



WPF
SUDOKU/PUZZLE
GRAND PRIX
2015

WPF PUZZLE GP 2015 COMPETITION BOOKLET

ROUND 7

Puzzle authors:

Switzerland

Roger Kohler

Fred Stalder

Markus Roth

Esther Naef

Carmen Günther

Organized by



WORLD PUZZLE FEDERATION

**Points:**

1.	Fillomino	6
2.	Fillomino	12
3.	Fillomino	17
4.	Fillomino	58
5.	Tapa	5
6.	Tapa	8
7.	Tapa	7
8.	Tapa	20
9.	Tapa	36
10.	Spiral Galaxies	35
11.	Spiral Galaxies	23
12.	Spiral Galaxies	37
13.	LITS	33
14.	LITS	18
15.	LITS	27
16.	LITS	25
17.	Magnets	31
18.	Magnets	28
19.	Magnets	29
20.	Pills	25
21.	Pills	54
22.	Pills	40
23.	Starry Road	26
TOTAL:		600

General Notes: Some of the puzzles *and puzzle solutions* in this round incorporate Switzerland-related themes, specifically equilateral crosses and the initials "CH" (for "Confoederatio Helvetica").

An earlier version of the instruction booklet left out an important rule for the Starrry Road puzzle. This has been corrected.

**1-2. Fillomino [Roger Kohler] (6, 12 points)**

Divide the grid along the dotted lines into regions (called polyominoes) so that no two polyominoes with the same area share an edge. Inside some cells are numbers; each number must equal the area of the polyomino it belongs to. A polyomino may contain zero, one, or more of the given numbers. (It is possible to have a "hidden" polyomino: a polyomino without any of the given numbers. "Hidden" polyominoes may have any area, including a value not present in the starting grid, such as a 6 in a puzzle with only clues numbered 1-5.)

The dots in cells are only used for entering your answers.

Answer: Enter the area of the polyomino each dot is in, reading the dots from left to right. (Ignore which row the dots are in.) Use only the last digit for two-digit numbers; e.g., use '0' for a polyomino of size 10.

Example Answer: 82523655

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

	3						
	1			3	10		1
			2		2		
		2	1		1	2	
	7			20			4
	6						9
		2	1		1	2	
			2			2	
	1			8	5		1
6							5

1		6				2	
	4		3			2	
				3			3
4	1	5	4		6		9
		4			5		
3			4	2	3	5	1
1		3	5	1	4		
		5		5	4	2	2
4	2			1	2		
		2			5		9



3-4. Fillomino [Roger Kohler, Fred Stalder] (17, 58 points)

Answer: Enter the area of the polyomino each dot is in, reading the dots from left to right. (Ignore which row the dots are in.) Use only the last digit for two-digit numbers; e.g., use '0' for a polyomino of size 10.

Example Answer: 82523655

8				1	4		
		2		4			
	2				•		4
•		•	6			6	5
1	5		•	2			•
4				•		1	
			4		3		
	•	4	5			•	3

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

12	9	1						1	8	4	8
			1	2	9	1					
		●						●			
				●			●				
	●						1	2	9	1	
1	2	9	1	12	9	1				●	●
					8						
						●	1	2	9	1	
●		1	8	4	8				●		
			●	1	8	1	5				
1	2	9	1		●			1	8	4	8

Shade some empty cells black (cells with numbers cannot be shaded). All black cells connect along edges to create a single connected region. (It is permissible for the region to touch itself at a corner, but touching at a corner does not connect the region.) No 2×2 group of squares can be entirely shaded black.

Example Answer: 212, 231

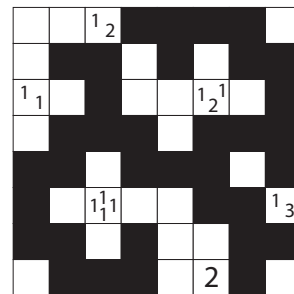
The diagram illustrates a 3D grid structure with three planes. The top plane is a 4x4 grid with values: (1,1)=1, (1,4)=3, (2,3)=3, (3,2)=3, (4,2)=1, (4,3)=2, (5,2)=2, (6,1)=2, (6,2)=2, (7,7)=1, (8,2)=1₅, (8,3)=1₃, (8,4)=2. The middle plane is a 4x4 grid with values: (1,2)=4, (2,1)=3, (3,3)=4, (4,1)=1, (4,3)=3, (5,1)=3, (6,1)=1₁. The bottom plane is a 4x4 grid with values: (1,1)=1, (1,4)=2, (2,3)=5, (4,3)=1, (5,3)=3, (5,4)=3₃, (6,4)=3. Arrows indicate movement: 5a (solid arrow, top-left to top-right), 5b (solid arrow, middle-left to middle-right), 6a (dotted arrow, top-left to top-right), and 6b (solid arrow, middle-left to middle-right).



7-8. Tapa [Markus Roth, Esther Naef] (7, 20 points)

Answer: For each designated row, enter the length in cells of each of the shaded segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a segment of size 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer: 212, 231



7a →

						1				
	2		0		1		5		3	
										1
1										
		2		0		1		5		
1	1									
			2		0		1		5	
3										2

7b →

8a →

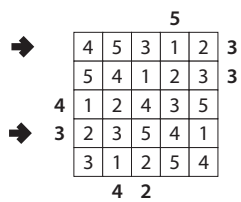
			3						2	
3					2	3			2	2
		1	2		1	2			2	3
	3				1	1				
			1	2				4	4	
					2	3				
									1	2
4										
			6							
									2	2
2		1	2		1	2		1	2	

8c →

9. Tapa [Esther Naef] (36 points)

Answer: For each designated row, enter the length in cells of each of the shaded segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a segment of size 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer: 212, 231

[illegible]

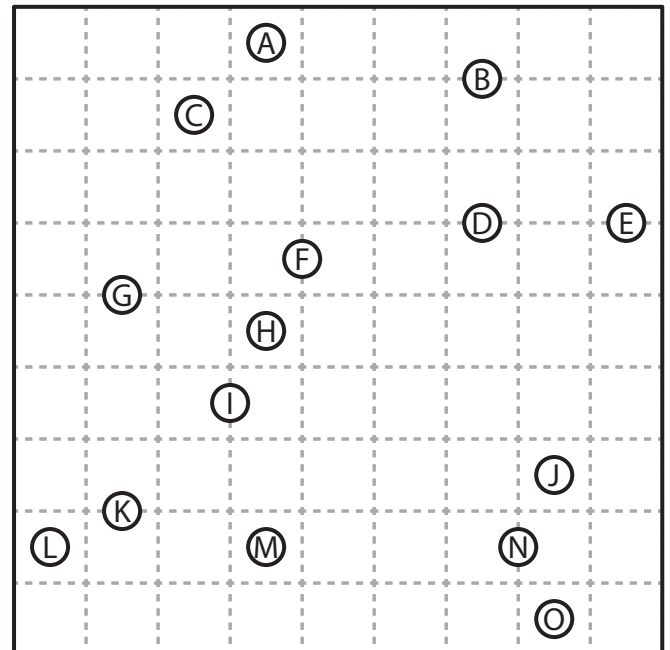
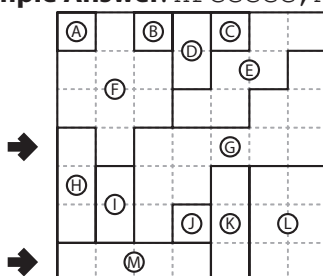
10. Spiral Galaxies [Esther Naef] (35 points)

Divide the grid along the dotted lines into regions so that every cell is part of exactly one region. Each region must be rotationally symmetric (has the same shape when rotated 180 degrees) with exactly one dot inside it, at the center of rotation. (It is permissible to have a region of size exactly one cell, as long as that cell has a dot in its center.)

The letters inside the dots are only used for entering your answers.

Answer: For each designated row, enter the matching letter for each cell from left to right. The matching letter for a cell is the letter inside the dot that is at the center of the region that contains that cell.

Example Answer: HFGGGGG, MMMMKLL

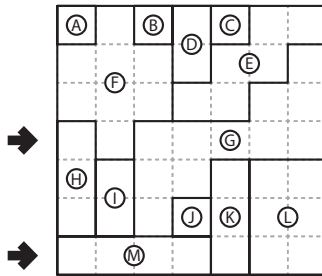




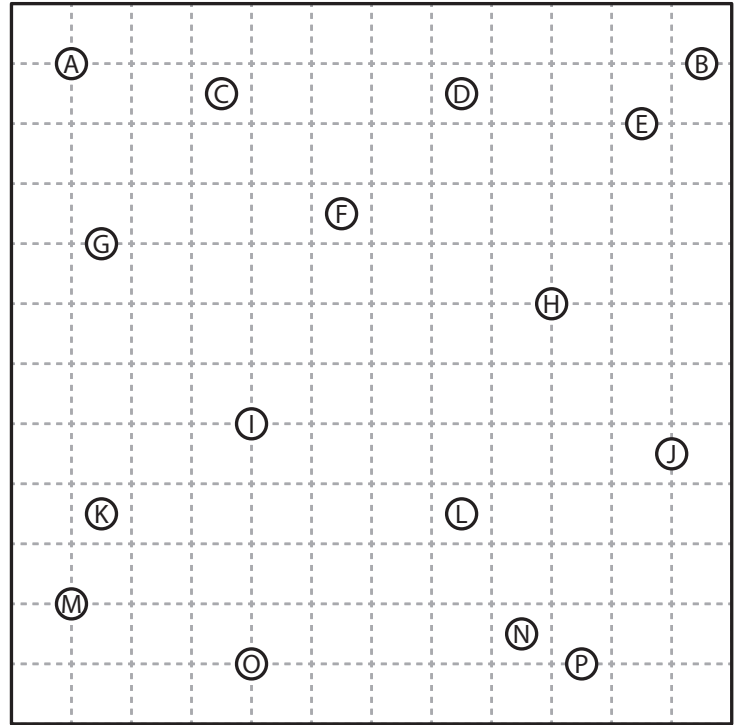
11-12. Spiral Galaxies [Carmen Günther] (23, 37 points)

Answer: For each designated row, enter the matching letter for each cell from left to right. The matching letter for a cell is the letter inside the dot that is at the center of the region that contains that cell.

Example Answer: HFGGGGG, MMMKLL



11a →

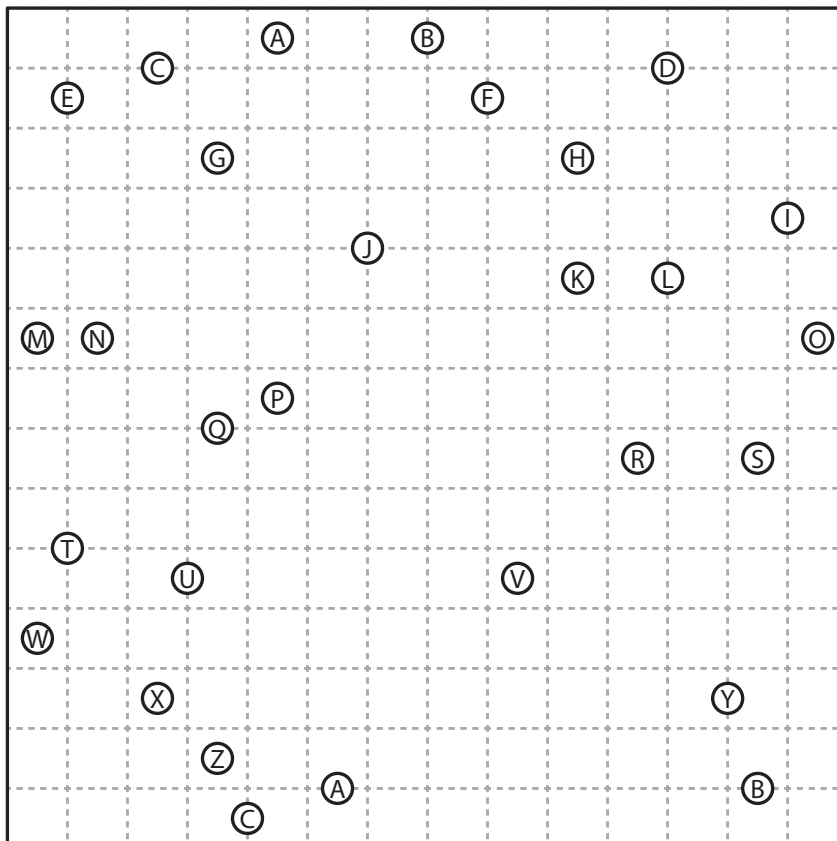


11b →

12a →

12b →

12c →



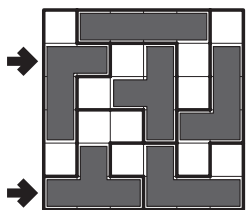
**13-14. LITS [Esther Naef] (33, 18 points)**

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 along their edges; (2) No 2×2 group of cells can be entirely shaded; (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, based on its shape, looks like the letter "L", "I", "T", or "S". Not all four letters 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.

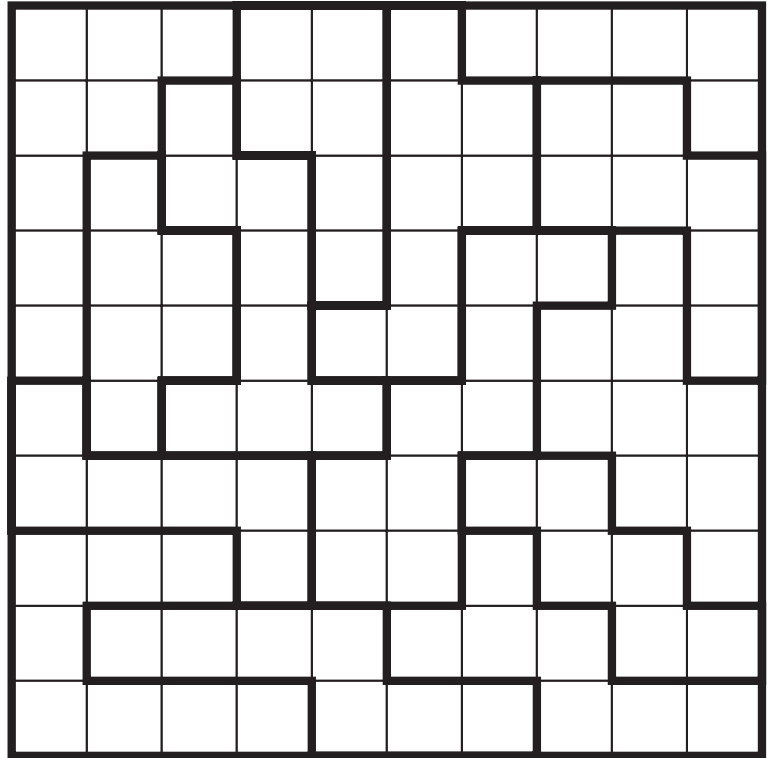
Example Answer: LLXTXL, TTLLLL



13a →

13b →

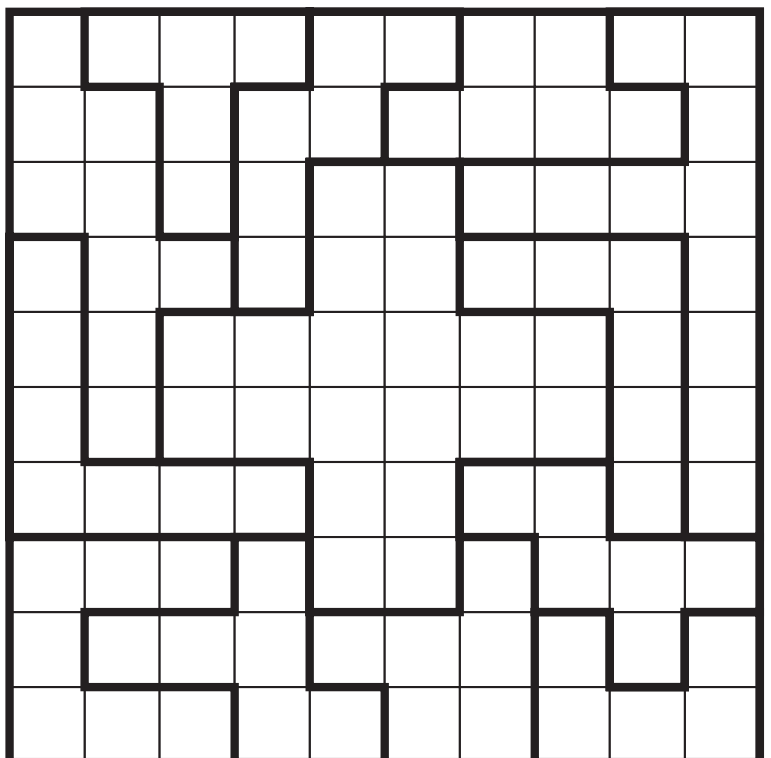
13c →



14a →

14b →

14c →

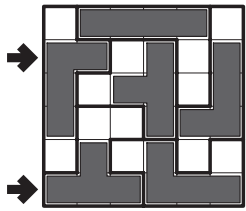




15-16. LITS [Carmen Günther] (27, 25 points)

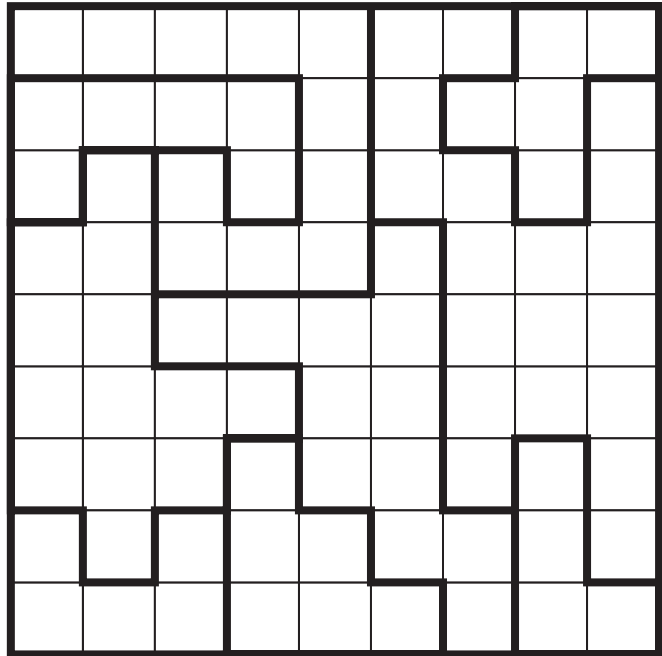
Answer: For each designated row, enter the contents of each cell, from left to right. For each cell, its contents are the letter of the tetromino occupying that cell, or the letter 'x' if the cell is empty.

Example Answer: LLXTXL, TTLLLL



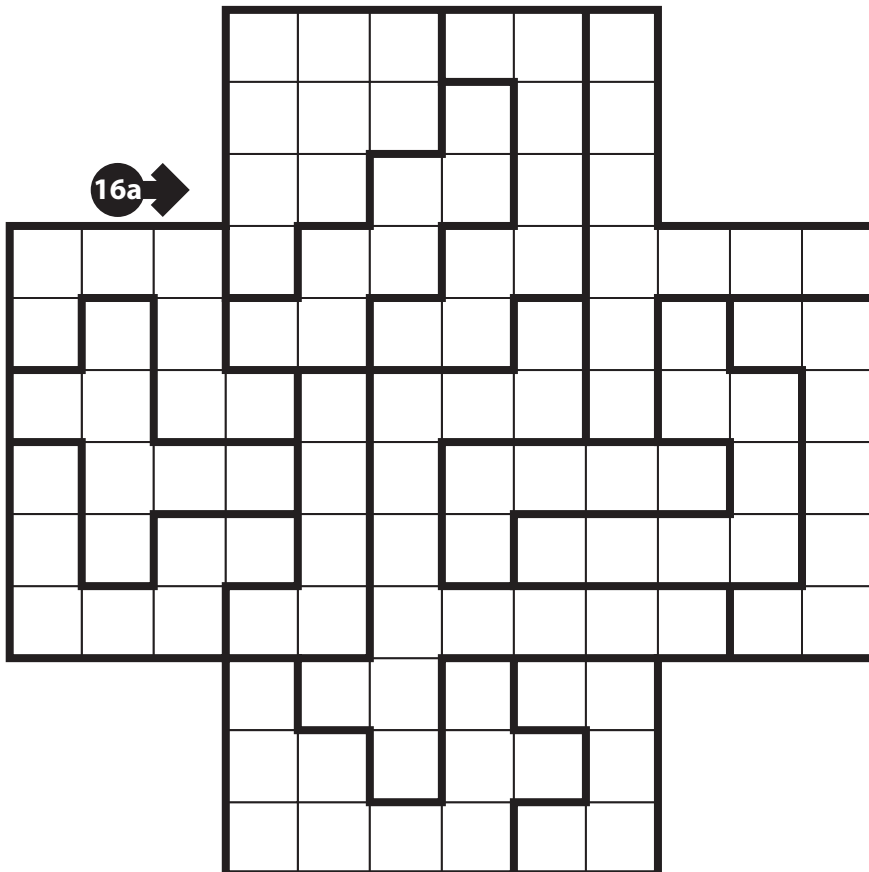
15a →

15b →



16a →

16b →



17-18. Magnets [Roger Kohler, Carmen Günther] (31, 28 points)

The grid is partitioned into regions of two square cells each (note that only region borders are drawn). Put “positive” (+) and “negative” (–) symbols into some cells, at most one symbol per cell, such that each region either has two symbols or no symbols at all. Adjacent cells (even within a region) cannot contain the same symbol.

The numbers above and to the left of the grid indicate the exact number of symbols of the specified type that must be placed in each column or row, respectively. If a number is not given, there might be any number of symbols of the specified type.

Answer: For each designated row, enter its contents, using 'P' for a "positive" (+) symbol, 'N' for a "negative" (–) symbol, and 'X' for an empty cell. Alternatively, you may use '+' for a positive symbol, '–' for a negative symbol, and 'X' for an empty cell, but do not mix the two systems!

Example Answer: XXPXNX, PXXXPX

	+		2					
	-		0 3					
→	0	1			-			
					+		-	
	2	2	+		-		+	-
			-		+		-	+
→			+				+	
	2	3	-	+	-	+	-	

18a ➔

18b 

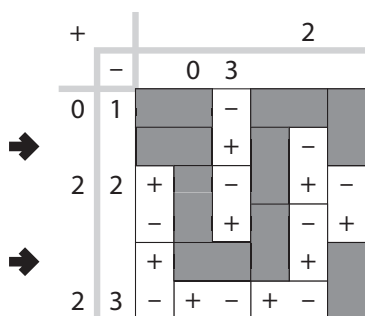
[illegible][illegible]



19. Magnets [Markus Roth] (29 points)

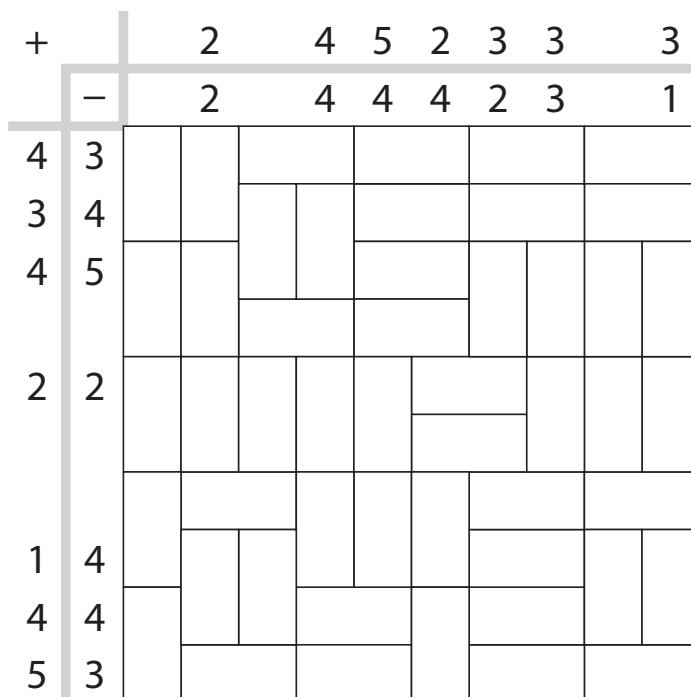
Answer: For each designated row, enter its contents, using 'P' for a "positive" (+) symbol, 'N' for a "negative" (-) symbol, and 'X' for an empty cell. Alternatively, you may use '+' for a positive symbol, '-' for a negative symbol, and 'X' for an empty cell, but do not mix the two systems!

Example Answer: XXPXNX, PXXXXP



19a

19b

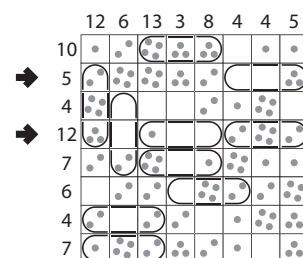


20. Pills [Roger Kohler] (25 points)

Locate the indicated set of pills in the grid. Pills have a 1×3 or 3×1 shape and do not overlap each other. Each pill has a different "value" (number of dots inside the pill), as indicated to the right of the grid. Each number to the left and top of the grid reveals the number of dots in that row or column that are inside pills.

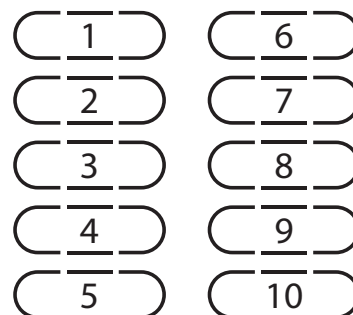
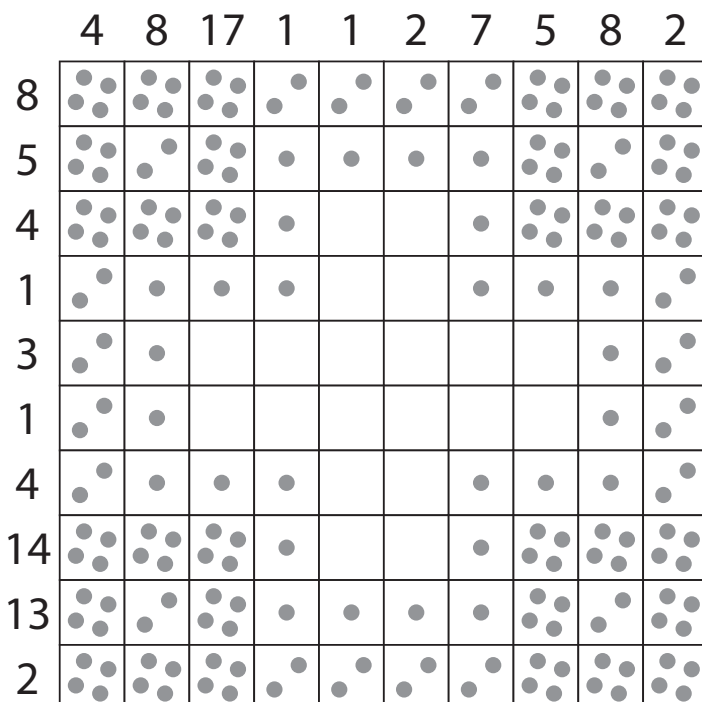
Answer: For each designated row, enter the pill value for each cell from left to right. (If the cell is inside a pill, enter the value of that pill; if the cell is not inside a pill, enter '0'.) Use only the last digit for two-digit numbers; e.g., use '0' for a pill of value 10.

Example Answer: 90000333, 92111888



20a

20b



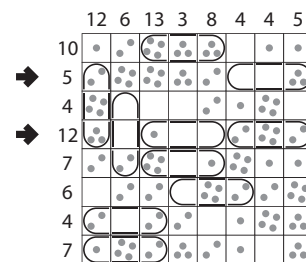


21-22. Pills [Carmen Günther, Markus Roth] (54, 40 points)

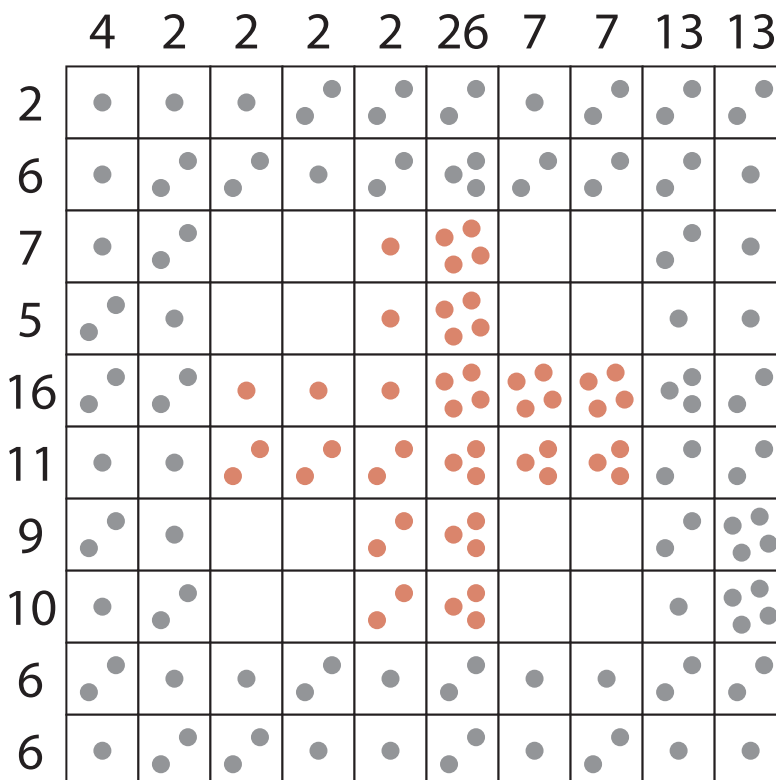
The shading in puzzle 21 is for decorative purposes only.

Answer: For each designated row, enter the pill value for each cell from left to right. (If the cell is inside a pill, enter the value of that pill; if the cell is not inside a pill, enter '0'.) Use only the last digit for two-digit numbers; e.g., use '0' for a pill of value 10.

Example Answer: 90000333, 92111888

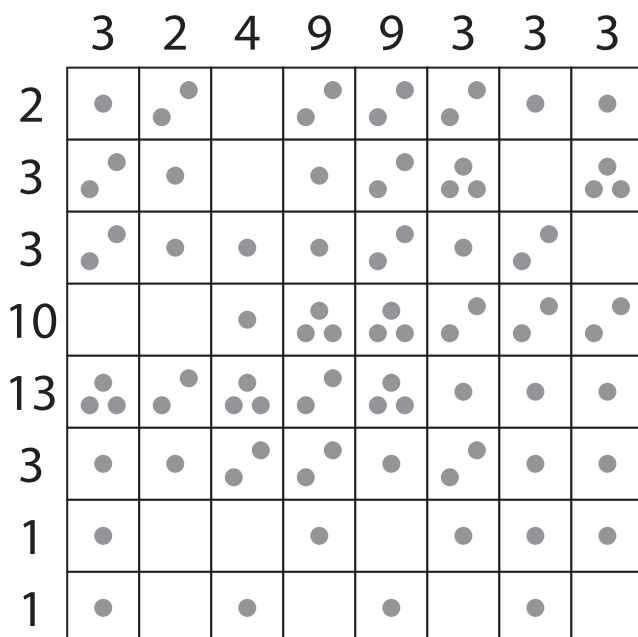


21a →



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

21b →



22a →

1	5
2	6
3	7
4	8

22b →

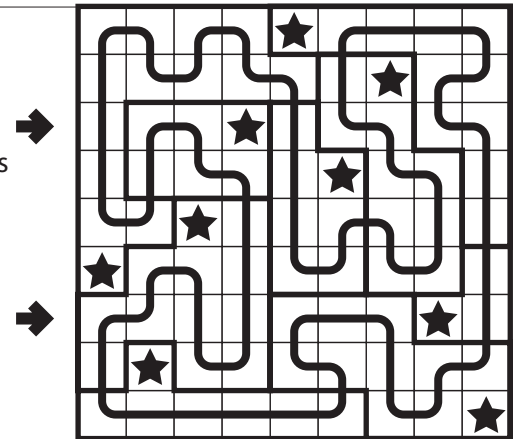
**23. Starry Road [Fred Stalder] (26 points)**

Place stars into some cells in the grid and draw a closed loop through all other cells in the grid. Each row, column, and outlined region must contain exactly one star. The loop connects the centers of cells orthogonally and goes through each outlined region exactly once (that is, it crosses the boundaries of each region exactly twice).

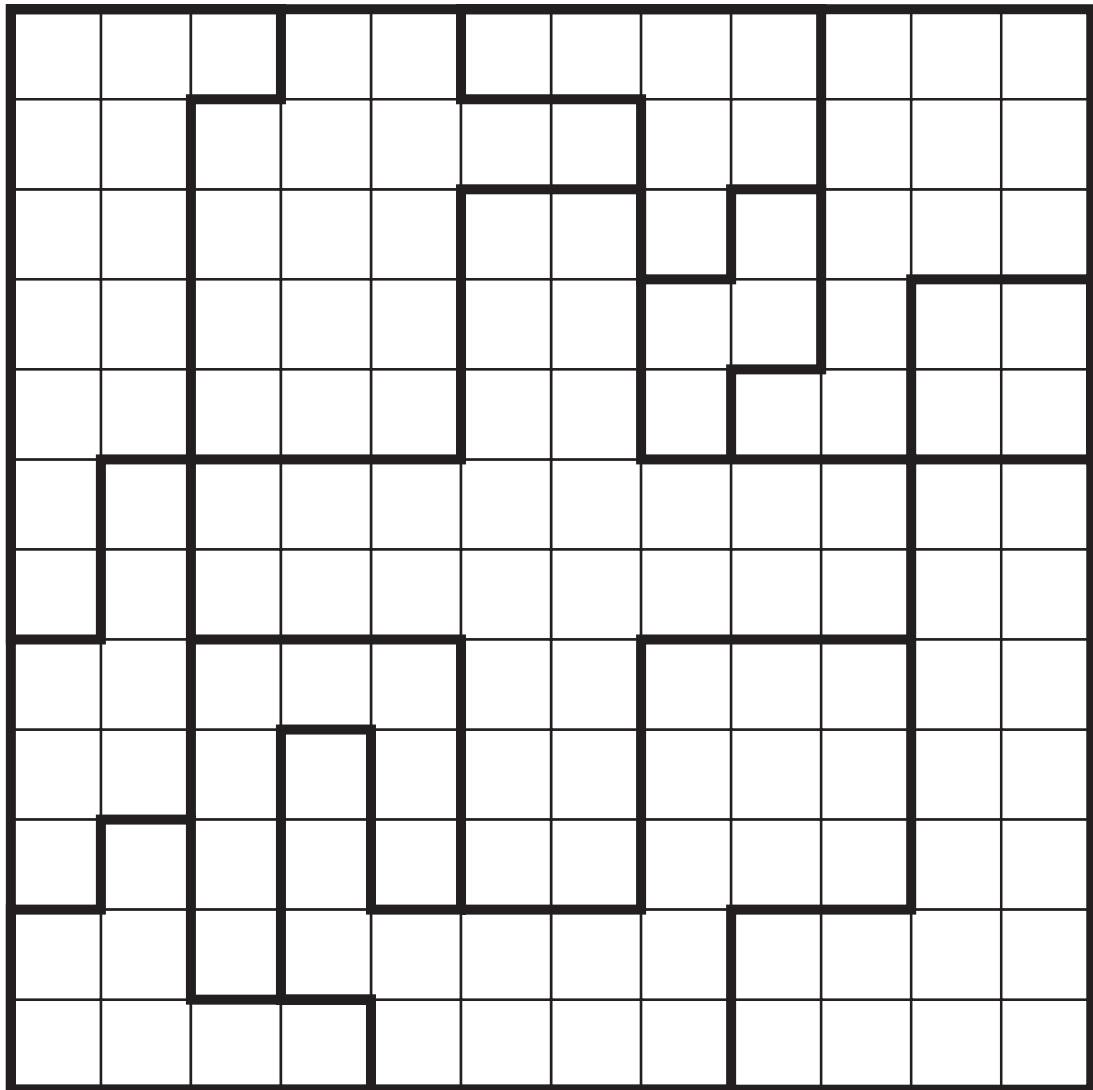
Stars may not be in diagonally touching cells.

Answer: For each designated row, enter its contents from left to right. Use 'S' for a cell containing a star, 'I' for a cell in which the loop goes straight, and 'L' for a cell in which the loop turns.

Example Answer: ILLSILLLL, LLILILLSI



23a



23b

