

### 1. Rotational Sudoku (40+78 points)

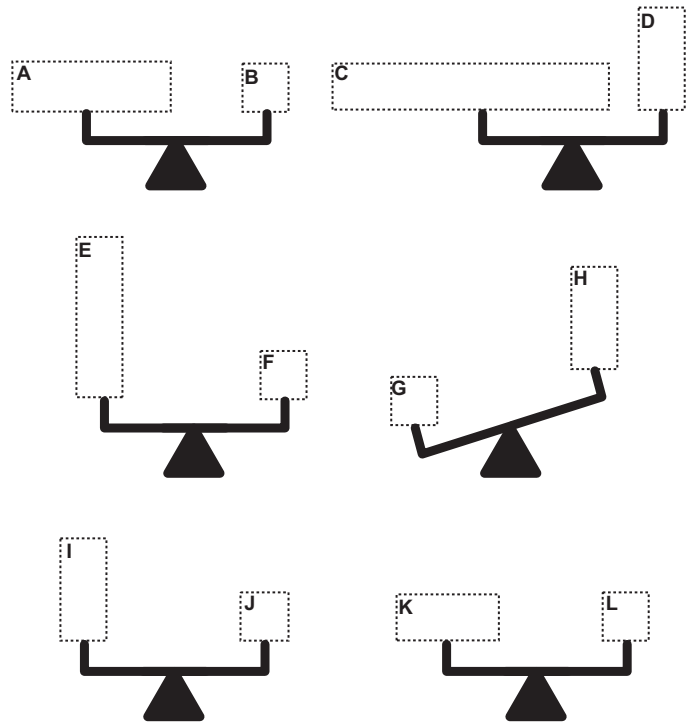
Place digits 1-9 in the diagram and divide the grid into some regions, where the given circles represent the point of symmetry. No digit is repeated within any row/column/region. Symmetrical pairs of cells in one region should always contain consecutive digits. All regions should contain a circle and all circles are given. No cell may remain empty.

*Answer format: Write the content of the marked row/column. The answer for the example would be: 627981*

### 2. Scale Sudoku (10+60 points)

Fill the grid with digits from 1 to 6 / 1 to 9 so that each digit appears exactly once in every row, column and 2x3 outlined region. Some marked regions are scaled and the measurements are given next to the grid. The weight of the frames and the pans are ignored.

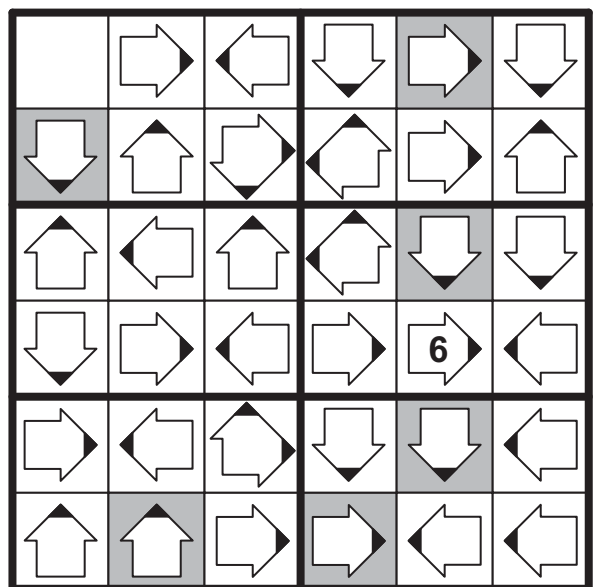
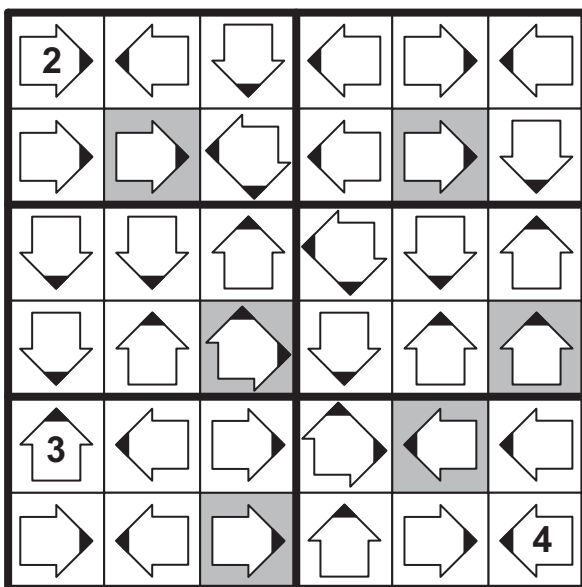
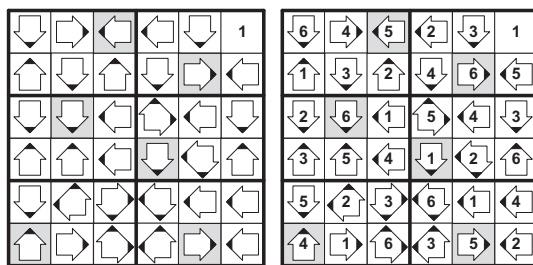
9			5	4	2			3
K				D			5	4
	J	5					E	
5								1
A				9				G
8		C						7
		L				3		H
4	8	I		B				
7			8	3	5		F	6



Answer format: Write the content of the marked row/column. The answer for the example would be: 326415

### 3. Pusula (36+48 points)

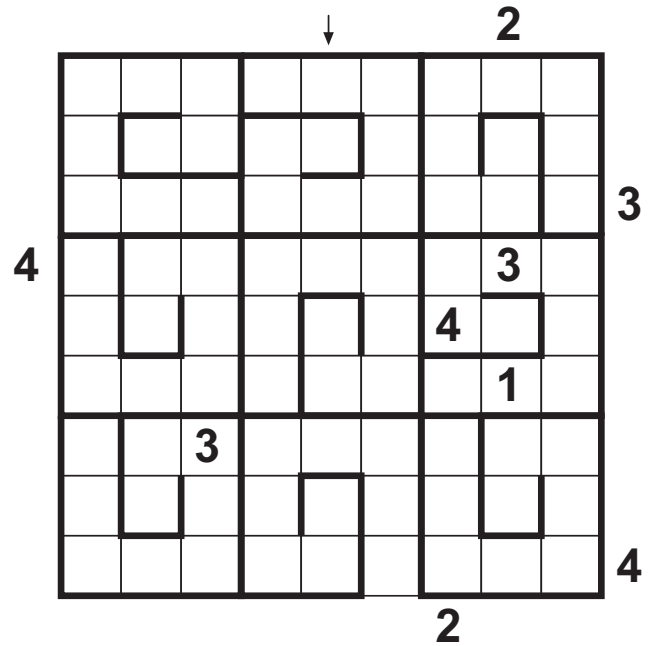
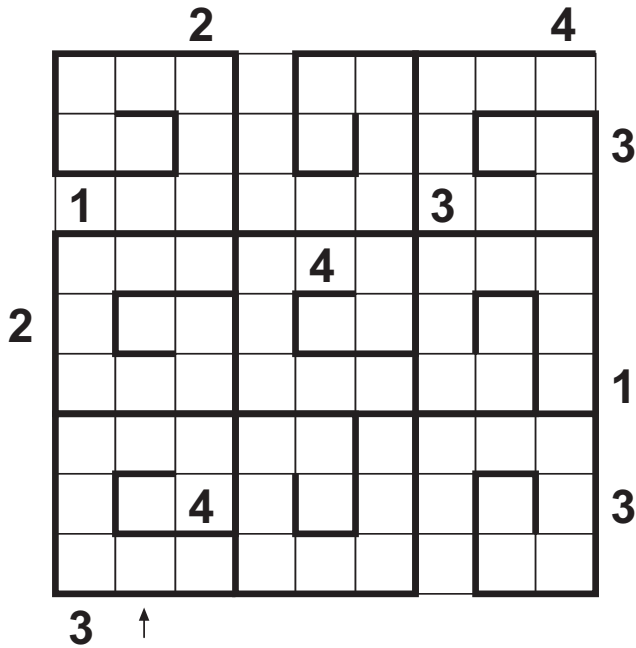
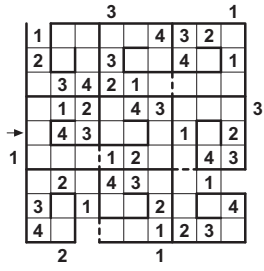
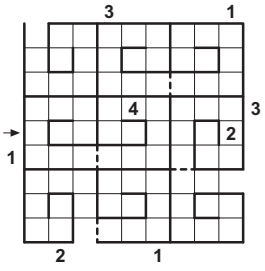
Fill the grid with digits from 1 to 6 so that each digit appears exactly once in every row, column and 2x3 outlined region. The arrow of an odd digit points to the bigger even neighbour of the cell. The arrow of an even digit points to the bigger odd neighbour of the cell. All possible arrows are given.



Answer format: Write the content of the coloured cells, from top left to bottom right, row by row. The answer for the example would be: 566145

#### 4. Snail Sudoku (44+44 points)

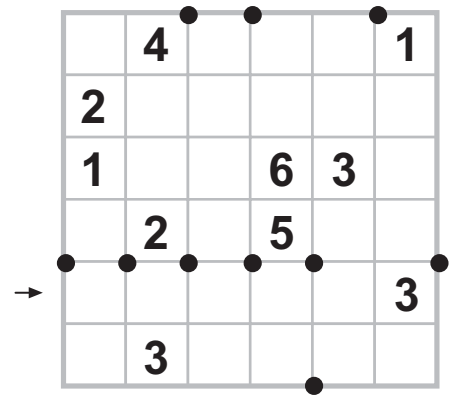
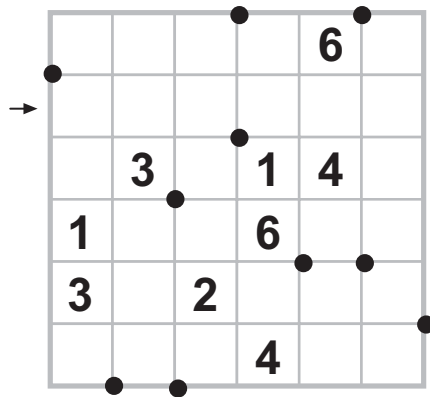
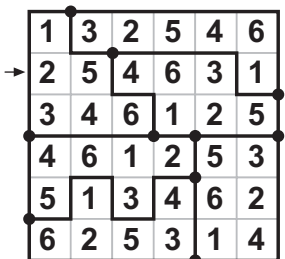
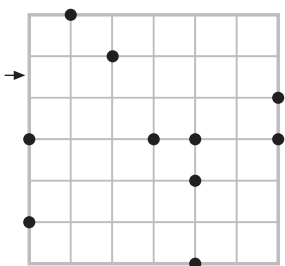
Fill the grid with digits 1~4, so that each digit appears exactly once in every row, column and every 3x3 spiral. Digits should be placed orderly in the spirals, from the entrance to the center. The numbers outside the grid indicate the first seen number from that direction.



*Answer format:* Write the content of the marked row/column. Use 0 for empty cells. The answer for the example would be: 043000102

#### 5. Tripod Sudoku (64+72 points)

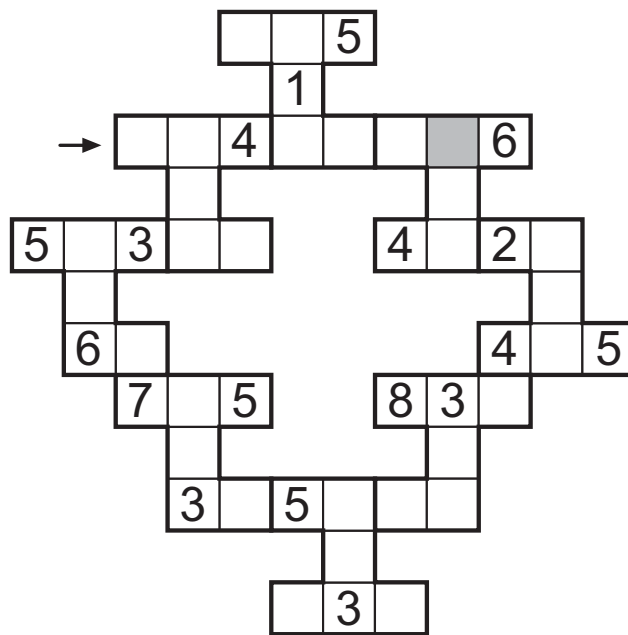
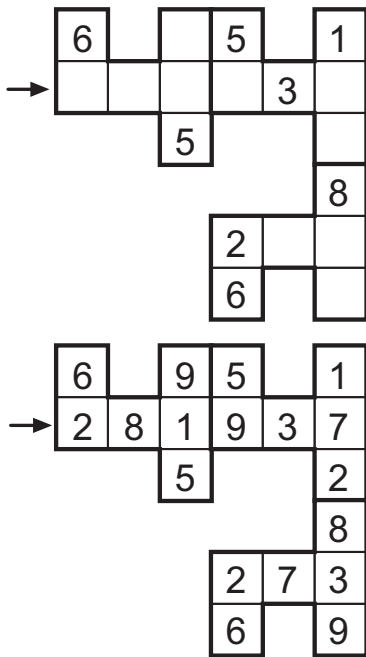
Fill the grid with digits 1 - 6 and divide the grid into some regions, so that each digit appears exactly once in every row, column and region. All points where three regions meet are given. There are no points where four regions meet.



*Answer format:* Write the content of the marked row/column. The answer for the example would be: 254631

## 6. Štyri Sudoku (24 points)

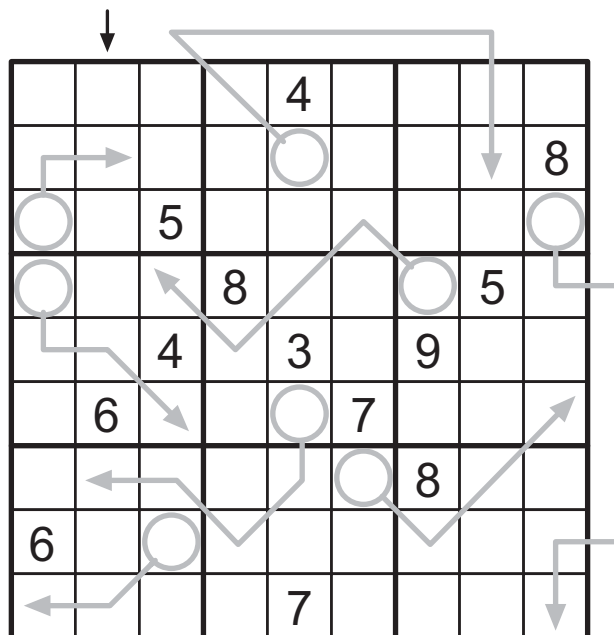
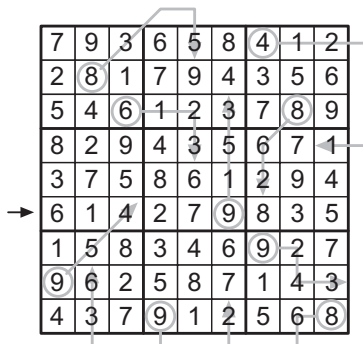
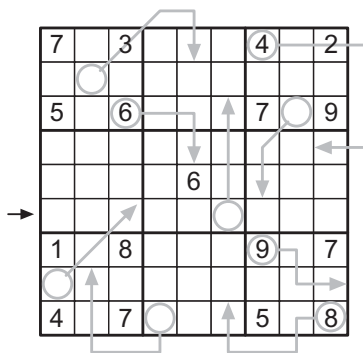
Fill the grid with digits 1-9 so that no digit is repeated within any row/column/region. The difference between two edge-to-edge neighbouring cells is minimum 4. There is no digit on the grey cell.



*Answer format:* Write the content of the marked row/column. The answer for the example would be: 281937

## 7. Arrow Sudoku (96 points)

Fill the grid with digits from 1 to 9 so that each digit appears exactly once in every row, column and 3x3 outlined region. The digit in a circle is the sum of the digits which are marked with its arrow.



*Answer format:* Write the content of the marked row/column. The answer for the example would be: 614279835

### 8. Slovak 1 (84 points)

Put the given words in the grid in eight optional directions so that every row, column and 3x3 box contains all the letters exactly once.

NŠINUTN, ŠNAŠUI, IŠAYTU,  
YILRŠA, UTIRLŠ, AUYSIL

	Š			R			N
→		Y				T	
	A			I			R

N	Y	A	U	T	I	R	L	Š	
L	Š	U	A	R	Y	I	N	T	
R	T	I	Š	N	L	A	U	Y	
I	L	T	N	A	Š	U	Y	R	
→	Š	N	Y	L	U	R	T	A	I
A	U	R	I	Y	T	L	S	N	
Y	I	L	R	Š	A	N	T	U	
T	A	N	Y	I	U	Š	R	L	
U	R	Š	T	L	N	Y	I	A	

SLOVAKIA, SUDOKU, ALSO,  
AVOID, LOUD, LOAD

	V			O		L		
U		K					O	
				A				
		S				A		
				K				
	I					D		L
		A		D			S	

*Answer format:* Write the content of the marked row/column. The answer for the example would be: ŠNYLURTAI

### 9. Slovak 2 (72 points)

Place the given blocks in the grid so that every row, every column and every 3x3 box contains the digits 1 through 9. The blocks cannot be rotated and mirrored.

			8					
	2						8	
							4	

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

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

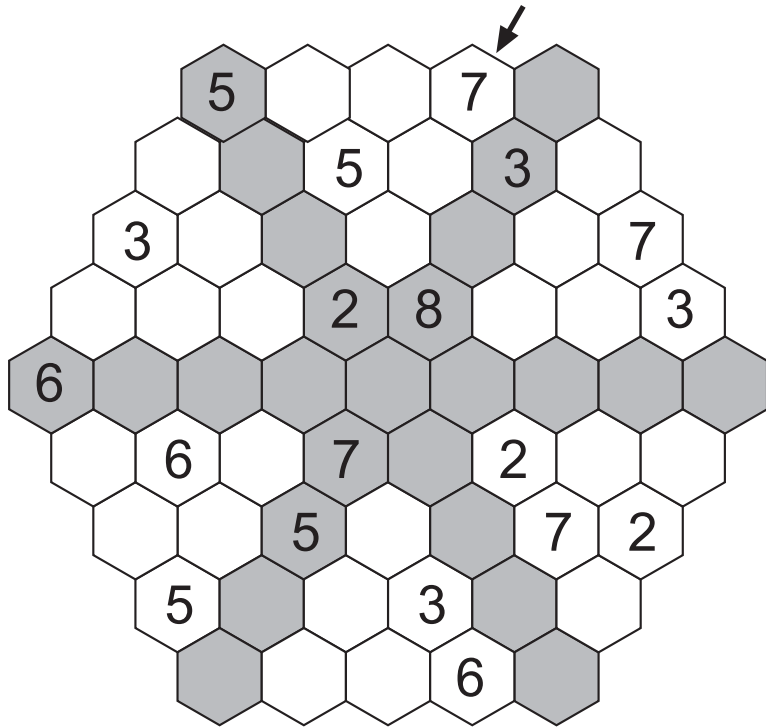
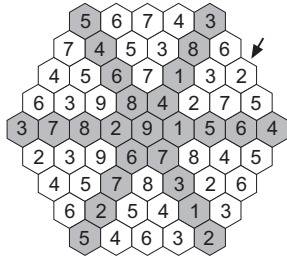
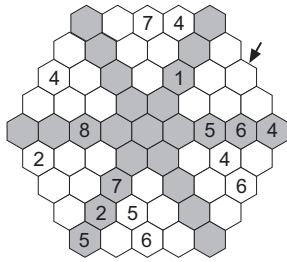
8		7	3		9	2		7	9		2	6		3
4		2	1		5	6		4	7		5	9		7
4			1			8			4			8		
8	1	3	4	7	2	2	9	3	6	2	8	1	5	9
						6			7					3

														9
1					3									
					5									
7														6

*Answer format:* Write the content of the marked row/column. The answer for the example would be: 384695721

### 10. Slovak 3 (54 points)

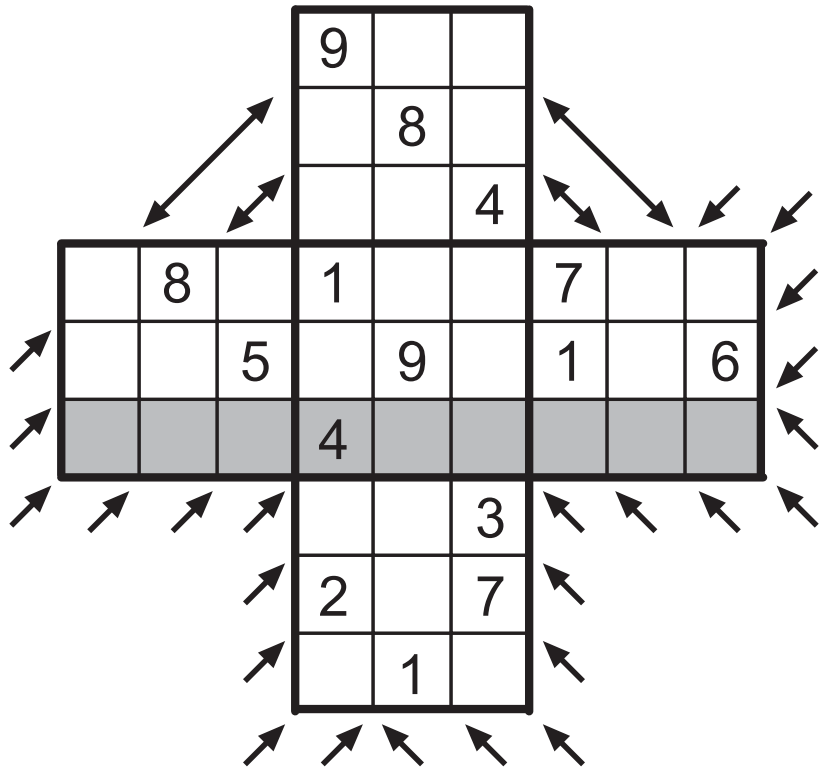
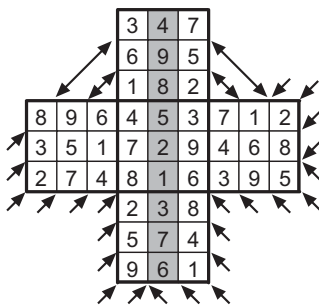
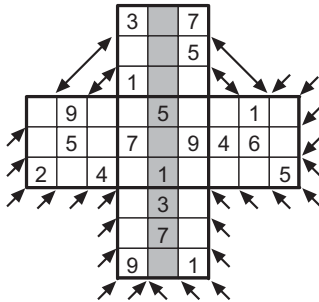
Fill the grid with digits 1-9 so that every grey line contains all digits 1-9 and no digit is repeated within any line. All lines should be formed of consecutive digits.



*Answer format:* Write the content of the marked row. The answer for the example would be: 2758346

### 11. Slovak 4 (48 points)

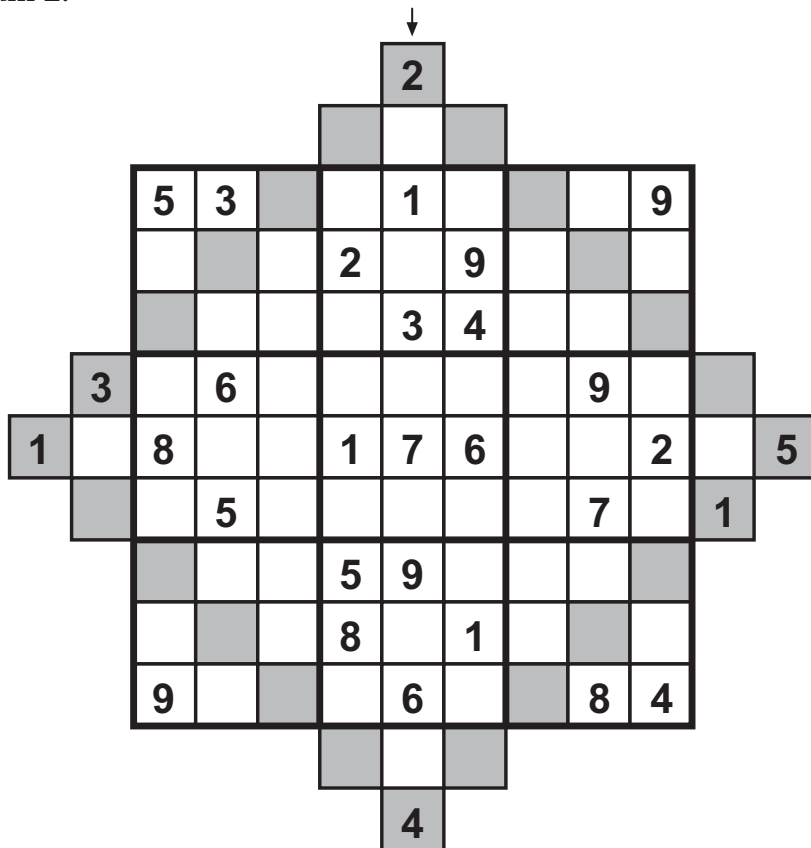
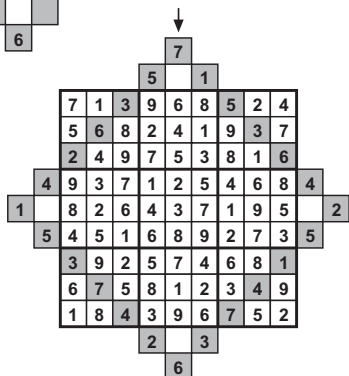
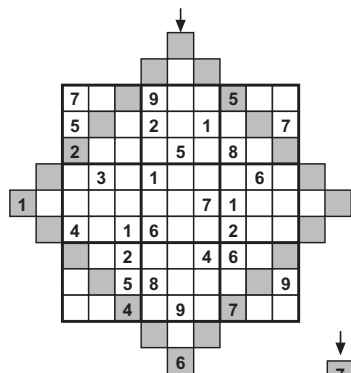
Fill the grid with digits 1-9 so that no digit is repeated within any row, column, 3x3 box and arrowed directions.



*Answer format:* Write the content of the marked row/column. The answer for the example would be: 498521376

### 12. Slovak 5 (84 points)

Fill in the grid so that every row, every column and every 3x3 box contains all digits 1 through 9. Fill in the grey square so that every side contains all digits 1 through 7 and the absolute difference between two digits in neighbouring grey cells is minimum 2.

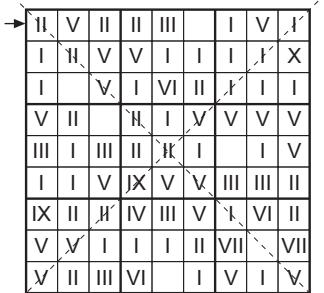


*Answer format:* Write the content of the marked row/column. The answer for the example would be: 76452387196

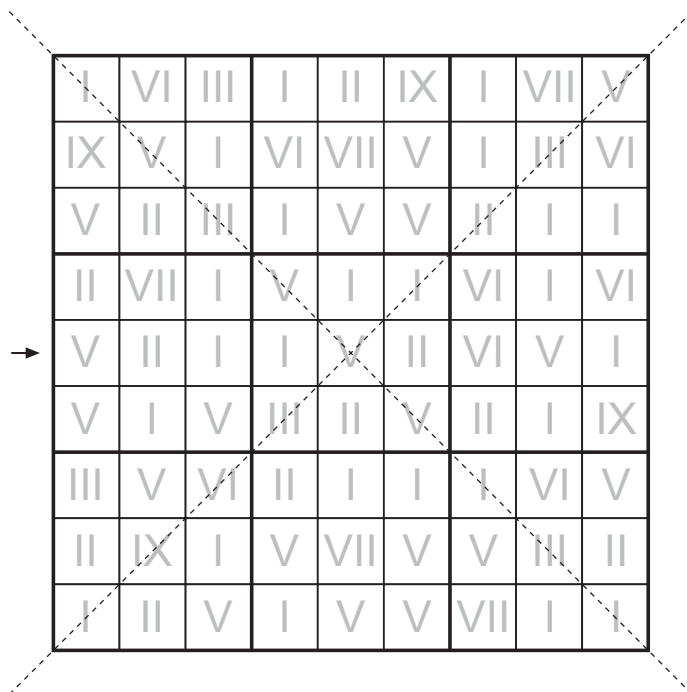
### 13. Slovak 6 (74 points)

Fill in the grid so that every row, column, diagonal and every 3x3 box contains all roman digits I through IX. Given clues are not complete digits and may become any digit with added lines.

1	2	3	4	5	6	7	8	9
I	II	III	IV	V	VI	VII	VIII	IX



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



*Answer format:* Write the content of the marked row/column. The answer for the example would be: 247839651

### 14. Mathdoku (72 points)

Fill in the grid so that every row, column and every 3x3 box contains all digits 1-9. In some of the 3x3 boxes there are subsidiary numbers between two cells. These numbers are the results of binary operations (addition, subtraction, multiplication, division) between the two cells.

	48	
	3	14
		6

8	48	6	5
4	2	3	14
3	17	6	17

↓

	8						
		15		3	24		9
8				1		5	17
	21						
			13				
3		35				13	
							2
	4					18	
				2			
	16			9		5	
		24					14
	10		63	7			
						12	
							13

*Answer format: Write the content of the marked row/column.*

### 15. Pairs (88 points)

Fill in the grid so that every row, column and every 3x3 box contains all digits 1-9. There are pairs of cells diagonally connected and their diagonal distance (distance between the centers of the squares) corresponds to their values. It stands for each pair that one digit is stated in a grey cell and the other one is in a white cell. Every grey cell is exactly in one of the pairs. The other digits don't have the same feature. Every digit except 9 is in one of the pairs at least.

2				4
	3			<del>1</del>
		2	1	<del>2</del>
		1		
4	<del>1</del>	<del>2</del>		3

Example of the pairs 2 and 4:  
 digits 2 in the diagonal: 2 cells distance  
 digits 4 in the diagonal: 4 cells distance

↓

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

*Answer format: Write the content of the marked row/column.*