

# WPF PUZZLE GP 2023 INSTRUCTION BOOKLET

**Host Country: Germany**

**Gabriele Penn-Karras, Jürgen Blume-Nienhaus**

**Special Notes:** Puzzles 9-16 have identical rules to Puzzles 1-8, but are paired with extra “Persistence of Memory” instructions. Solving both puzzles in a pair will result in a “malus” of negative points (it is still advantageous, however, to solve both puzzles instead of solving just one). See details on the relevant pages. In an earlier version of the Instruction Booklet, the solution for the example for puzzle #9 was incorrect. This has been fixed.

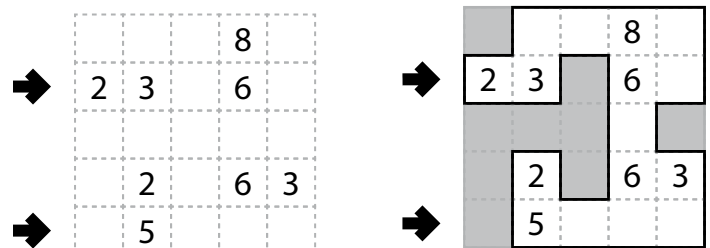
| Points: |                       |     | 11+12. | Persistence of Memory | -31  |
|---------|-----------------------|-----|--------|-----------------------|------|
| 1.      | Cave                  | 27  | 11.    | Railway               | 37   |
| 2.      | YinYang               | 9   | 12.    | Masyu                 | 37   |
| 3.      | Railway               | 23  | 13+14. | Persistence of Memory | -76  |
| 4.      | Masyu                 | 35  | 13.    | Japanese Sums         | 82   |
| 5.      | Japanese Sums         | 37  | 14.    | Doppelblock           | 89   |
| 6.      | Doppelblock           | 48  | 15+16. | Persistence of Memory | -108 |
| 7.      | Underground           | 132 | 15.    | Underground           | 173  |
| 8.      | Tiger in the Woods    | 26  | 16.    | Tiger in the Woods    | 115  |
| 9+10.   | Persistence of Memory | -23 |        |                       |      |
| 9.      | Cave                  | 28  | TOTAL: |                       | 689  |
| 10.     | YinYang               | 29  |        |                       |      |

## 1. Cave [Jürgen Blume-Nienhaus] (27 points)

Shade some cells to leave behind a single orthogonally-connected group—the cave—with no shaded cells enclosed within the cave. In other words, all shaded cells must be connected edge-wise by other shaded cells to an edge of the grid. All numbered cells must be a part of the cave (and therefore not shaded). Each number indicates the total count of unshaded cells connected in line vertically and horizontally to the numbered cell *including the cell itself*.

**Answer:** For each designated row, enter its contents from left to right. Use ‘O’ for an (unshaded) cell occupied by the cave and ‘X’ for a (shaded) cell not occupied by the cave. You may use other characters, as long as they are distinct.

**Example Answer:** OOXOO, XOOOO



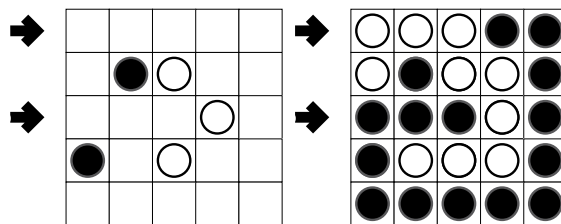


## 2. YinYang [Jürgen Blume-Nienhaus] (9 points)

Fill each cell with either a black or a white circle. All cells with black circles must be connected orthogonally, and all cells with white circles must be connected orthogonally. Every 2x2 group of cells must contain at least one black circle and at least one white circle. Some cells are already filled in for you.

**Answer:** For each designated row, enter its contents from left to right. Use 'o' for a white cell and 'x' for a black cell. You may use other characters, as long as they are distinct.

**Example Answer:**  
OOXX, XXXOX

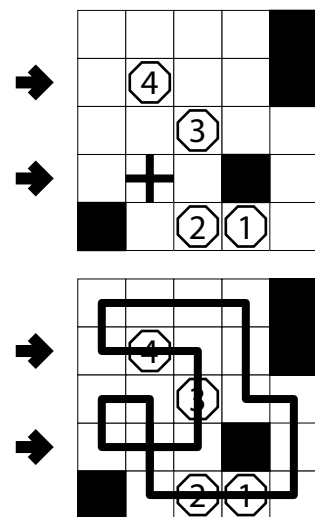


## 3. Railway [Jürgen Blume-Nienhaus] (23 points)

Draw a single loop that passes orthogonally through centers of cells. The loop must go through all non-black cells and cannot go through any black cells. The loop goes straight and intersects itself in the cells marked with a crossing. The loop may not enter the same cell more than once except at these marked crossings. The loop must go straight through the cells with numbers, and it must go through these numbers in numerical order (starting over at 1 once all cells have been reached).

**Answer:** For each designated row, enter the letter for each cell, from left to right. The letter for a cell is 'I' if the loop goes straight through the cell, 'L' if the loop turns in the cell, and 'X' if the loop intersects itself in the cell, and 'X' (also) if the cell is black. You may use other characters, as long as they are distinct.

**Example Answer:** LILIX, LXLXI

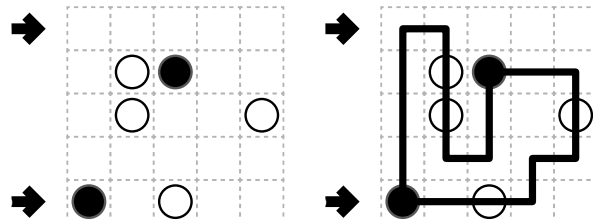


## 4. Masyu [Jürgen Blume-Nienhaus] (35 points)

Draw a single loop that passes orthogonally through centers of cells. The loop must go through all circled cells. The loop may not intersect itself or enter the same cell more than once. The loop must go straight through the cells with white circles, with a turn in at least one of the cells immediately before or after each white circle. The loop must make a turn in all the black circles, but must go straight in both cells immediately before and after each black circle.

**Answer:** For each designated row, enter the letter for each cell, from left to right. The letter for a cell is 'I' if the path goes straight through the cell, 'L' if the path turns in the cell, and 'X' if the path does not go through the cell. You may use other characters, as long as they are distinct.

**Example Answer:**  
LLXXX, LIILX

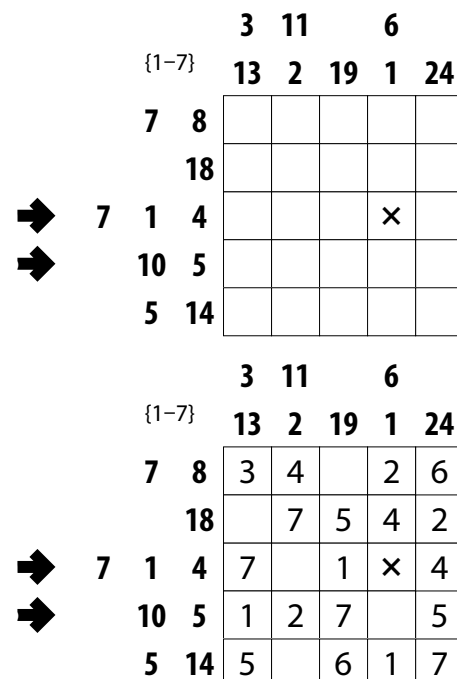


## 5. Japanese Sums [Gabriele Penn-Karras] (37 points)

Place a number from the specified list into some cells so that no number appears more than once in each row or column. Cells may remain empty. Numbers outside the grid indicate all sums of continuous groups of numbers (including "sums" of a single number) along that row or column, in positional order. These groups are separated by empty cells. A question mark (?) indicates an unspecified (but non-zero) sum. Some cells might be marked with a cross; do not put any numbers into those cells.

**Answer:** For each designated row, enter its contents, using 'x' for an empty cell. Do not include any numbers outside the grid.

**Example Answer:**  
7X1X4, 127X5



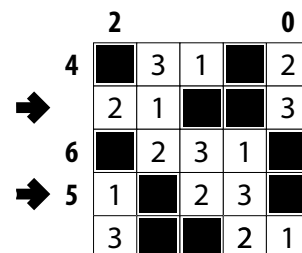
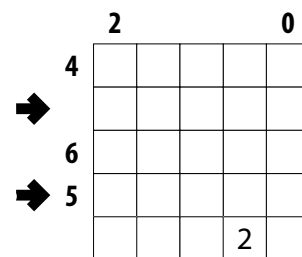


**6. Doppelblock [Gabriele Penn-Karras] (48 points)**

Place either a block or a number from 1 to X into each cell so that each number appears exactly once in each row and each column. (X is two fewer than the number of cells in each row.) Each row and each column will therefore have exactly two cells with blocks in them. The numbers outside the grid indicate the sum of the numbers between the two blocks in that row or column. Some cells may already be filled in for you.

**Answer:** For each designated row, enter its contents from left to right. Use 'x' to denote a block. Use only the last digit for two-digit numbers; e.g., use '0' for the number 10. Do not include any given numbers outside the grid.

**Example Answer:** 21xx3, 1x23x



**7. Underground [Gabriele Penn-Karras] (132 points)**

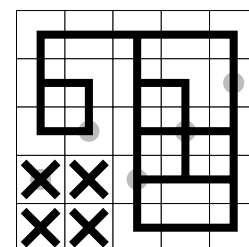
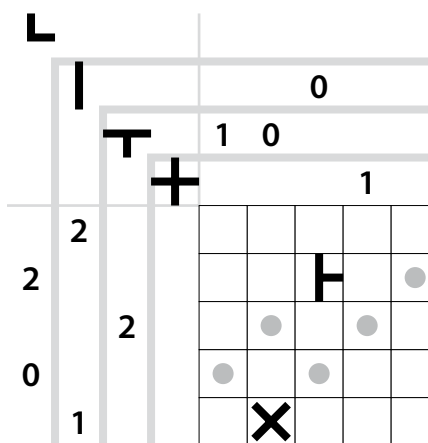
Draw orthogonal connections through centers of cells to form one connected network. It is not allowed to have any cell with only one connection. It is allowed for any cell to have no connections; fill them with an X-shaped cross.

Each cell with connections will therefore be one of these four types: connected to two cells at right angles, two cells in a line, three cells, or four cells. The numbers above and to the left of the grid indicate the exact number of cells 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 cells of the specified type. The contents of some cells may be given to you; any such cell has all of its connections given.

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

**Answer:** Enter the contents of each dotted cell, reading the dots from left to right. (Ignore which row the dots are in.) Use 'L' for a cell connected to two others at right angles, 'I' for a cell connected to two cells in a line, 'T' for a cell connected to three cells, and 'X' for an empty cell or cell connected to four cells. You may use other characters, as long as they are distinct.

**Example Answer:** XLTXI



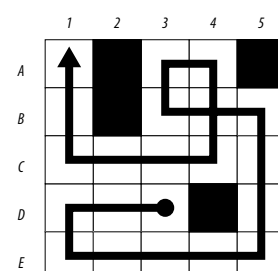
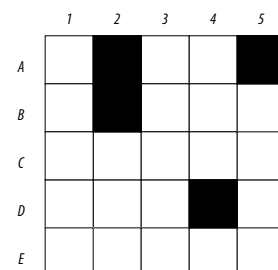
**8. Tiger in the Woods [Jürgen Blume-Nienhaus] (26 points)**

Find a path that starts at a white cell in the grid and visits every white cell in the grid. The path may only travel in the orthogonal directions, and must continue straight if the next cell ahead of it is white (for example, the ending cell of the path must be immediately before a black cell or the edge of the grid). The path may visit a cell more than once, but the visits must be at right angles to each other and that cell may not be the starting cell nor the ending cell of the path.

The letters to the left of the grid and the numbers above the grid are for Answer purposes only.

**Answer:** Enter the row letter and column number (in that order) for the starting cell of the path, then do the same for the ending cell of the path.

**Example Answer:** D3, A1



**9+10. Persistence of Memory (-23 points)**

Highlighted regions of the same shape and orientation must contain the same contents in these two puzzles. Note that if you get points for both puzzles, 23 points will be *subtracted* from your score.

**9. Cave [Jürgen Blume-Nienhaus] (28 points)**

Instead of shading, put black circles in cells outside the cave and white circles in cells inside the cave.

**Example Answer:** XXX000, 00X0XX

**10. YinYang [Jürgen Blume-Nienhaus] (29 points)**

**Example Answer:** XOX00X, XOX0X0

**11+12. Persistence of Memory (-31 points)**

Highlighted regions of the same shape and orientation must contain the same contents in these two puzzles. Regions will not contain Railway numbers or Masyu circles. Note that if you get points for both puzzles, 31 points will be *subtracted* from your score.

**11. Railway [Jürgen Blume-Nienhaus] (37 points)**

**Example Answer:** LXLLLI, LLLLLL

**12. Masyu [Jürgen Blume-Nienhaus] (37 points)**

**Example Answer:** LIIIIIL, XXLLLLL

**13+14. Persistence of Memory (-76 points)**

Highlighted regions of the same shape and orientation must contain the same contents in these two puzzles. Empty cells in Japanese Sums should be considered the same as cells with blocks in Doppelblock. Note that if you get points for both puzzles, 76 will be *subtracted* from your score.

**13. Japanese Sums [Gabriele Penn-Karras] (82 points)**

**Example Answer:** 1XX3X2, X3X421

|       |   |   |  |   |   |
|-------|---|---|--|---|---|
|       | 8 | 4 |  | 1 | 1 |
| {1-4} | 2 | 4 |  | 9 | 9 |
| 5     | 3 |   |  |   |   |
| 9     | 1 |   |  |   |   |
| 5     | 5 |   |  |   |   |
| 3     | 7 |   |  |   |   |

|       |   |   |   |   |   |
|-------|---|---|---|---|---|
|       | 8 | 4 |   | 1 | 1 |
| {1-4} | 2 | 4 |   | 9 | 9 |
| 5     | 3 |   | 4 | 1 | 3 |
| 9     | 1 | 3 | 4 | 2 | 1 |
| 1     |   |   | 3 |   | 2 |
| 5     | 5 | 4 | 1 | 2 | 3 |
| 3     | 7 |   | 3 | 4 | 2 |
| 2     |   | 3 |   | 4 |   |

**14. Doppelblock [Gabriele Penn-Karras] (89 points)**

**Example Answer:** 14X2X3, XX3421

|   |   |   |  |   |
|---|---|---|--|---|
|   | 7 | 7 |  | 6 |
| 8 |   |   |  |   |
| 4 |   |   |  |   |

|   |   |   |   |   |   |  |
|---|---|---|---|---|---|--|
|   | 7 | 7 |   | 6 |   |  |
| 8 | 2 |   | 1 | 3 | 4 |  |
| 1 | 4 |   | 2 |   | 3 |  |
|   | 3 | 4 |   | 1 | 2 |  |
|   |   | 3 | 4 | 2 | 1 |  |
| 4 | 4 | 2 |   | 1 | 3 |  |
| 3 | 1 | 2 |   |   | 4 |  |

**15+16. Persistence of Memory (-108 points)**

Highlighted regions of the same shape and orientation must contain the same contents in these two puzzles. Note that if you get points for both puzzles, 108 points will be *subtracted* from your score.

**15. Underground [Gabriele Penn-Karras] (173 points)**

**Example Answer:** LXXITX

|   |  |  |  |   |
|---|--|--|--|---|
| L |  |  |  | 5 |
| I |  |  |  | 3 |
| T |  |  |  | 2 |
| + |  |  |  |   |
| 4 |  |  |  |   |
| 2 |  |  |  |   |
| 3 |  |  |  |   |

|   |   |   |   |   |   |
|---|---|---|---|---|---|
| L | X | X | I | T | X |
|---|---|---|---|---|---|

**16. Tiger in the Woods [Jürgen Blume-Nienhaus] (115 points)**

**Example Answer:** E2, A6

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
|   | 1 | 2 | 3 | 4 | 5 | 6 |
| A |   |   |   |   |   |   |
| B |   |   |   |   |   |   |
| C |   |   |   |   |   |   |
| D |   |   |   |   |   |   |
| E |   |   |   |   |   |   |
| F |   |   |   |   |   |   |

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
|   | 1 | 2 | 3 | 4 | 5 | 6 |
| A |   |   |   |   |   |   |
| B |   |   |   |   |   |   |
| C |   |   |   |   |   |   |
| D |   |   |   |   |   |   |
| E |   |   |   |   |   |   |
| F |   |   |   |   |   |   |