



# WPF SUDOKU/PUZZLE **GRAND PRIX** 2017

# ROUND 3A

# **WPF PUZZLE GP 2017**

## **COMPETITION BOOKLET**

## **Host Country: Netherlands**

**Author: Bram de Laat**

**Special Notes:** None.

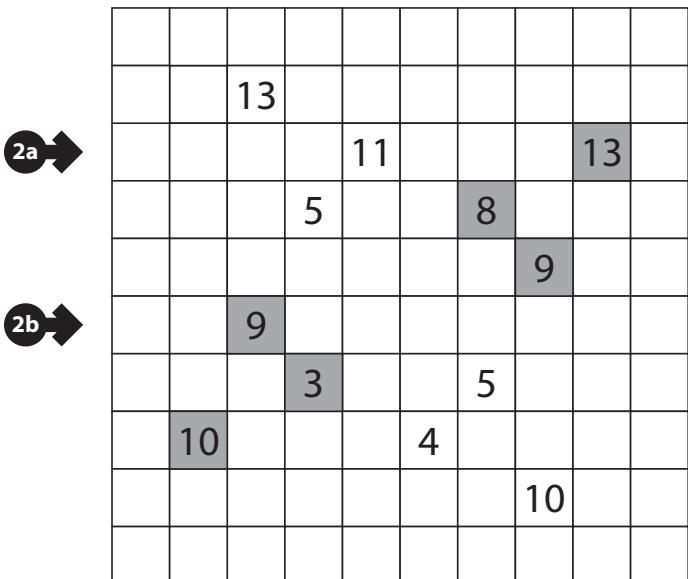
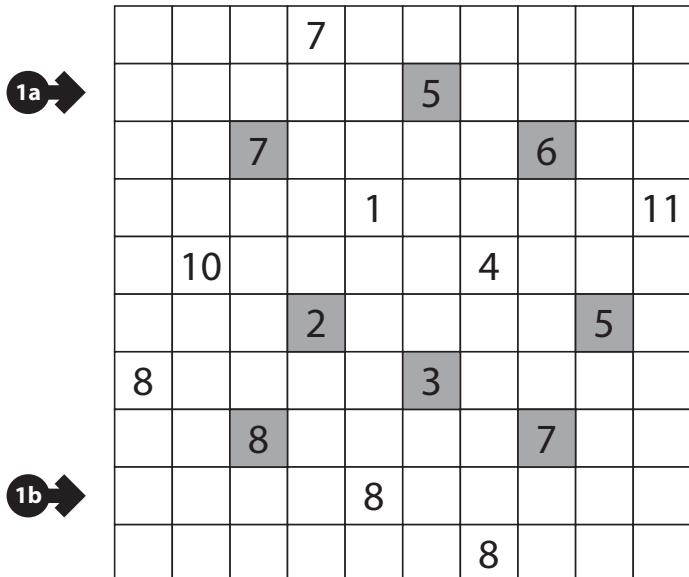
**A1-2. Light and Shadow (19, 66 points)**

Shade some empty cells black (leaving the other cells white) so that the grid is divided into non-overlapping regions; cells of the same color are considered in the same region if they are adjacent along edges. Each given number must be in a region that has the same area in cells as that number. Each region must have exactly one given number.



**Answer:** For each designated row, enter the lengths (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'. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10.

**Example Answer:** 211, 13



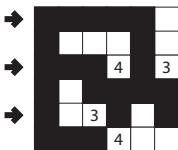


**A3-4. Nurikabe (12, 36 points)**

Shade some cells black (leaving the other cells white) so that the grid is divided into non-overlapping regions; cells of the same color are considered in the same region if they are adjacent along edges. 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 2x2 group of cells can be entirely shaded black.

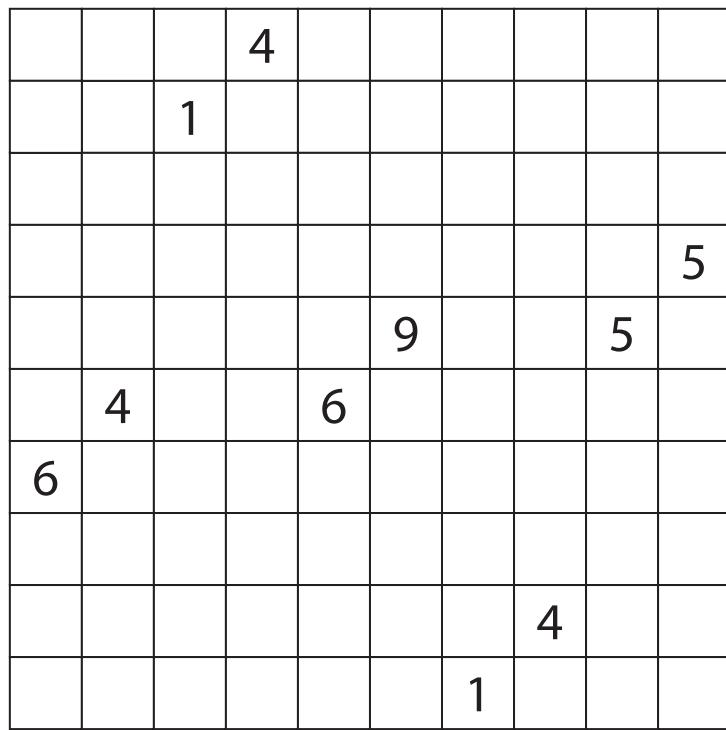
**Answer:** For each designated row, enter the lengths (number of cells) of the black segments from left to right. If there are no black cells in the row, enter a single digit '0'. Use only the last digit for two-digit numbers; e.g., use '0' for a black segment of length 10.

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

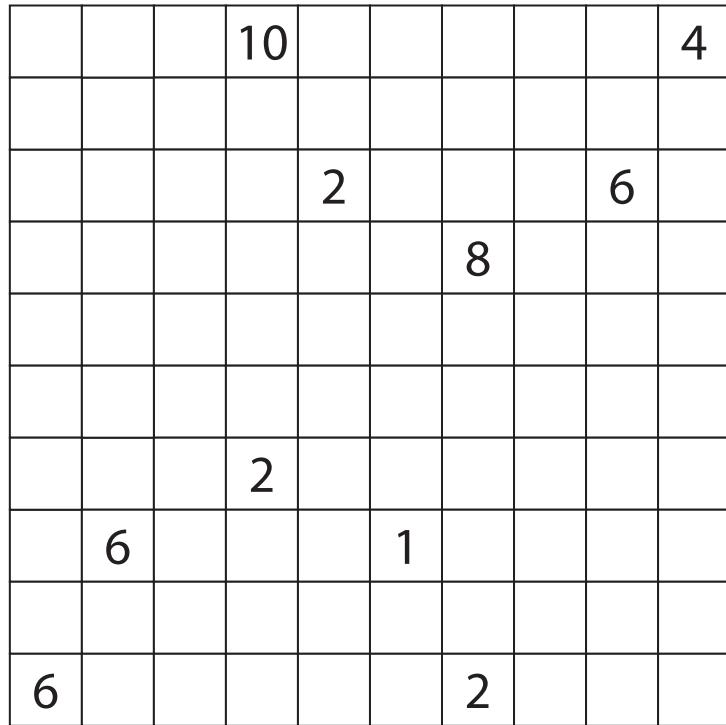


3a ➔

3b ➔



4a ➔



4b ➔

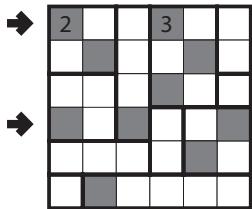


**A5-6. Heyawake (67, 52 points)**

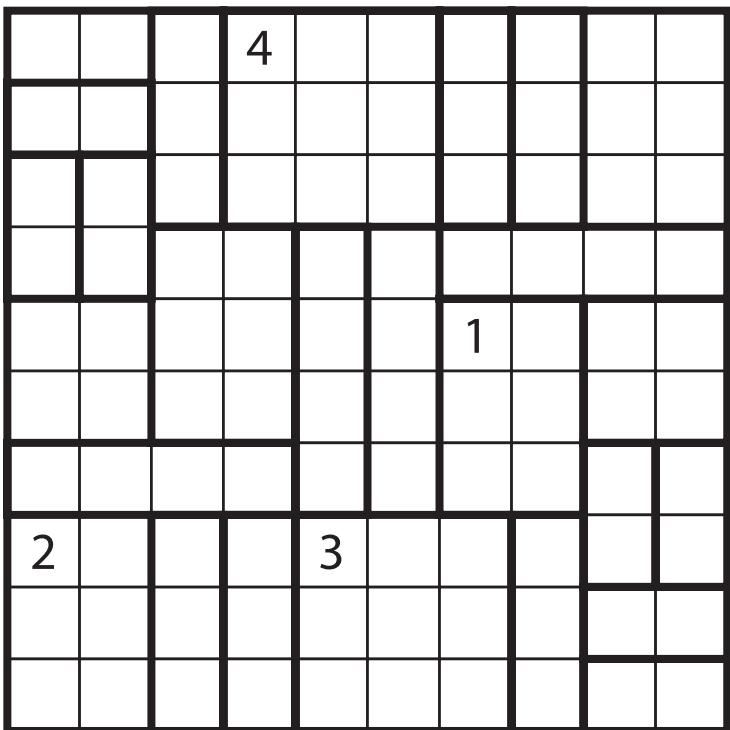
Shade some cells black so that all remaining cells are connected orthogonally and no two black cells share an edge. The grid is divided into regions by thick borders; a number in a region indicates exactly how many cells in that region must be shaded black. Every “word” in the grid (a group of unblackened cells connected to each other either only horizontally or only vertically) may not cross more than one thick border.

**Answer:** For each indicated row, enter its contents from left to right. Use ‘O’ for an unshaded cell and ‘X’ for a black cell. Ignore borders and numbers when entering your answer.

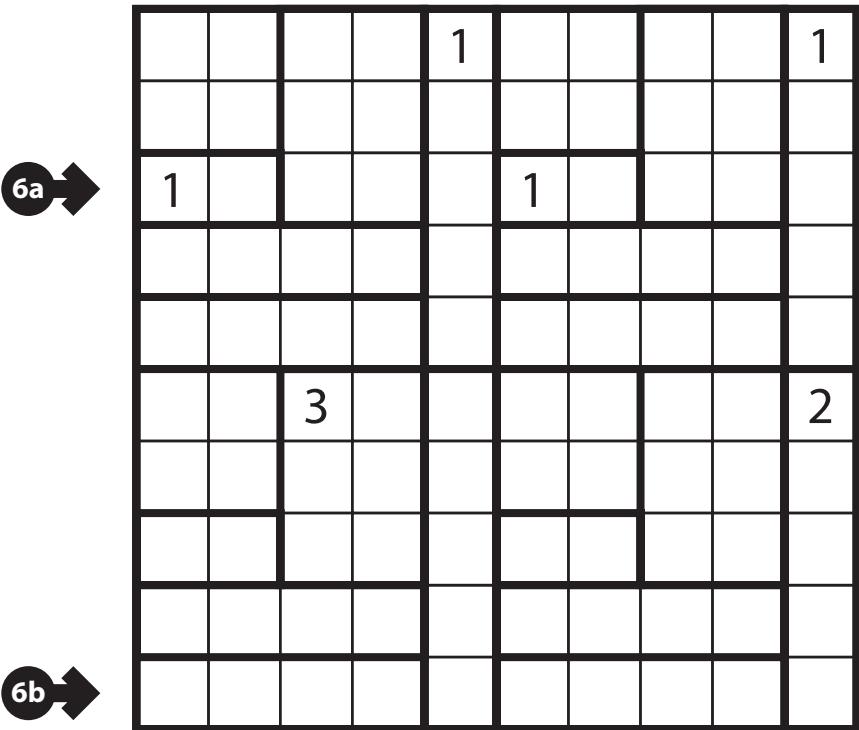
**Example Answer:** XOOXOO , XOXOOX



5a ➡



5b ➡



6a ➡

6b ➡

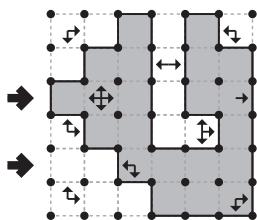


**A7-8. Myopia (37, 29 points)**

Draw a single, non-intersecting loop that only consists of line segments between the dots. Arrows in a cell indicate *all* closest loop edges to that cell along the four orthogonal directions (if there are multiple loop edges of the same closest distance to the cell, there will be multiple arrows).

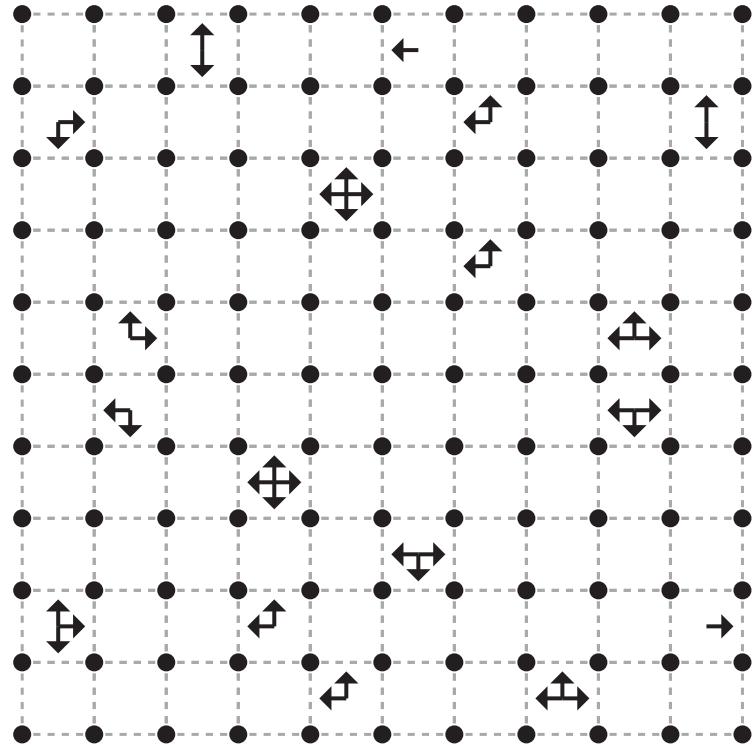
**Answer:** For each designated row, enter the lengths (number of cells) of each segment of cells *inside* the loop, from left to right. Use only the last digit for two digit numbers; e.g., use '0' for a segment of length 10. If there are no cells inside the loop for a row, enter the single digit '0'.

**Example Answer:** 32 , 4



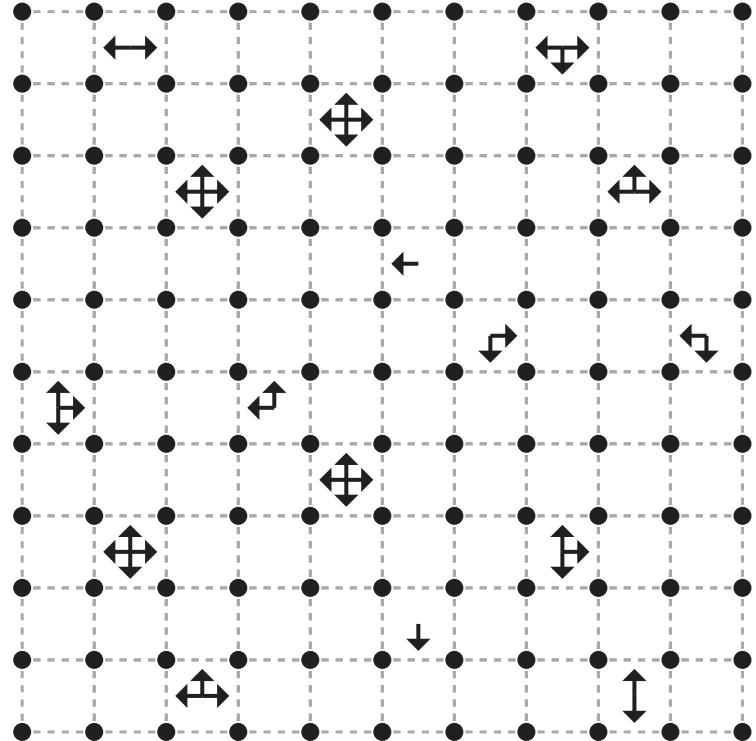
7a →

7b →



8a →

8b →





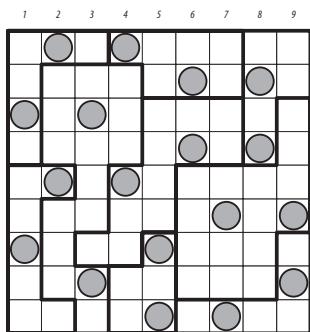
**A9-10. Star Battle (12, 108 points)**

Place stars into some cells in the grid, no more than one star per cell. Each row, each column, and each outlined region must contain exactly two stars. Cells with stars may not touch each other, not even diagonally.

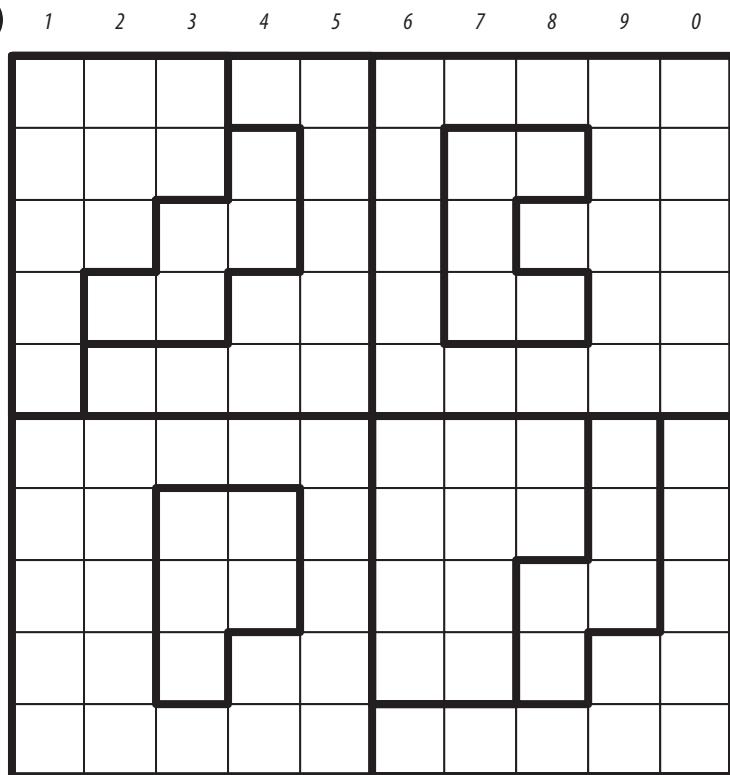
*The numbers on top of the diagram are for Answer purposes only.*

**Answer:** For each row from top to bottom, enter the number of the first column from the left where a star appears (the number on top of that column). Use only the last digit for two-digit numbers; e.g., use '0' if the star piece appears in column 10.

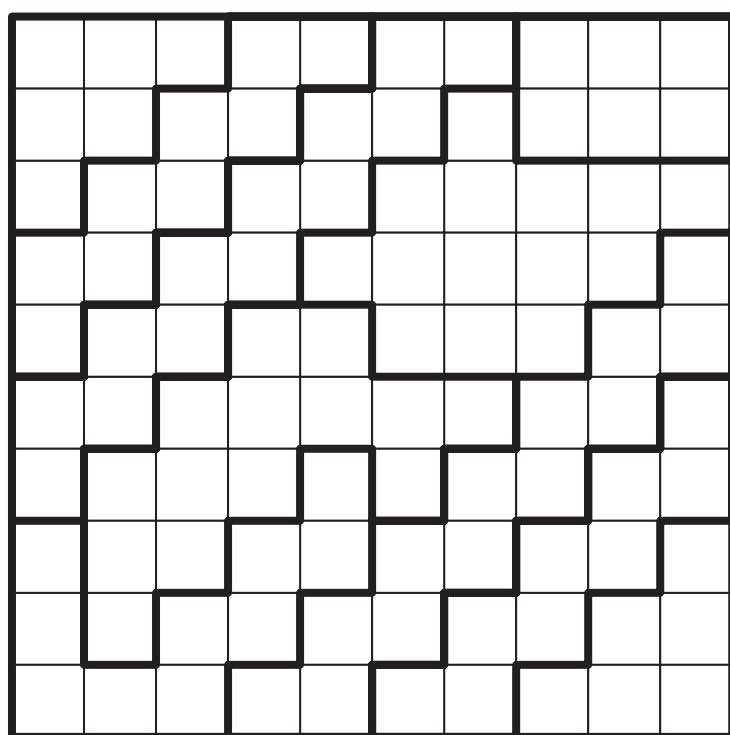
**Example Answer:** 261627135



9



10





**A11-12.Skyscrapers (25, 65 points)**

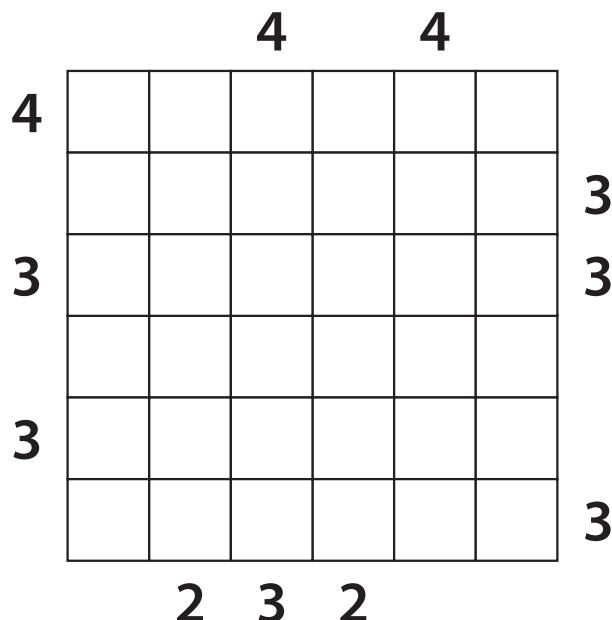
Place a number from 1 to X (integers only) into each cell so that each number appears exactly once in each row and column. (X is the number of cells in each row.) Each number represents a skyscraper of its respective height. The numbers outside the grid indicate how many skyscrapers can be seen in the respective row or column from the respective direction; smaller skyscrapers are hidden behind higher ones. Some numbers may already be filled in for you.

**Answer:** For each designated row, enter its contents. Do not include any numbers outside the grid.

**Example Answer:** 45312 , 23541

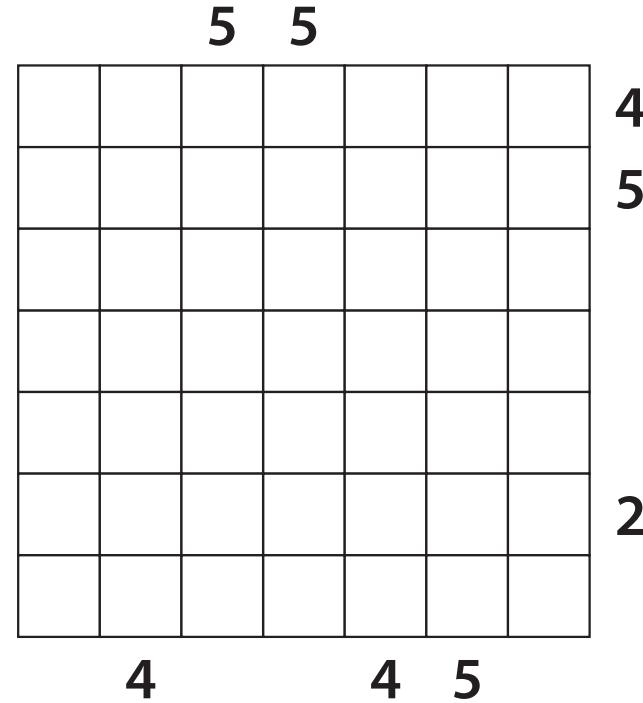
→	4	5	3	1	2	3
5	4	1	2	3	3	3
4	1	2	4	3	5	3
→	3	2	3	5	4	1
3	2	1	2	5	4	1
	3	1	2	5	4	2
	4	2				

11a →  
11b →



2 3 2

12a →  
12b →



4 5