



WPF  
SUDOKU/PUZZLE  
**GRAND PRIX**  
2015

# WPF PUZZLE GP 2015 COMPETITION BOOKLET

## ROUND 2

Puzzle authors:  
Slovakia

Matúš Demiger  
Matej Uher

Organised by



WORLD PUZZLE FEDERATION



**Submission Page:** <http://www.gp.worldpuzzle.org/content/puzzle-gp>

**Points:**

1.	<b>Domino Search</b>	12
2.	<b>Domino Search</b>	14
3.	<b>Domino Search</b>	13
4.	<b>Domino Search</b>	13
5.	<b>Lakes</b>	18
6.	<b>Lakes</b>	7
7.	<b>Lakes</b>	21
8.	<b>Lakes</b>	49
9.	<b>Slitherlink</b>	6
10.	<b>Slitherlink</b>	47
11.	<b>Slitherlink</b>	34
12.	<b>Slitherlink</b>	21
13.	<b>Magic Snail</b>	21
14.	<b>Magic Snail</b>	32
15.	<b>Magic Snail</b>	20
16.	<b>Magic Snail</b>	36
17.	<b>LITS</b>	14
18.	<b>LITS</b>	22
19.	<b>LITS</b>	14
20.	<b>LITS</b>	20
21.	<b>Slovak Sums</b>	26
22.	<b>Slovak Sums</b>	36
23.	<b>Slovak Sums</b>	37
24.	<b>Slovak Sums</b>	67
<b>TOTAL:</b>		600

**General Notes:** No special notes for this round.



## 1-2. Domino Search [Matej Uher, Matúš Demiger] (12, 14 points)

Divide the grid into a full set of dominoes labeled from 0 to 6 (0 to 3 in the example). Each domino should be used exactly once. The orientation of the digits do not matter. Empty cells are not part of a domino. A full set of dominoes will be provided for your convenience.

**Answer:** For each designated row, enter all the digits in dominoes that are *only* in that row (that is, the horizontal dominoes), from left to right. If there are no horizontal dominoes in the row, enter a single digit '0'.

**Example Answer:** 00, 11

	2	2	1	
0	0	3	2	0
3	2	3	1	1
0	1	1	3	2
3				0

**1a** →

1	4	5	4	1	1	1	2
3	4	0		6	3	4	5
2	3		0		1	6	0
5	5	1	1		2	2	3
5	6	6		5	4	6	3
2	6				3	4	3
2	0	0	0	0	4	0	2
6	1	3	5	2	4	5	6

**1b** →

0	0												
0	1	1	1										
0	2	1	2	2	2								
0	3	1	3	2	3	3	3						
0	4	1	4	2	4	3	4	4	4				
0	5	1	5	2	5	3	5	4	5	5	5		
0	6	1	6	2	6	3	6	4	6	5	6	6	6

**2a** →

1	6	2	2	3	1	2	1
1	4	0			4	0	0
1	3		5	1	0	5	0
6	5		3	5		4	6
4	1	4	2	6		6	6
5	4	0			6	2	6
2	2	2	1	3	5	5	3
3	3	4	4	0	5	0	3

**2b** →

0	0												
0	1	1	1										
0	2	1	2	2	2								
0	3	1	3	2	3	3	3						
0	4	1	4	2	4	3	4	4	4				
0	5	1	5	2	5	3	5	4	5	5	5		
0	6	1	6	2	6	3	6	4	6	5	6	6	6

**3-4. Domino Search [Matej Uher, Matúš Demiger] (13, 13 points)**

Divide the grid into a full set of dominoes labeled from 0 to 6 (0 to 3 in the example). Each domino should be used exactly once. The orientation of the digits do not matter. Empty cells are not part of a domino. A full set of dominoes will be provided for your convenience.

**Answer:** For each designated row, enter all the digits in dominoes that are *only* in that row (that is, the horizontal dominoes), from left to right. If there are no horizontal dominoes in the row, enter a single digit '0'.

**Example Answer:** 00, 11

	2	2	1	
0	0	3	2	0
3	2	3	1	1
0	1	1	3	2
3				0

3a →

2	0	1	5	2	0	1	5
4	5	4	4		0	1	6
0	6	5			0	1	4
5	6	4	1		6	3	3
2	2	3	3		2	3	5
3	4	3			6	4	
6	6	4	2	0	3	6	0
1	5	5	2	0	1	1	2

0	0
---	---

0	1	1	1
---	---	---	---

0	2	1	2	2	2
---	---	---	---	---	---

0	3	1	3	2	3	3	3
---	---	---	---	---	---	---	---

0	4	1	4	2	4	3	4	4	4
---	---	---	---	---	---	---	---	---	---

0	5	1	5	2	5	3	5	4	5	5	5
---	---	---	---	---	---	---	---	---	---	---	---

0	6	1	6	2	6	3	6	4	6	5	6	6	6
---	---	---	---	---	---	---	---	---	---	---	---	---	---

4a →

3	3	4	2	2	5	4	6
2	6	6			2	6	1
2	4		1	1	3	5	0
5	3	1			0	2	0
5	4	6	0	0		2	6
1	3	0			1	3	6
1	0	5	3	3	2	5	1
4	4	5	5	4	4	0	6

0	0
---	---

0	1	1	1
---	---	---	---

0	2	1	2	2	2
---	---	---	---	---	---

0	3	1	3	2	3	3	3
---	---	---	---	---	---	---	---

0	4	1	4	2	4	3	4	4	4
---	---	---	---	---	---	---	---	---	---

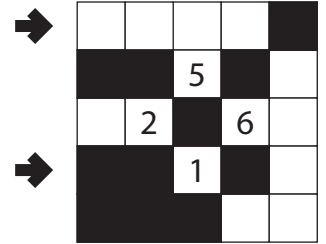
0	5	1	5	2	5	3	5	4	5	5	5
---	---	---	---	---	---	---	---	---	---	---	---

0	6	1	6	2	6	3	6	4	6	5	6	6	6
---	---	---	---	---	---	---	---	---	---	---	---	---	---

4b →

**5-6. Lakes [Matej Uher, Matúš Demiger] (18, 7 points)**

Shade some cells black (leaving the other cells white) so that the grid is divided into black and white regions. (Cells of the same color are considered in the same region if they are adjacent horizontally or vertically.) Each given number must be in a white region that has the same area in cells as that number. Each white region must have exactly one given number. (There is no constraint on the number, size, or shape of black regions.)



**Answer:** For each designated row, enter the lengths (number of cells) of the white (*not* black) segments from left to right. If there are no white cells in the row, enter a single digit '0'. Use only the last digit for two-digit numbers; e.g., use '0' for an white segment of length 10.

**Example Answer:** 4, 11

5a →

3					3		
			2				
	3					3	
				3			
		2					3
3					1		
			3				
	3					3	

5b →

6a →

			4				
						5	
		2					
3				1			
			6				4
					3		
	6						
				4			

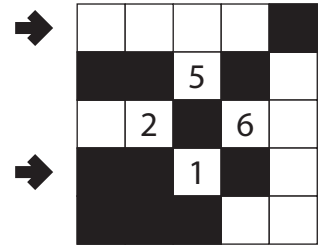
6b →

**7-8. Lakes [Matúš Demiger, Matej Uher] (21, 49 points)**

Shade some cells black (leaving the other cells white) so that the grid is divided into black and white regions. (Cells of the same color are considered in the same region if they are adjacent horizontally or vertically.) Each given number must be in a white region that has the same area in cells as that number. Each white region must have exactly one given number. (There is no constraint on the number, size, or shape of black regions.)

**Answer:** For each designated row, enter the lengths (number of cells) of the white (*not* black) segments from left to right. If there are no white cells in the row, enter a single digit '0'. Use only the last digit for two-digit numbers; e.g., use '0' for an white segment of length 10.

**Example Answer:** 4, 11



7a →

	2			2			
							3
			3				
2					5		
		4					
				2			5
4							
			3			2	

7b →

8a →

		6					
						9	
	14						
					22		

8b →



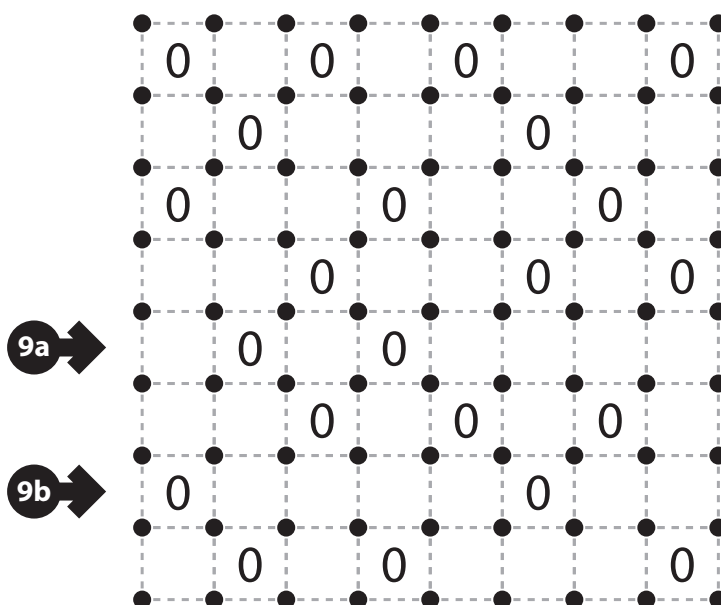
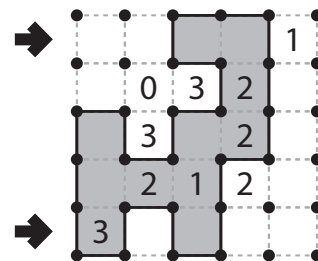
## 9-10. Slitherlink [Matúš Demiger, Matej Uher] (6, 47 points)

Draw a single, non-intersecting loop that only consists of horizontal and vertical segments between the dots. A number inside a cell indicates how many of the edges of that cell are part of the loop.

You may only draw on the grid, as indicated by the dotted lines.

**Answer:** For each designated row, enter the lengths (number of cells) of each segment of cells *inside* the loop, from left to right. Use only the last digit for two digit numbers; e.g., use '0' for a segment of length 10. If there are no cells inside the loop for a row, enter the single digit '0'.

**Example Answer:** 2, 11



The loop must have at least one edge.

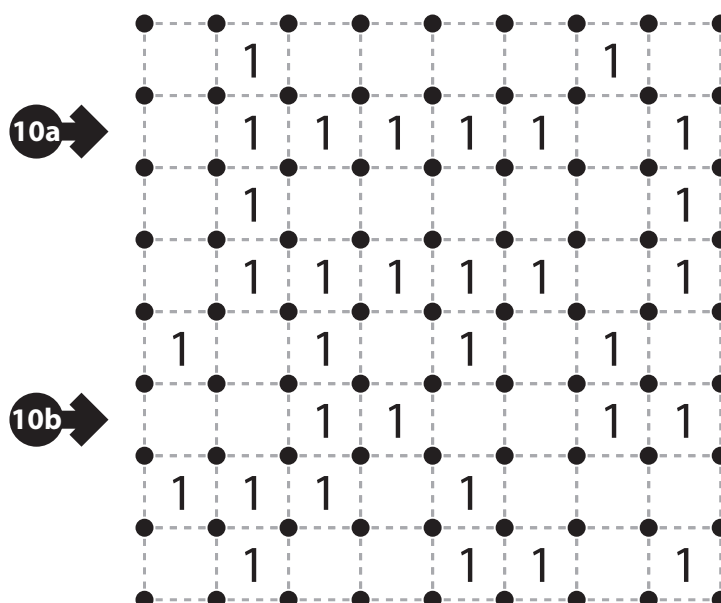


Figure 12 consists of two 8x8 grids, labeled 12a and 12b, showing the distribution of the number 3. Each grid has a dashed line grid and a solid line grid. The number 3 is placed in various cells of the dashed grid.

**Grid 12a:** The number 3 is placed in the following cells (row, column): (1, 2), (1, 5), (1, 6), (1, 8), (2, 4), (2, 8), (3, 5), (3, 6), (4, 7), (5, 3), (5, 5), (6, 2), (6, 5), (7, 3), (7, 8), (8, 2), (8, 4), (8, 6), (8, 7), (8, 8).

**Grid 12b:** The number 3 is placed in the following cells (row, column): (1, 2), (1, 4), (1, 6), (1, 7), (1, 8), (2, 3), (2, 5), (2, 8), (3, 3), (3, 5), (3, 8), (4, 3), (4, 5), (4, 8), (5, 2), (5, 4), (5, 6), (5, 7), (5, 8), (6, 2), (6, 4), (6, 6), (6, 7), (6, 8), (7, 2), (7, 4), (7, 6), (7, 7), (7, 8), (8, 2), (8, 4), (8, 6), (8, 7), (8, 8)).



**14b** 

**15-16. Magic Snail [Matej Uher, Matúš Demiger] (20, 36 points)**

Place a digit from 1 to 4 (1 to 3 in the example) into some cells so that each digit appears exactly once in each row and column. Cells may remain empty. A cell cannot contain more than one digit. Along the path of the “snail” indicated by the bold lines (starting from the outside and going towards the center), the digits must start with 1 and be in consecutive ascending order, starting over from the highest digit to the lowest (that is, 1-2-3-4-1-2-3-4-1-2...). Some numbers and empty cells (marked with ‘x’) may be already filled in the grid.

→

1	2	x		3
3		1	2	
2			3	1
	3	2	1	
	1	3		2

→

**Answer:** For each designated row, enter its contents, using ‘x’ for a cell without a digit.

**Example Answer:** 12xx3, 2xx31

15a →

x				x			
	3					2	
		3					
				1			
	4					1	
			x				x

15b →

16a →

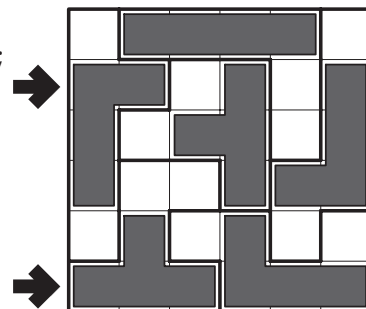
x				3			
	x		1				
		x					
			x				
				x			
					x		
				4		x	
			2				x

16b →

**17-18. LITS [Matúš Demiger, Matúš Demiger] (14, 22 points)**

Shade exactly four connected cells in each outlined region to form a tetromino, so that the following conditions are true: (1) All tetrominoes are connected into one large shape; (2) No 2×2 group of cells can be entirely shaded black; (3) When two tetrominoes share an edge, they must not be of the same shape, regardless of rotations or reflections. (These rules ensure that every tetromino can be labelled "L", "I", "T", or "S", based on its shape. However, it is not true that all four shapes have to be present in the grid; for example, it is possible for your solution to not have any "I" shapes.)

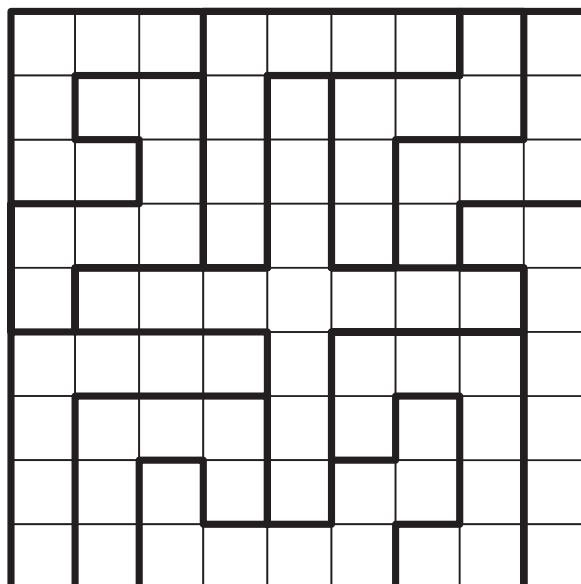
Cells with an 'x' (if given) are not part of any region.



**Answer:** For each designated row, enter the contents of each cell, from left to right. For each cell, its contents are the letter of the tetromino occupying that cell, or the letter 'x' if the cell is empty.

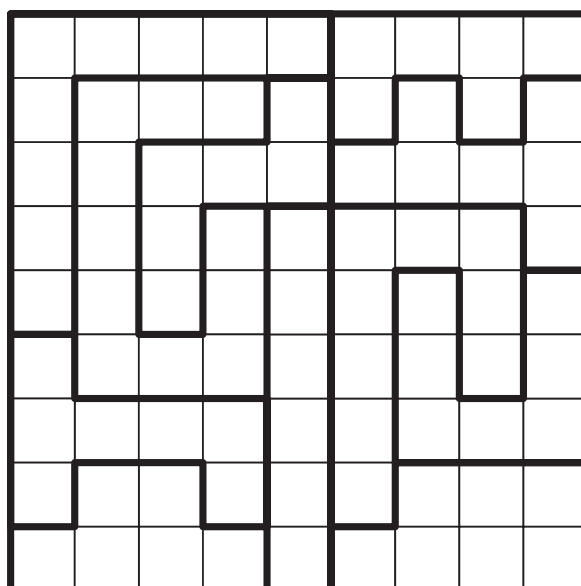
**Example Answer:** LLXTXL, TTTLLL

17a →



17b →

18a →

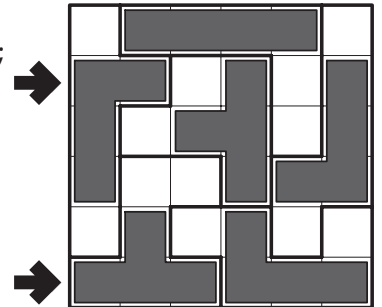


18b →

**19-20. LITS [Matej Uher, Matej Uher] (14, 20 points)**

Shade exactly four connected cells in each outlined region to form a tetromino, so that the following conditions are true: (1) All tetrominoes are connected into one large shape; (2) No 2×2 group of cells can be entirely shaded black; (3) When two tetrominoes share an edge, they must not be of the same shape, regardless of rotations or reflections. (These rules ensure that every tetromino can be labelled "L", "I", "T", or "S", based on its shape. However, it is not true that all four shapes have to be present in the grid; for example, it is possible for your solution to not have any "I" shapes.)

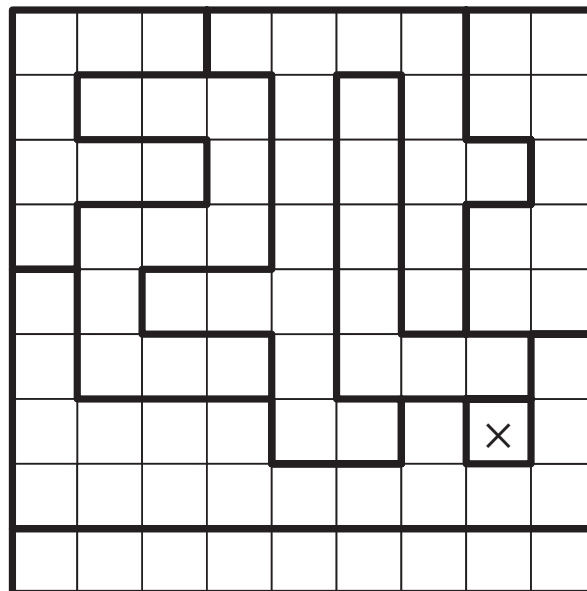
Cells with an 'X' (if given) are not part of any region.



**Answer:** For each designated row, enter the contents of each cell, from left to right. For each cell, its contents are the letter of the tetromino occupying that cell, or the letter 'X' if the cell is empty.

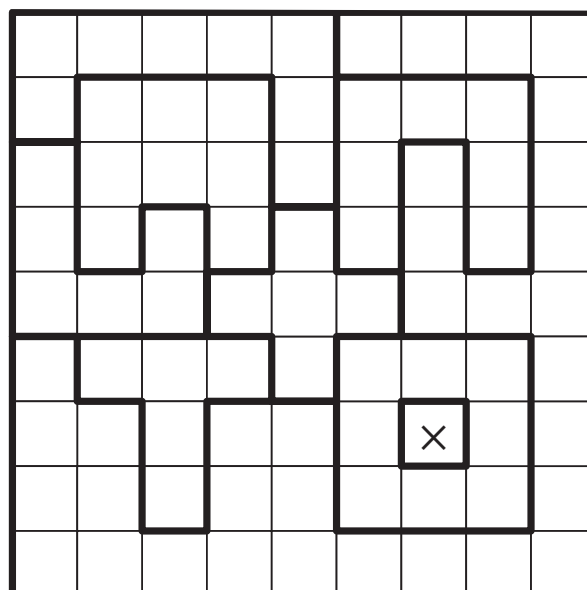
**Example Answer:** LLXTXL, TTTLLL

19a →



19b →

20a →



20b →


**21-22. Slovak Sums [Matúš Demiger, Matej Uher] (26, 36 points)**

Place a digit from 1 to 4 (1 to 3 in the example) into some cells so that each digit appears exactly once in each row and column. Cells may remain empty. A cell cannot contain more than one digit. Some clues are given in the grid; digits should not be placed in cells with clues. Each clue describes the contents of the cells next to that clue (horizontally or vertically, but not diagonal). The number in the clue indicates the sum of the digits next to the clue, while the number of circles beneath the number indicates the number of cells that should have a digit placed in them.

→

	1	1	2	3
1		2	3	6
2	1	3		
8	3		1	2
3	2		2	1

→

**Answer:** For each designated row, enter its contents, using 'x' for an empty or clued cell.

**Example Answer:** xx123, x3x12

21a →

	3						
			2				
					8		
							9
10							
		14					
				10			
						3	

21b →

22a →

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

22b →

**23-24. Slovak Sums [Matúš Demiger, Matej Uher] (37, 67 points)**

Place a digit from 1 to 4 (1 to 3 in the example) into some cells so that each digit appears exactly once in each row and column. Cells may remain empty. A cell cannot contain more than one digit. Some clues are given in the grid; digits should not be placed in cells with clues. Each clue describes the contents of the cells next to that clue (horizontally or vertically, but not diagonal). The number in the clue indicates the sum of the digits next to the clue, while the number of circles beneath the number indicates the number of cells that should have a digit placed in them.



	1	1	2	3
1		2	3	6
2	1	3		
8	3		1	2
3	2		2	1



**Answer:** For each designated row, enter its contents, using 'X' for an empty or clued cell.

**Example Answer:** XX123, X3X12

23a →

23b →

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

24a →

24b →

						6	
5			9				
		7			6		
						9	
	9						
		5			8		
				11			5
	7						