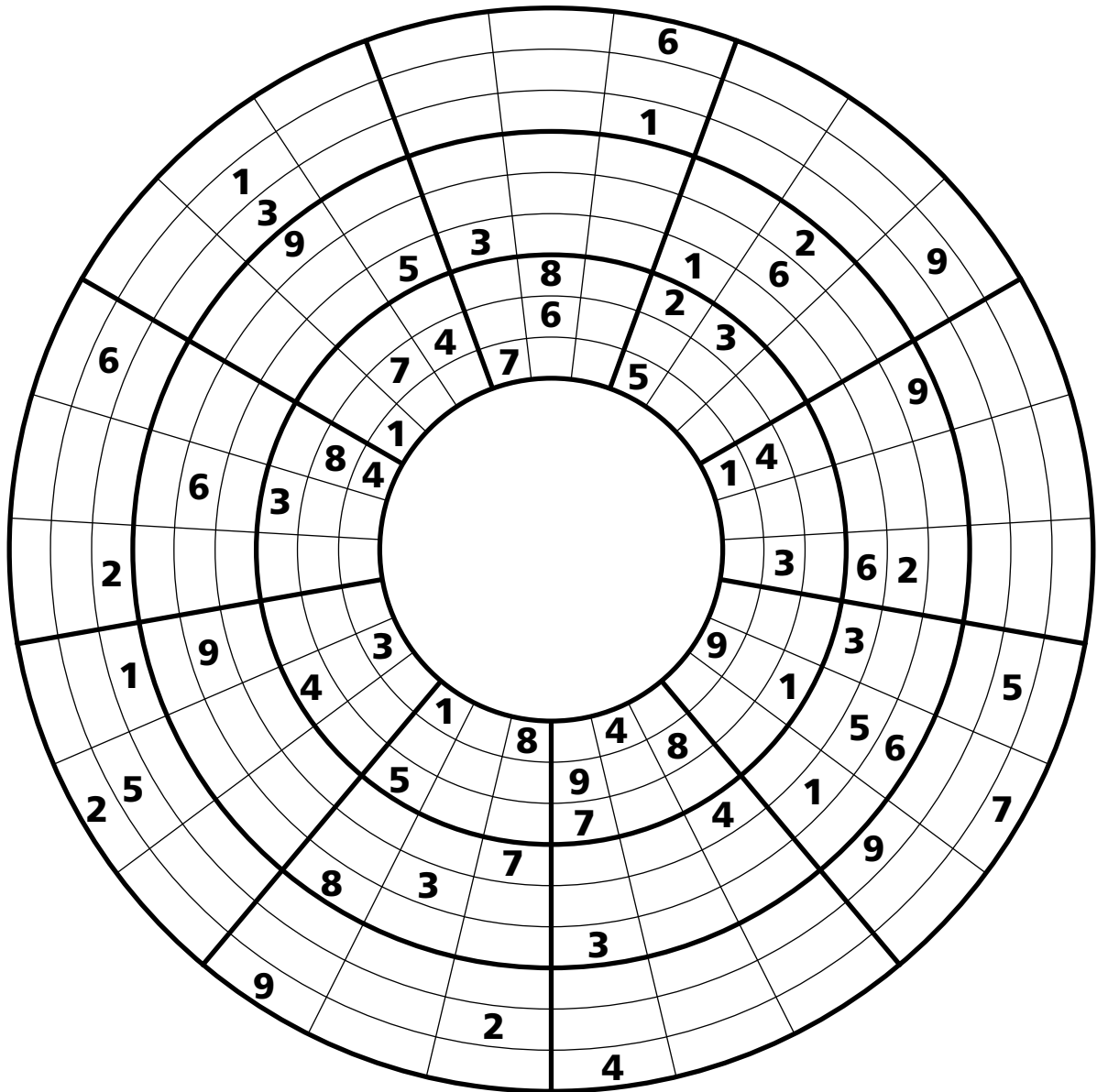
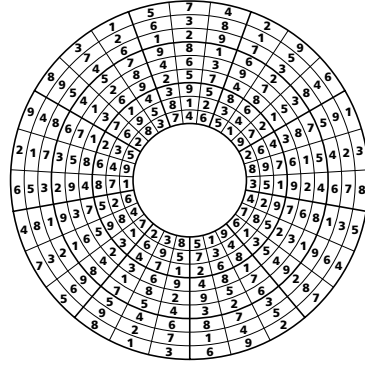
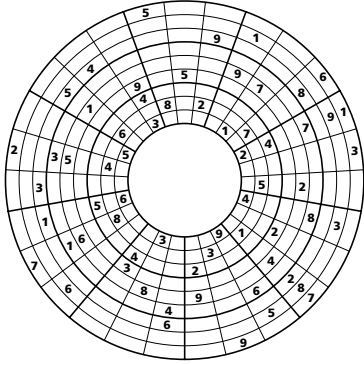
								6
		1		9				
		3						
				2			3	
			8		9			
	1		4			2		6
								7
			5				4	

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11 Ring

Points:

Place a digit from 1 to 9 into each of the empty cells so that each digit appears exactly once in each of the columns and rows of three consecutive sectors 3x9. Each three consecutive sectors 3x9 form the standard sudoku 9x9. **60 points**



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12 Neighbours

Points:

Place a digit from 1 to 9 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the nine outlined 3x3 regions.

Small clue-numbers in the top parts of certain squares are the sums of the digits in all the squares horizontally and vertically adjacent to the square.

60 points

	6	20		26			14
						20	
							10
							14
			10				17
	21		16				
13				14			18
	15		10				
3	6		6	23			17

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

8					14		10	17
	18			18		16		6
		15			18		8	
			19	14		19		4
18					17		13	
	18					13		
								16
							20	
6					16			14

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13 12 x 12

Points:

Place a digit from 1 to 12 into each of the empty squares so that each digit appears exactly once in each of the rows, columns and the twelve outlined 4x3 regions. **70 points**

	11		1					8		12	
		7			3	8			6		
	4				12	11				7	
9		5	11						12	4	10
			12	3			10	5			
					4	2					
					5	7					
			7	8			2	10			
11		1	10				4	7		8	
	10				6	12				3	
		4			2	3			12		
	5		6					1		11	

2	11	6	1	4	10	5	7	8	9	12	3
10	12	7	5	2	3	8	9	11	6	4	1
8	4	9	3	6	12	11	1	2	10	7	5
9	3	5	11	7	8	1	6	12	4	2	10
4	7	2	12	3	11	9	10	5	1	8	6
6	1	10	8	5	4	2	12	7	3	9	11
12	6	8	4	10	5	7	11	3	2	1	9
5	9	3	7	8	1	4	2	10	11	6	12
11	2	1	10	12	9	6	3	4	7	5	8
7	10	11	2	1	6	12	8	9	5	3	4
1	8	4	9	11	2	3	5	6	12	10	7
3	5	12	6	9	7	10	4	1	8	11	2

		9							5		
	4			6			8			10	
6		3	7					2	11		8
				8			10				
7	6				4	2				1	5
2		5			11	1			12		10
8		1			3	11			9		4
3	11				8	7				6	1
				2			4				
5		6	11					4	10		12
	2			9			3			7	
		8							1		

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