



WPF  
SUDOKU/PUZZLE  
**GRAND PRIX**  
2014

# WPF PUZZLE GP 2014 INSTRUCTION **BOOKLET**

## ROUND **1**

Puzzle authors:

Germany

Rainer Biegler (6, 11)

Gabi Penn-Karras (5, 7, 9)

Roland Voigt (2, 3, 8)

Ulrich Voigt (1, 5, 10)

Robert Vollmert (4, 12)

Organised by



WORLD PUZZLE FEDERATION

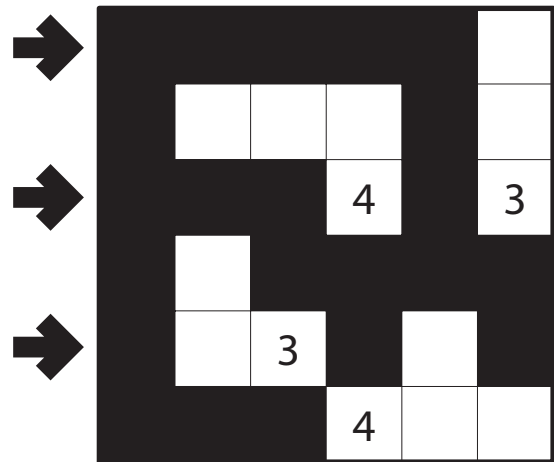
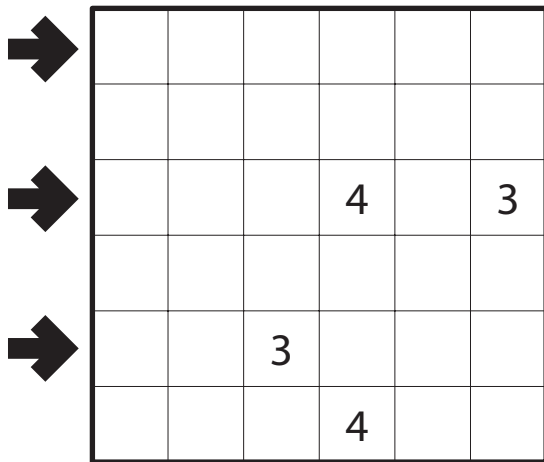


### 1. Nurikabe (29 points) [Ulrich Voigt]

Shade some cells black (leaving the other cells white) so that the grid is divided into 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. All black cells must be in the same region. No  $2 \times 2$  group of cells can be entirely shaded black.

**Answer:** For each designated row, enter the length (number of cells) of the black segments from left to right. If there are no black cells in the row, enter a single digit '0'.

**Example Answer:** 5, 31, 111

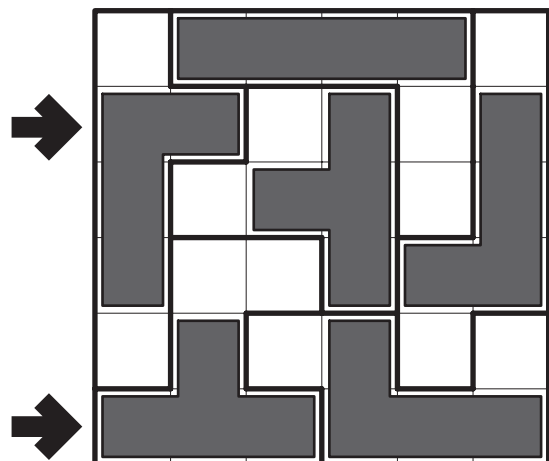
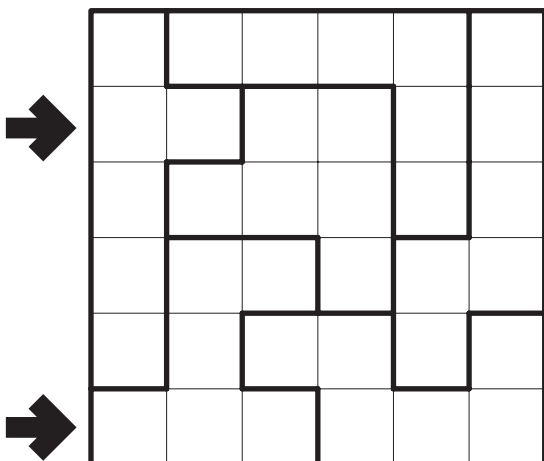


### 2. LITS (53 points) [Roland Voigt]

Shade exactly four connected cells in each outlined region, to form an L, I, T, or S tetromino, so that the following conditions are true: (1) All shaded cells are connected with each other; (2) No  $2 \times 2$  group of cells can be entirely shaded black; (3) When two tetrominoes in adjacent regions share an edge, they must not be of the same type (L, I, T, or S), regardless of rotations or reflections.

**Answer:** For each designated row, enter the letter for each tetromino that appears in that row, from left to right. Within a row, if a tetromino occupies more than one cell, only enter that tetromino's letter once. If there are no tetrominos in the row, enter the single letter 'A'.

**Example Answer:** LTL, TL



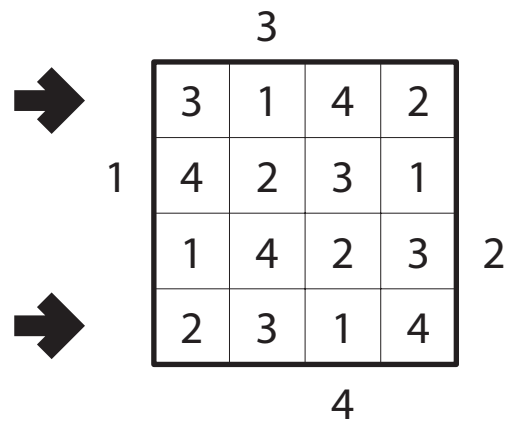
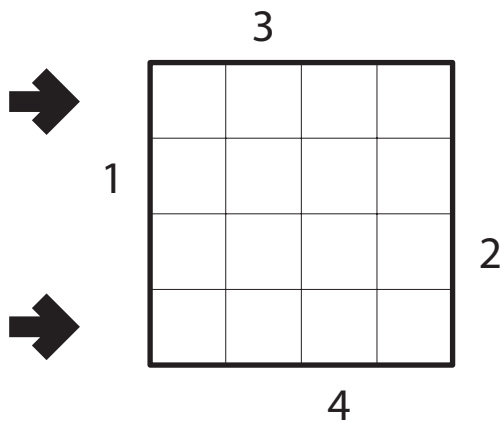


**3. Skyscrapers (15 points) [Roland Voigt]**

Place a digit from 1 to 5 into each cell (1 to 4 in the example), so that each digit appears exactly once in each row and column. The digits represent skyscrapers of different heights; the numbers outside the grid indicate how many skyscrapers can be seen in the respective row or column from the respective direction (smaller skyscrapers are hidden behind higher ones).

**Answer:** For each designated row, enter its contents.

**Example Answer:** 3142, 2314



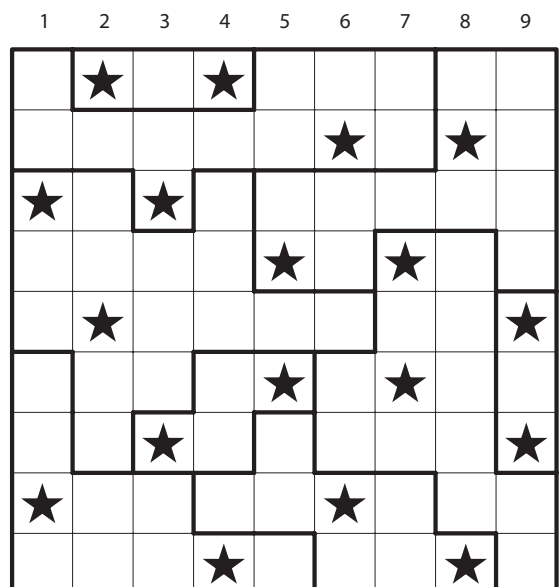
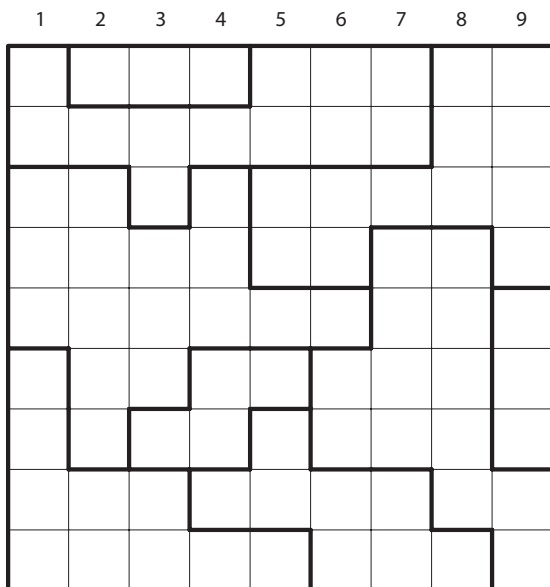
**4. Star Battle (35 points) [Robert Vollmert]**

Place stars into the grid, so that each row, each column and each outlined region contains exactly two stars. The stars have the size of one cell and must not touch each other, not even diagonally.

*The numbers on top of the diagram are for Answer purposes only.*

**Answer:** Enter the column number of the first star in each row. Use only the last digit for two digit numbers; e.g., use '0' for column 10.

**Example Answer:** 261525314



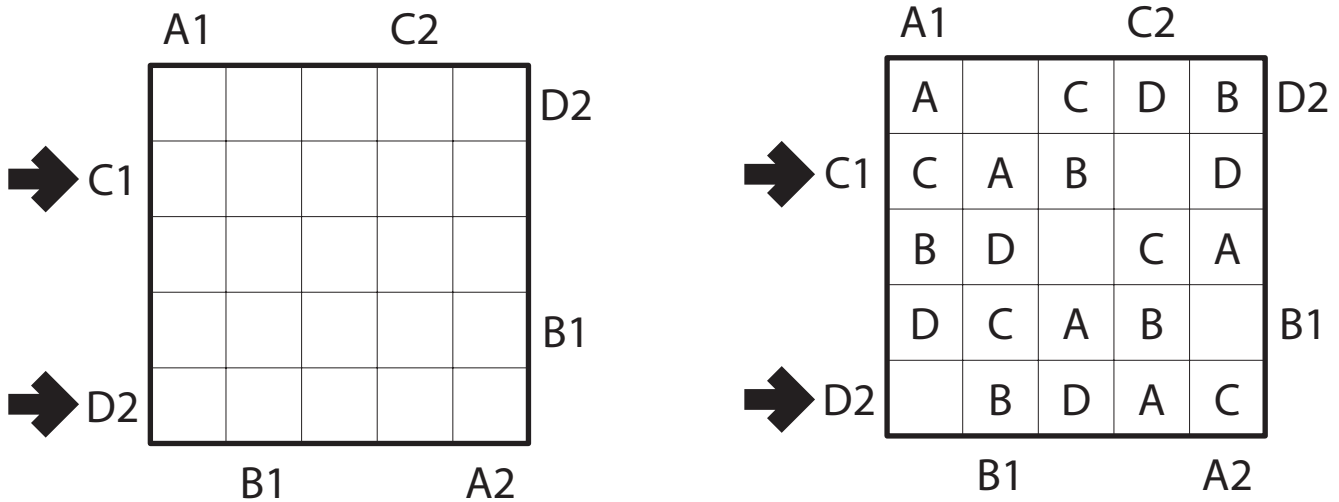


**5. Easy as First or Second ABCD (31 points) [Gabi Penn-Karras & Ulrich Voigt]**

Place letters A, B, C, D in the cells, so that each letter appears exactly once in each row and column. Each cell must have at most one letter, but can be empty. Clues of the form 'X1' indicate the first letter and clues of the form 'X2' indicate the second letter in the respective row or column, seen from that direction.

**Answer:** For each designated row, enter its contents. Use 'X' to designate an empty cell.

**Example Answer:** CABXD, XBDAC

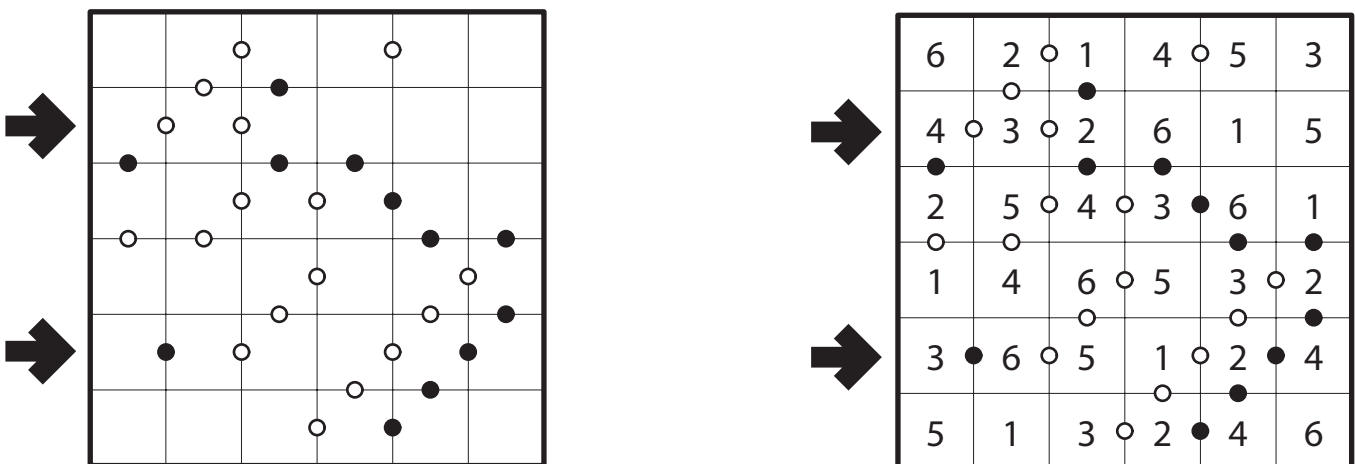


**6. Kropki (54 points) [Rainer Biegler]**

Place a number from 1 to 9 (1 to 6 in the example) into each cell, so that each number appears exactly once in each row and column. A white dot between two adjacent cells indicates that these cells hold consecutive numbers, and a black dot indicates that one number is exactly half of the other. If there is no dot between two adjacent cells, then neither property holds. A dot between the numbers 1 and 2 may be black or white, and not necessarily consistent throughout the puzzle.

**Answer:** For each designated row, enter its contents.

**Example Answer:** 432615, 365124





**7. Magnets (43 points) [Gabi Penn-Karras]**

Fill the grid with magnetic and non-magnetic 2x1 plates. Each magnetic plate has two halves, Positive (+) and Negative (-). Halves of the same type cannot be horizontally or vertically adjacent. Numbers outside the grid indicate the number of Positive and Negative halves in each row and column.

**Answer:** For each designated row, enter its contents. Use 'P' for a Positive half, 'N' for a Negative half, and 'X' for a non-magnetic half.

**Example Answer:** NPNXXX, XPNXPX

	+		2	2	1	1	2	2
		-	1	2	2	2	1	2
2	1							
1	2							
2	2							
1	2							
3	1							
1	2							

	+		2	2	1	1	2	2
		-	1	2	2	2	1	2
2	1				+	-	+	
1	2		-	+	-			
2	2		+	-			-	+
1	2					-	+	-
3	1			+	-	+		+
1	2		+	-				-

**8. No Four in a Row (61 points) [Roland Voigt]**

Place an X or an O into each cell, so that four consecutive identical symbols in a row, column or diagonal never occur.

**Answer:** For each designated row, enter its contents.

**Example Answer:** XOXOOO, OXOXO

			X			
				O	O	
O		O	O			X
				O	O	
O						
					X	X

X	O	X	X	O	X
X	O	X	O	O	O
O	X	O	O	X	X
O	X	O	O	O	X
O	X	O	X	X	O
X	O	X	O	X	X

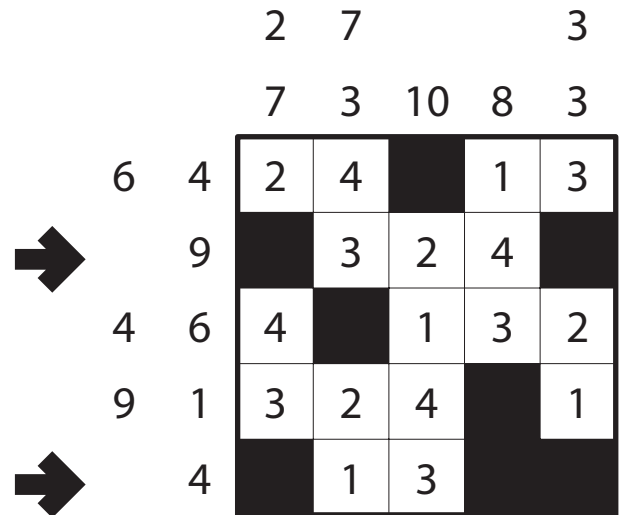
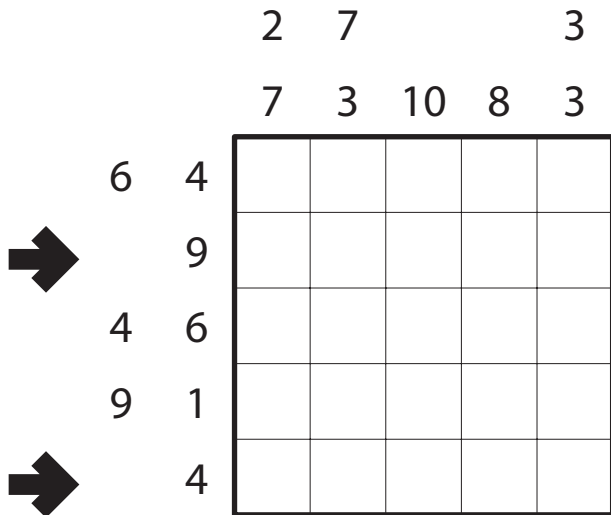


9. Japanese Sums (69 points) [Gabi Penn-Karras]

Place a digit from 1 to 7 (1 to 4 in the example) into some cells so that no digit appears more than once in each row or column. Cells may remain empty. Numbers outside the grid indicate the sums of continuous groups of digits (including "sums" of a single digit). These sums are given in the same order as their corresponding groups of digits.

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

**Example Answer:** X324X, X13XX

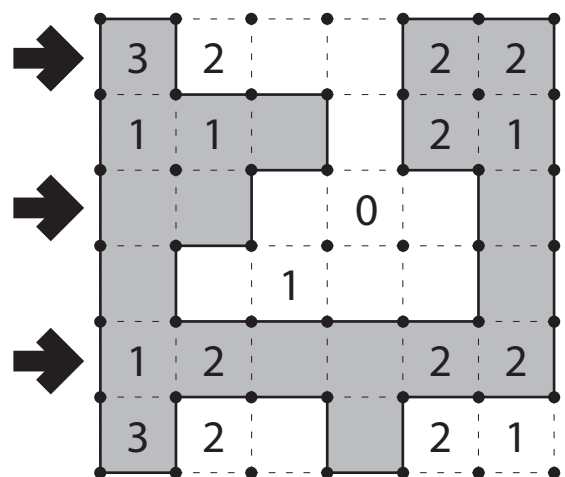
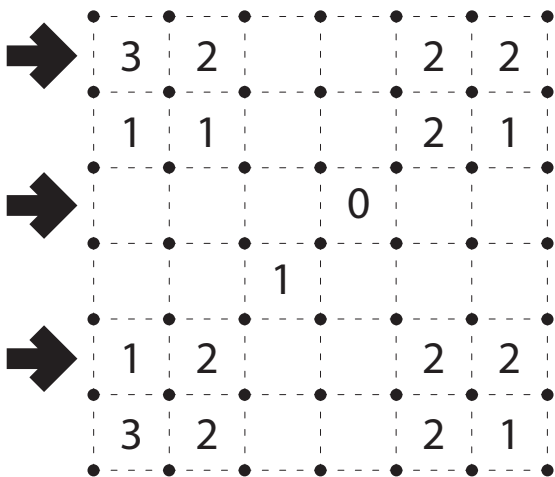


10. Slitherlink (73 points) [Ulrich Voigt]

Draw a single, non-intersecting loop that only consists of horizontal and vertical segments along the dotted lines. Numbers inside a cell indicate how many of the edges of that cell are part of the loop.

**Answer:** For each designated row, enter the length (number of cells) of each segment inside the loop, from left to right. Enter the full two-digit number for a segment of length greater than 9; e.g., '10' for a segment of length 10. If there are no cells inside the loop for a row, enter the single digit '0'.

**Example Answer:** 12, 21, 6





**11. Pentominoes (74 points) [Rainer Biegler]**

Place the twelve pentominoes (tetrominoes in the example) into the grid so that they do not touch each other, not even diagonally. Numbers above and to the left indicate the number of cells used by the pentominoes; numbers below and to the right indicate the number of pentominoes that appear in the respective row and column. Pentominoes can be rotated and reflected. Cells marked with an x cannot be occupied with a pentomino.

**Answer:** For each designated row, enter the letter for each pentomino that appears in that row, from left to right. Within a row, if a pentomino occupies more than one cell, only enter that pentomino's letter once. If there are no pentominoes in that row, enter a single letter 'A'. (LITSO is used for the tetrominoes in the example; standard pentomino letters FILPNTUVWXYZ will be used for the competition puzzle.)

**Example Answer:** OL, TS

The diagram shows a 6x6 grid puzzle. The top row has numbers 4, 2, 3, 3, 4 above it. The left side has numbers 3, 3, 2, 2, 4 next to it. The right side has numbers 2, 2, 1, 1, 1 next to it. The bottom row has numbers 2, 2, 2, 2, 2 below it. Cells (1,5), (2,4), (2,5), (3,3), (3,4), (4,2), and (5,2) are marked with an 'x'. In the center, there are several tetrominoes: an L-shaped one with 'L's, an I-shaped one with 'I's, a T-shaped one with 'T's, an S-shaped one with 'S's, and an O-shaped one with 'O's. To the right, the same grid is shown with shaded pentominoes: a 4x1 vertical one (L), a 3x1 horizontal one (I), a 2x2 square one (O), a 2x1 horizontal one (S), and a 1x4 horizontal one (L). Arrows point from the left and right towards the grid.

**12. Compass (75 points) [Robert Vollmert]**

Divide the grid along the dotted lines into regions (groups of cells that are connected north-south or east-west, where north is towards the top of the page). Each cell must be in exactly one region, and each region must contain exactly one clue. For each clue, the number in the north part indicates how many cells of that clue's region are located North of the clue cell (irrespective of their East-West location). Analogously, numbers in the west, east, and south part indicate how many cells of that region are located West, East and South of the clue cell.

*The letters in the clue cells are for Answer purposes only.*

**Answer:** For each designated row, enter the letter of the region each cell belongs to.

**Example Answer:** ACCAB, DEEAE

The diagram shows a 5x5 grid puzzle. Clue cells are circled with letters and numbers: (1,3) has 'A' with '4' above; (1,5) has 'B' with '0' above and '1' below; (2,3) has 'C' with '2' above and '2' below; (3,1) has 'D' with '2' below; (4,4) has 'E' with '3' below. Dotted lines represent potential region boundaries. To the right, the same grid is shown with solid lines forming the final regions. Arrows point from the left and right towards the grid.