

# Competition puzzles

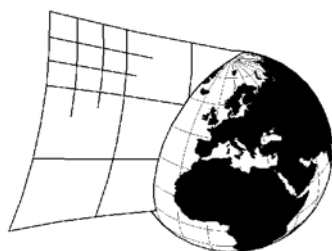
## Sudoku

### Round 2: Extraordinary



**HALAS**  
sudokualogika.cz

**Tournament  
of HALAS  
league**



**SUDOKUCUP.COM**

**Partners:**

**TESAR** consult  
<http://tesar.cz>

**Spedrapid**

### 1) Ordering (56 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

Every cage outlines a two-digit number (read from left to right). A small number in the top left corner of each cage gives the rank of the two-digit number in an ordered list of all two-digit numbers. (From the smallest to the highest.)

<b>1</b> ▷	<b>2</b> ▷	22			5		3	11		1	▷
		15			9				21		▷
			3				13				▷
		6		8	12			23		4	▷
			2		9	4			18		▷
				10		7	20				▷
		19		5	16		2	1			▷
			7			14			17		▷
		6		8				24			▷

### 2) Counting the neighbours (60 p.)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

There is a cross in the cell if the value of the digit (in this cell) is the number of different digits among its diagonal neighbors. If the value of the digit is the number of different digits among all the neighbors (up to 8 in any direction), there is a circle in the cell.

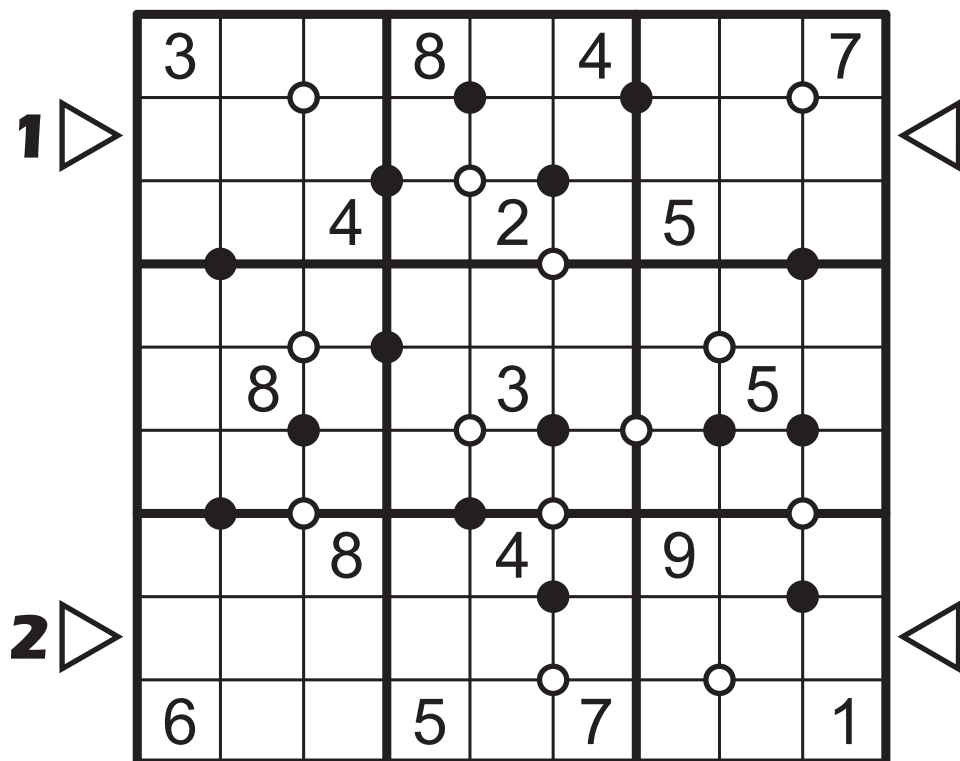
All the cells with given characteristics are indicated.

<b>1</b> ▷	<b>2</b> ▷	×			×		○		○	6	▷
			×		○	○			×		▷
		×				○	○				▷
		○		○	1			×	○		▷
						×					▷
						○	○				▷
			×		○					○	▷
				×	×			○	○	○	▷
		8				○		×		7	▷

### 3) Clock-faces (35 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

Digits around the white clock-faces are ordered by the size in the clockwise direction. Digits around the black clock-faces are ordered by the size in the anticlockwise direction. All the possible clock-faces are indicated.



1 ▷	3		○	8	●	4	●	7	◁
			4	●	○	2	●	5	
	●				○			●	
	8	○	●		3		○	5	
	●	●		○	●	○	●	●	
2 ▷	6		8	○	4	○	9	○	◁
				●			●		
	6		5	○	7	○		1	

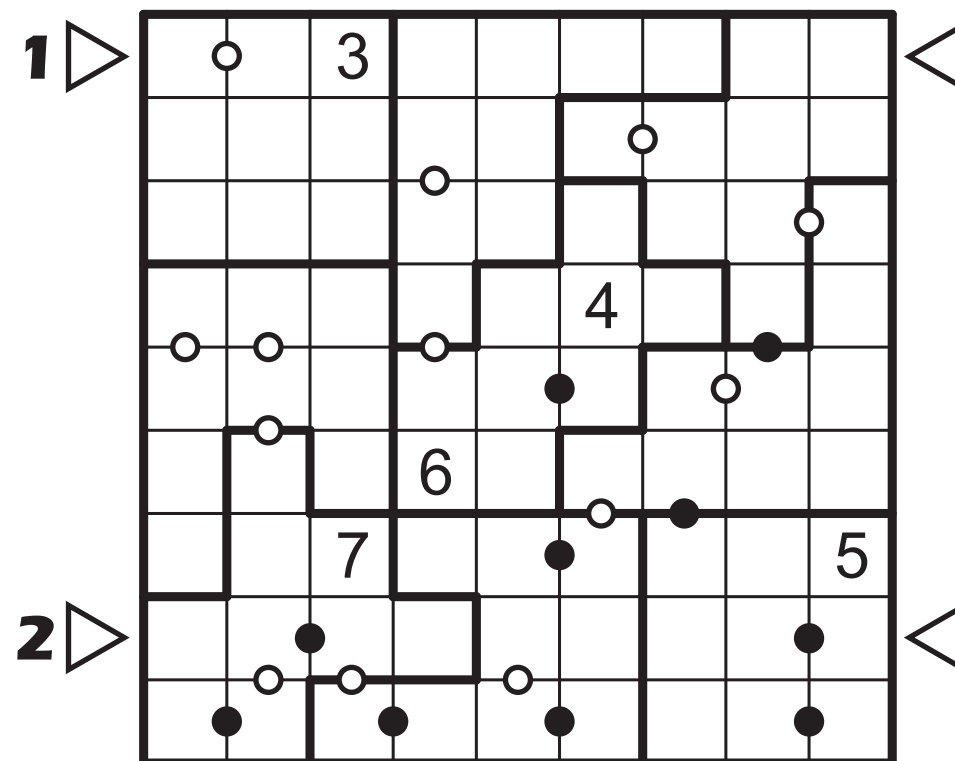
### 4) Irregular dots (33 points)

Fill in the grid so that every row, column, and boldly outlined region contains the digits 1 through 9.

If the difference of two adjacent digits in the Nth line is N, there is a white dot between them. If the sum of two adjacent digits in the Nth line is N, there is a black dot.

The same rule holds for columns.

All the possible dots are given.



1 ▷	○	3							◁
			○			○			
								○	
	○	○		○		4		●	
	○						○		
			6						
		7			○	●		5	
2 ▷								●	◁
	●	○	○		○	●		●	

### 5) Knight and Queen (26 p.)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 7 and letters N and Q.

Letters N represent chess knights and cannot attack each other.

Letters Q represent chess queens and cannot attack each other.

	N					6			
			7		2				
1 ▷	3						5 ▷		
	6	1				4	2		
				5					
		7				3			
	2		6		N		7		1
			3		6				
2 ▷		4					Q		▷

### 6) Increasing snake (24 points)

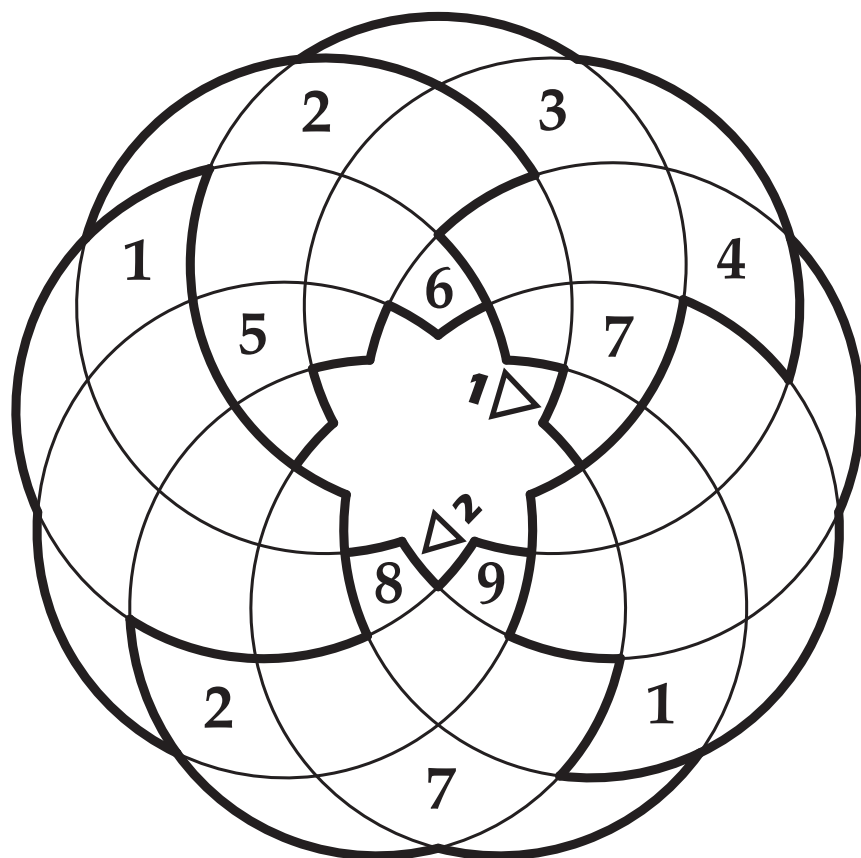
Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

In the solved grid you can draw a snake with a head in the left top. There are four cells occupied by a snake in every 3x3 box and the digits in these cells are in increasing order from a head to tail. (Exact position of the snake is not unique, but there is only one solution of the sudoku.)

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

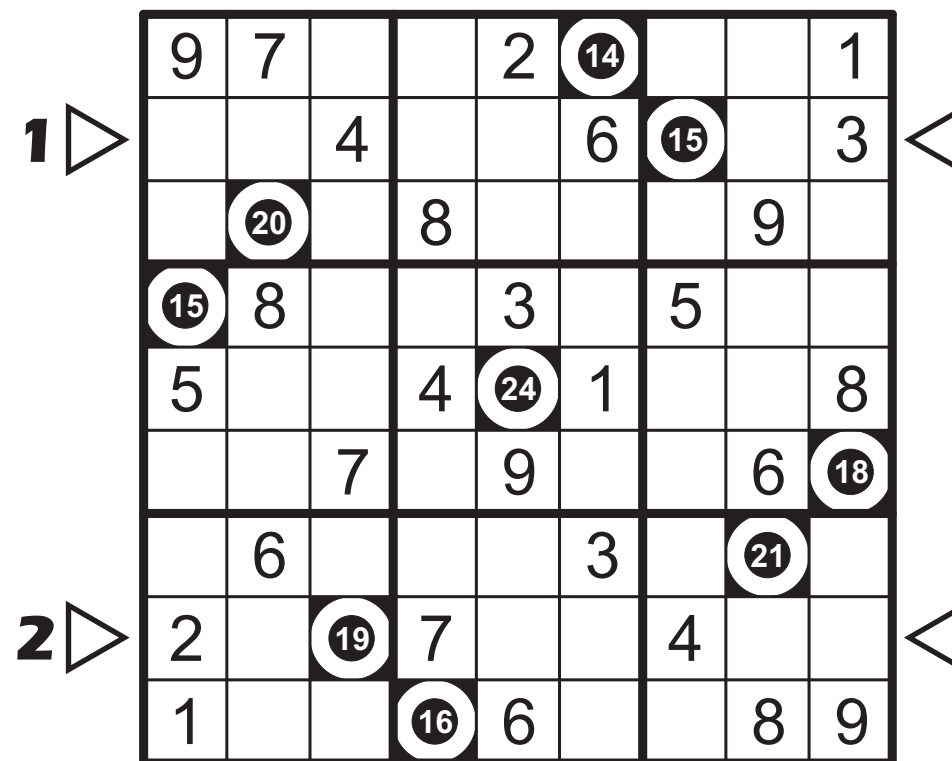
### 7) Primrose (32 points)

Fill in each empty cell with a digit from 1 to 9 so that each boldly outlined region contain all of them. Moreover no digit can be repeated along the inner circumference of each circle.



### 8) Blackout sums (41 points)

Fill in each empty cell with a digit from 1 to 9 so that no digits can be repeated in a row, column or outlined box 3x3 cells. The black cell is empty. Moreover the given number in it is the total of three digits —those digits that are missing on that position in the corresponding row / column / box to complete 1 to 9 set.



### 9) Four winds (55 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

1, 2, 3 or 4 straight lines go from each circle, the number in the circle gives their total length. These lines fill all cells without a circle and do not touch or cross themselves. No digit can be repeated on the lines starting from the same circle.

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

### 10) Minesweeper (39 points)


➔

1	2	M	3
M	3	1	2
3	M	2	1
2	1	3	M

**1-2-3-M**

1 ▷									▷
2 ▷									▷

**0-1-2-3-4-M-M**

### 11) Elimination (42 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

The digit from a cell with an arrow doesn't appear in the cells pointed by the arrow.

<b>1</b> ▷		3	↘			9	↘	↘	↘	◁
	6		↘		3	2				↘
	↘	↘	↘	7	1	↘	↖↘			↘
		8		↘	↖↘	↘	4	2		
		1	3	↘	↖↘	↘	8	7		
	5	4	↘	↖↘	↘		3			
	↘		↖↘	↘	4	5	↘	↘	↘	
	↘			9	8		↘			4
<b>2</b> ▷	↘	↘	↘	6			↘	9		◁

### 12) Inside skyscrapers (46 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

All digits represent skyscrapers of nine different heights. Moreover the digits in the cells with arrows give the count of visible skyscrapers in the corresponding direction. (Higher skyscrapers hide all smaller ones behind them.)

		4				↖↘		↖	
	7				9		8		
1				↖↘					
<b>1</b> ▷					5				◁
	↖↘			6			↖↘		
			3						
				↖↘					3
<b>2</b> ▷		6	7				5		◁
	↖		↖↘				4		

### 13) Choose the givens (28 points)

Fill in the grid so that every row, column, and 3x3 box contains the digits 1 through 9.

You should choose the givens from a grid on the right. Numbers around it give the length of groups of consecutive digits you should copy from each row / column. The lengths are given in a correct order. Two groups of copied digits are separated by at least one blank cell.

<b>1</b> ▷									◁
<b>2</b> ▷									◁

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



### 14) Transfer (32 points)

We have erased in the filled sudoku grid the digits in grey cells. Then four digits in every row are transferred to the right one after another. Four digits in every column are transferred down one after another. Restore all digits in the grid.

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

**1** ▷

7 2 4 1

7 3 2 6

6 1 2 4

8 5 9 1

1 4 7 6

**2** ▷

6 5 7 2

7 1 2 4

1 2 7 9

4 2 9 8

