## - WPF $\begin{aligned} & \text { SUDOKU/PUZZLE }\end{aligned}$ GRAND PRIX 2015

# WPF puZZLE gP 2015 INSTRUCTION BOOKLET 

## ROUND4

## Puzzle authors: <br> Netherlands

Hans Eendebak

Richard Stolk

## Organised by



## Points:

1. Battleships 14
2. Battleships 33
3. Battleships 29
4. Sum Battleships 10
5. Sum Battleships 11
6. Sum Battleships 28
7. Star Battle 6
8. Star Battle 11
9. Star Battle 11
10. Star Wars 25
11. Star Wars 23
12. Star Wars 69
13. Pento-slitherlink 13
14. Pento-slitherlink 14
15. Pento-slitherlink 15
16. Pento-blokus 12
17. Pento-blokus 16
18. Pento-blokus 34
19. Neighbors 12
20. Neighbors 31
21. Neighbors 49
22. Sky-neighbors 40
23. Sky-neighbors 48
24. Sky-neighbors 46

TOTAL: 600

General Notes: The point values for each puzzle are close to final but are not final yet. We will release a modified booklet with final point values later this week.

## 1-3. Battleships [Hans Eendebak] (14, 33, 29 points)

Locate the indicated fleet of ships in the grid. Each ship piece occupies a single cell. Ships can be rotated. Ships do not touch each other, not even diagonally (that is, if two ship pieces are in touching cells, they must be part of the same ship). The contents of some cells are given for you, which may include "sea" (spaces that do not have ship pieces).

Each number to the right and bottom of the grid reveals the number of ship pieces that must be located in that row or column (including any that might be given for you).

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 ship piece appears (the number on top of that column). Use only the last digit for two-digit numbers; e.g., use ' 0 ' if the first ship piece appears in column 10. If the row is empty, enter ' 0 '.

Example Answer: 1317171



## 4-6. Sum Battleships [Hans Eendebak] (10, 11, 28 points)

Locate the indicated fleet of ships in the grid. Each ship piece occupies a single cell. Ships can be rotated. Ships do not touch each other, not even diagonally (that is, if two ship pieces are in touching cells, they must be part of the same ship).

Each number to the right and bottom of the grid reveals the sum of the numbers in the same cells as the ship pieces in that row or column.

Answer: For each row from top to bottom, enter the number in the cell where the left-most ship piece appears. If the row is empty, enter '0'. (Do not enter the column number, like in normal Battleships puzzles!)

Example Answer: 5143658

| 5 | 5 | 2 | 2 | 2 | 2 | 5 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | $\mathbf{1 3}$ |  |  |  |  |  |
| 1 | 2 | 3 | 1 | 2 | 2 | 6 |
| 2 | 3 | 4 | 3 | 2 | 3 | 4 |
| 3 | 4 | 5 | 2 | 3 | 2 | 3 |
| 4 | 5 | 6 | 2 | 1 | 2 | 2 |
| 5 | 6 | 7 | 2 | 3 | 1 | 3 |
| 6 | 7 | 8 | 1 | 2 | 1 | 1 |
| $\mathbf{1 4}$ | $\mathbf{2 7}$ | $\mathbf{5}$ | $\mathbf{5}$ | $\mathbf{5}$ |  |  |



| 5 | 5 | 2 | 2 | 2 | 2 | 5 | 1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (1) | 2 | 3 | 1 | 2 | 2 | 6 |  |
| 2 | 3 | (4) | 3 | 2 | 3 | 4 | 1 |
| (3) | 4 | 5 | 2 | 3 | 2 | 3 |  |
| 4 | 5 | 6 | 2 | (1) | 2 | 2 |  |
| (5) | 6 | 7 | 2 | 3 | 1 | 3 |  |
| 6 | 7 | 8) | 1 | (2) | 1 | 1 |  |
| 14 |  | 27 | 5 | 5 | 5 |  |  |

## 7-9. Star Battle [Richard Stolk, Hans Eendebak] (6, 11, 11 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


## 10-12. Star Wars [Hans Eendebak] (25, 23, 69 points)

Place stars into some cells in the grid, no more than one star per cell. Each row, each column, each highlighted partial diagonal, 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 first star appears in column 10.

Example Answer: 262615351


## 13-15. Pento-slitherlink [Richard Stolk] (13, 14, 15 points)

Draw twelve loops that only consist of horizontal and vertical segments between the dots. The loops may not touch each other or intersect themselves, and they must be in the shapes of twelve different pentominoes. Each pentomino shape is used exactly once, but can be rotated or reflected. A number inside a cell indicates how many of the edges of that cell are part of any loop (that is, part of an edge of 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 ' $A$ '.

## Example Answer: TFI, XLW



## 16-18. Pento-blokus [Hans Eendebak, Richard Stolk] (12, 16, 34 points)

Shade some cells black so that the black cells form the shapes of twelve different pentominoes. Each pentomino shape is used exactly once, but can be rotated or reflected. Pentominoes cannot touch along edges, but can touch at corners. If a corner is marked with a dot, then two pentominoes touch at that corner. If a corner is not marked with a dot, then two pentominoes do not touch at that corner.

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 ' $A$ '.

Example Answer: YWLU, PXI


## 19-21. Neighbors [Richard Stolk, Hans Eendebak] (12, 31, 49 points)

Place one of the digits 1,2 , or 3 into each cell, one digit per cell, so that each digit appears exactly three times in each row and column. Some digits may already be placed for you. After placing all digits, each white cell must touch at least one cell with the same number along an edge, and each gray (outlined) cell must not touch any cells with the same number along an edge.

Answer: For each designated row, enter its contents.
Example Answer: 133213212,322131231


$\rightarrow$| 1 | 3 | 1 | 3 | 2 | 2 | 1 | 3 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | 1 | 2 | 2 | 3 | 1 | 3 | 1 | 3 |
| 3 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 |
| 1 | 3 | 3 | 2 | 1 | 3 | 2 | 1 | 2 |
| 2 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 3 |
| 3 | 2 | 3 | 1 | 2 | 1 | 3 | 2 | 1 |
| 3 | 2 | 2 | 1 | 3 | 1 | 2 | 3 | 1 |
| 2 | 3 | 1 | 3 | 1 | 3 | 1 | 2 | 2 |
| 1 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 3 |

## 22-24. Sky-neighbors [Richard Stolk] (40, 48, 46 points)

Place one of the digits 1, 2, or 3 into each cell, one digit per cell. Within the large $9 \times 9$ box, each digit appears exactly three times in each row and column. Some digits may already be placed for you. After placing all digits, each white cell must touch at least one cell with the same number along an edge, and each gray (outlined) cell must not touch any cells with the same number along an edge.

Also, the digits in the large $9 \times 9$ box each represent skyscrapers of their respective heights. The digits outside the grid indicate how many skyscrapers can be seen in the respective row or column from the respective direction. (A skyscraper hides all skyscrapers behind it that are of equal or lower height.)

Answer: For each designated row, enter its contents, including skyscrapers inside the large box and seen-skyscraper counts outside the large box.

Example Answer: 22231313122,112232221


|  | 1 | 1 | 3 | 2 | 2 | 3 | 1 | 2 | 2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 3 | 3 | 1 | 2 | 2 | 1 | 3 | 2 | 1 | 3 |
| 2 | 1 | 3 | 2 | 2 | 3 | 2 | 1 | 3 | 1 | 2 |
| 1 | 3 | 2 | 2 | 3 | 2 | 3 | 1 | 1 | 1 | 2 |
| 2 | 2 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 3 | 1 |
| 2 | 2 | 1 | 1 | 3 | 1 | 3 | 2 | 2 | 3 | 1 |
| 2 | 2 | 2 | 3 | 1 | 3 | 1 | 3 | 1 | 2 | 2 |
| 3 | 1 | 1 | 2 | 3 | 3 | 3 | 2 | 1 | 2 | 2 |
| 2 | 1 | 1 | 3 | 1 | 2 | 2 | 3 | 3 | 2 | 2 |
| 1 | 3 | 3 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 1 |
|  | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 |  |

