

## RUSSIA SUDOCU CHAMPIONSHIP 2 INSTRUCTIONS

This contest consists of four separated parts. Each part has its own time control and its own scoring. Also total scoring will be available.

### PART 1. FOURTH FROM THREE

. Time –20 minutes.

Solve three sudocu, then transfer the digits from the circles into the corresponded cells of fourth grid and solve fourth sudocu.

Solution:

2	3	5	6	4	1
1	6	4	5	2	3
5	1	3	2	6	4
4	2	6	3	1	5
6	5	1	4	3	2
3	4	2	1	5	6

3	1	2	6	5	4
4	6	5	1	3	2
5	2	3	4	6	1
1	4	6	3	2	5
6	5	1	2	4	3
2	3	4	5	1	6

1	3	6	5	2	4
2	4	5	6	3	1
3	6	4	2	1	5
5	2	1	4	6	3
6	5	3	1	4	2
4	1	2	3	5	6

2	3	1	6	4	5
6	5	4	1	3	2
5	1	2	4	6	3
3	4	6	5	2	1
1	6	3	2	5	4
4	2	5	3	1	6

Points: 5 for each solved previous sudocu, 10 for each solved fourth sudocu.

Maximum score – 25 points in every group. Total – 75 points

Key: the numbers in the yellow sells from top to bottom. In the example there is

1. 336
2. 336
3. 444
4. 525

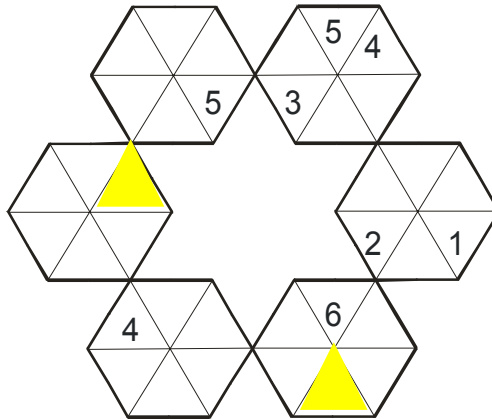
## PART 2. SUDOCU. MAGIC OF GEOMETRY

Time –60 minutes.

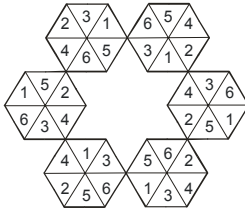
Maximum score –  $15+15+30+30+30+30+40+60 = 250$  points.

### 1.Sudocu snow-flake

Put the digits 1-6 into the hexagons. Each hexagon and each line (in the three directions: horizontal and two diagonal) must contain all six digits.



Solution



Key: the numbers in the yellow sells from top to bottom. In the example there is 2, 3

### 2. Sudocu with capsules

Fill in the grid with digits 1-8, so that each row, each column and each selected rectangle contains eight different digits. The digit in each capsule is used for the three columns.

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

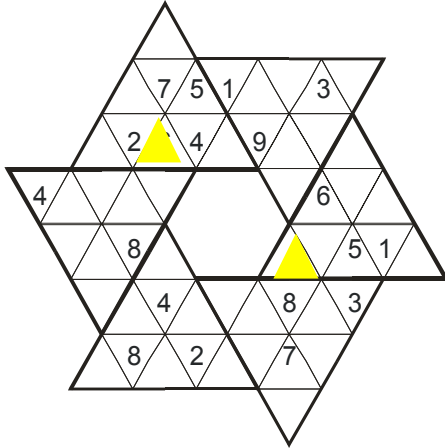
Solution

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

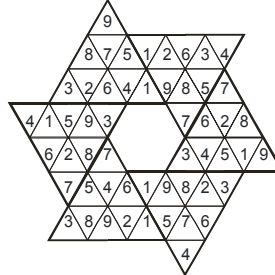


### 5. Star sudocu

Put the numbers 1-9 into the triangular cells so that each of 6 large triangles and every line (of any length, even uncontinuous) contain every digit 1-9 not more than once. Attention: the border lines consist of 8 cells.



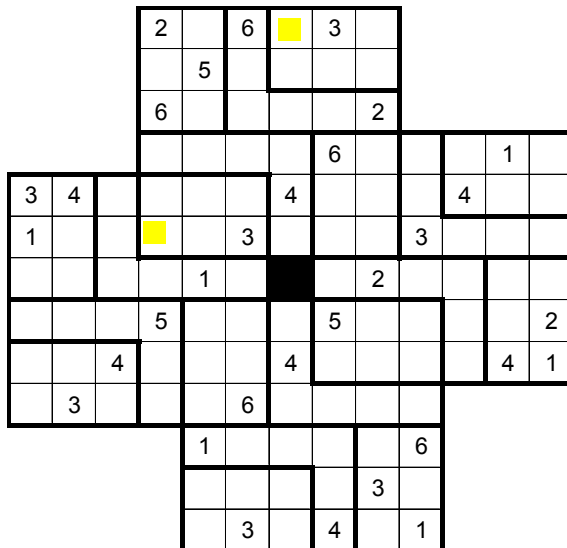
Solution:



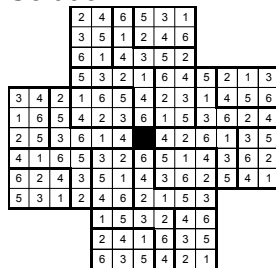
Key: the numbers in the yellow cells from top to bottom. In the example there is 6, 3.

### 6. Sudocu chain

Four sudocu 6x6 form the chain with total regions 2x3. Solve all four sudocu by usual rules.



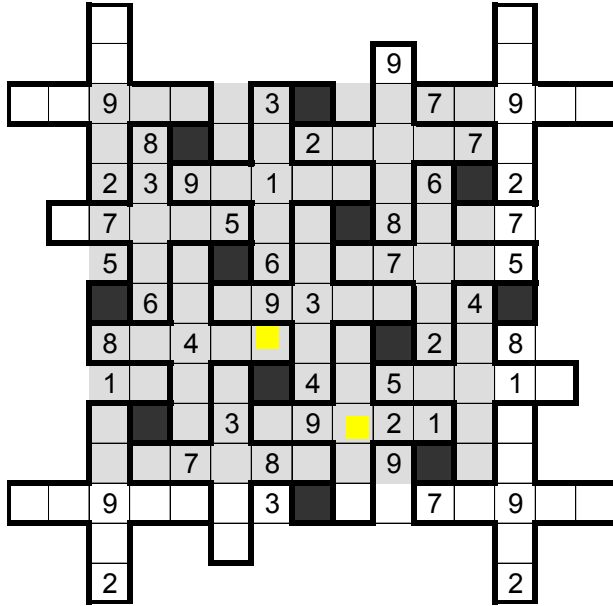
Solution



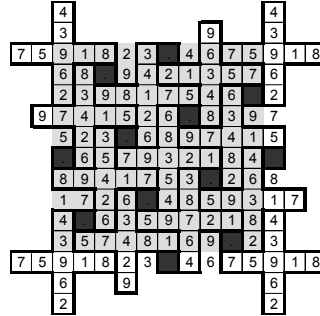
Key: the numbers in the yellow cells from top to bottom. In the example there is 5, 4.

### 7. Cross sudocu

Put the digits 1-9 in the grid so that in the grey square 10x10 all rows and columns contain each digit exactly once. The crosses contain each digit exactly once too. The grid is closed in space: four crosses in the corners of the grid are identical.



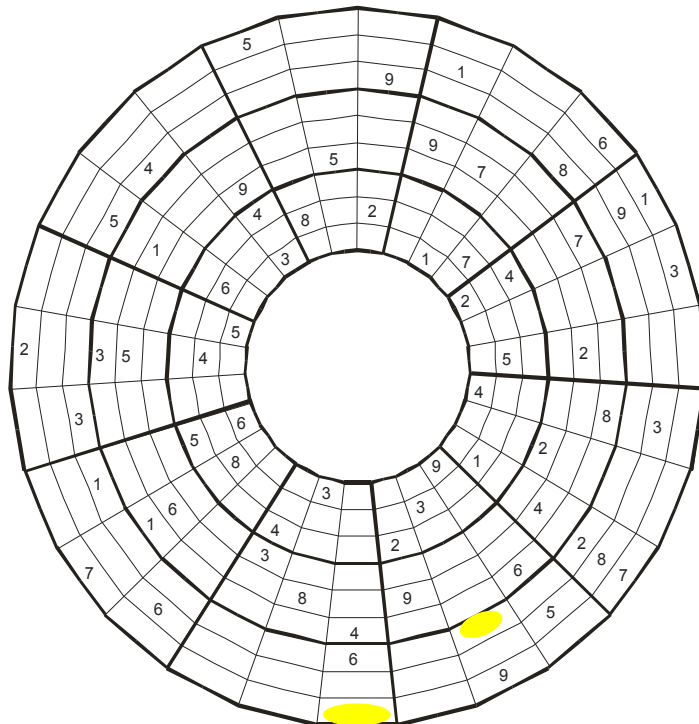
### Solution



Key: the numbers in the yellow cells from top to bottom. In the example there is 7, 7.

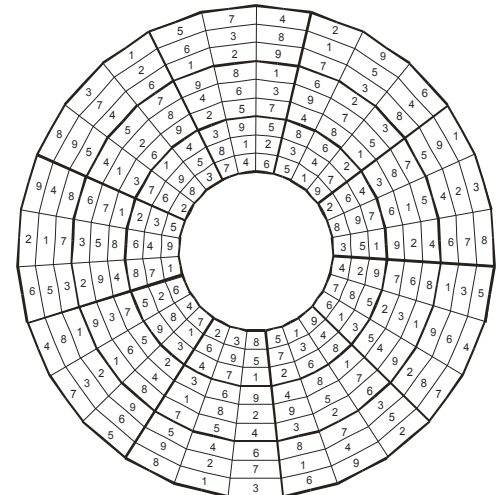
### 8. Ring sudocu

Fill in the grid with digits 1-9. Each three consecutive sectors 3x9 form regular sudocu 9x9.



Key: the numbers in the yellow cells from top to bottom. In the example there is 7, 3.

### Solution



### PART 3. SUDOCU AND OTHER ONES

Before solving sudocu in each puzzle it is necessary to solve another puzzle. You will obtain the points only after solving both puzzles: auxiliary and sudocu.

Time –60 minutes.

The score

- 1 solved puzzle – 30 points
- 2 solved puzzles – 70 points
- 3 solved puzzles – 110 points
- 4 solved puzzles – 150 points
- 5 solved puzzles – 200 points
- 6 solved puzzles – 250 points

#### 1. Sudocu + crossword

Fill in the white cells with given number words, as usual crossword. Then using written digits solve sudocu.


2431 7168  
2637 8491  
4316 8495  
4931 8627  
5876 8629  
6517 8651  
6798 9518

SOLUTION

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

Key: the numbers in the yellow cells from top to bottom. In the example there is 8, 4.

#### 2. Sudocu + battleship

Locate the positions of the 10-ship fleet in the grid by standard rules. The numbers outside the grid show the total number of ship segment. 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. Then solve sudocu by help of given digits and digits in ships.

	1	3	1	1	3	2	3	2	4	
4		1								1
	2									3
		7								4
						1				0
							2			1
								5		4
9				3						1
	7		6	2						3
1		2								3

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

SOLUTION

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

Key: the numbers in the yellow cells from top to bottom. In the example there is 6, 6.

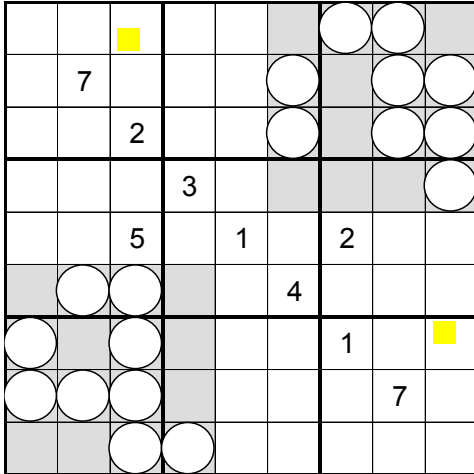
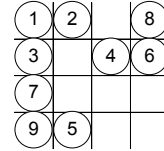
### 3. Sudoku + increase distance

Solve in both grey squares the puzzle "increase distance": Put the digits 1- 9 into the circles so that the dimension between circles increases one after another:

$$|1, 2| < |2, 3| < \dots < |8, 9|$$

Then using written and given digits solve sudoku.

INCREASE DISTANCE



SOLUTION

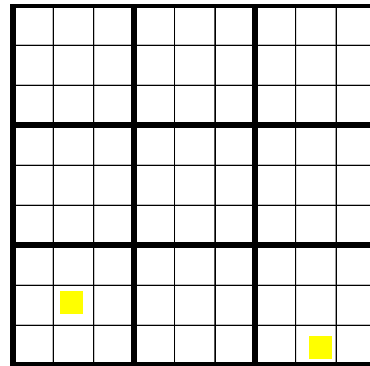
9	4	8	1	6	2	5	3	7
6	7	3	5	4	9	8	1	2
1	5	2	8	3	7	9	4	6
4	1	9	3	2	5	7	6	8
7	3	5	6	1	8	2	9	4
2	8	6	7	9	4	3	5	1
3	9	4	2	7	6	1	8	5
5	2	1	4	8	3	6	7	9
8	6	7	9	5	1	4	2	3

Key: the numbers in the yellow cells from top to bottom. In the example there is 8, 5.

### 4. Sudoku + Japan draw

Firstly solve the puzzle "Japan draw" with usual rules. Don't pay attention to digits in the grid. Then transfer the digits in black points into second grid and solve sudoku.

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



SOLUTION

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

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



bottom. In the example there is 6, 5.

## PART 4. SUDOCU VARIATIONS

Time – 50 minutes.

Maximum score – 30+40+30+40+30+30 =200 points.

### 1. Sudocu transfer

We have erased in the filled sudocu grid the digits in gray cells. Then in every row we transferred four digits to the right one after another. In every column we transferred four digits down one after another. Each digit was erased, or transferred to right, or transferred down. Restore all digits in the grid.

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

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

### SOLUTION

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

Points: 30

Key: the numbers in the yellow cells from top to bottom. In the example there is 4, 1.

### 2. Sudocu without touching

Fill in the grid by main sudocu rules. The same digits can not touch each others even diagonally.

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

### SOLUTION

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

4	
	4

Key: the numbers in the yellow cells from top to bottom. In the example there is 7, 6

### 3. Sudoku distance

Fill in the grid with main sudoku rules. In each row and column you can see the distance between some two digits of this line. The order of these digits is from left to right or from top to bottom. For example, writing “4-7: 8” in row means that in left cell of this row is 4, in right cell of this row is 7.

6 - 5: 4  
4 - 2: 7  
3 - 1: 5  
6 - 4: 6  
4 - 1: 5  
4 - 9: 5  
6 - 1: 7  
5 - 2: 6  
3 - 7: 5


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

### SOLUTION

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

Key: the numbers in the yellow cells from top to bottom. In the example there is 3, 6

### 4. Sudoku bands

You can see six grey twisty bands 7 cells long in the sudoku grid. The 7 digits long numbers are written on these bands. Reconstruct the numbers in the bands and all others digits of the grid.


1973421  
6539378  
7159876  
7234589  
7846574  
8418578

### SOLUTION

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

Key: the numbers in the yellow cells from top to bottom. In the example there is 1, 9



Key: the numbers in the yellow cells from top to bottom. In the example there is 1, 4.