



WPF PUZZLE GP 2021 INSTRUCTION BOOKLET

Host Country: France

Chloé, Olivier, and Théophane Garçonnet

Special Notes: A previous edition of the Instruction Booklet had the example for puzzle 4 with multiple solutions; this was not intentional, and has been fixed. A minor wording mistake in the Answer section for puzzle 8 has been fixed.

Points:

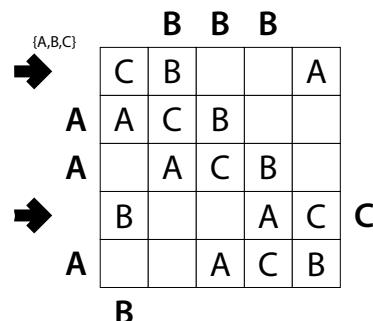
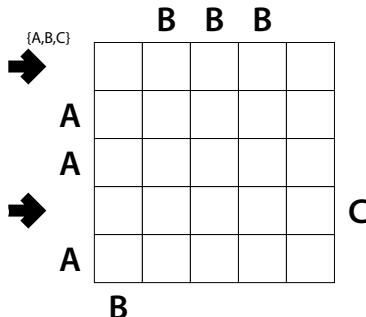
| | | | | | |
|-----|-------------------------------|----|-----|---------------------------------------|-----|
| 1. | Easy As | 9 | 11. | Masyu (Colorblind) + Yajilin | 56 |
| 2. | Easy As (Second) | 31 | 12. | Magnets | 25 |
| 3. | Tapa | 11 | 13. | Magnets (Toroidal) | 29 |
| 4. | Tents (Diagonal, Twos) | 62 | 14. | Spiral Galaxies | 59 |
| 5. | Yajilin | 24 | 15. | Spiral Galaxies + Battleships | 75 |
| 6. | Yajilin (Battleship) | 35 | 16. | Slitherlink | 39 |
| 7. | Loop | 43 | 17. | Slitherlink (Wolves and Sheep) | 51 |
| 8. | Loop (Shaded) | 43 | 18. | Star Battle | 53 |
| 9. | Masyu | 20 | 19. | Pentominous | 102 |
| 10. | Masyu (Colorblind) | 39 | | TOTAL: | 806 |

1. Easy As [Théophane] (9 points)

Place letters of the specified list into some cells, no more than one letter per cell, so that each letter appears exactly once in each row and column. The letters outside the grid indicate the first letter that can be seen in the respective row or column from the respective direction. Some letters may already be filled in for you. Some cells might be marked with a cross; do not put any letters into those cells.

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

Example Answer: CBXXA, BXXAC





2. Easy As (Second) [Théophane] (31 points)

Place letters of the specified list into some cells, no more than one letter per cell, so that each letter appears exactly once in each row and column. The letters outside the grid indicate the *second* letter that can be seen in the respective row or column from the respective direction. Some letters may already be filled in for you. Some cells might be marked with a cross; do not put any letters into those cells.

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

Example Answer: XBCXA, BXACX

| | | | | | | | | |
|---------|-----|---|---|---|---|---|--|--|
| | B | A | | | | | | |
| {A,B,C} | → A | | | | | | | |
| C | | | | | | | | |
| A | | | | | | | | |
| | → A | | | | | | | |
| | | C | | A | B | | | |
| | | B | C | | A | | | |
| | | A | C | A | B | | | |
| | | B | | A | C | | | |
| | | A | | | B | C | | |
| | | B | | | | | | |

3. Tapa [Olivier] (11 points)

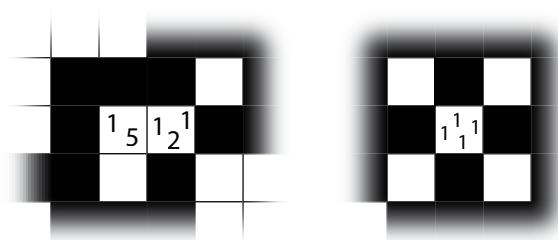
Shade some empty cells black; cells with numbers cannot be shaded. All black cells connect along edges to create a single connected region. (It is permissible for the region to touch itself at a corner, but touching at a corner does not connect the region.) No 2x2 group of squares can be entirely shaded black.

Numbers in a cell indicate the lengths of contiguous black cell groups along the "ring" of 8 cells touching that cell (fewer for cells along the outside edge). If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the black cell groups. The numbers are given in *no particular order*. As a special case, if the number given in a cell is a zero (0), it means that none of the cells around that cell can be shaded black.

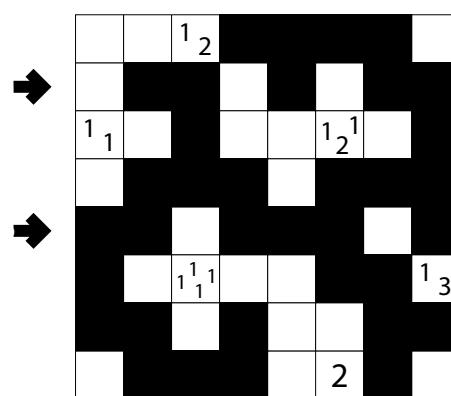
Answer: For each designated row, enter the length in cells of each of the shaded segments from left to right. Use only the last digit for two-digit numbers; e.g., use '0' for a segment of size 10. If there are no black cells in the row, enter a single digit '0'.

Example Answer: 212, 231

Tapa Clue Examples



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





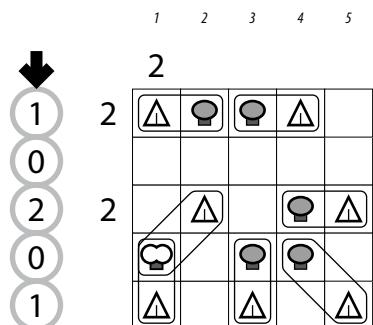
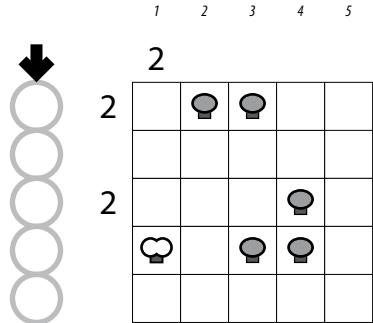
4. Tents (Diagonal, Twos) [Chloé] (62 points)

Place tents into the empty cells in the grid, at most one tent per cell. Tents may not be in cells that share a corner (or an edge). The tents and trees must match up in such a way that each tent matches one tree, each gray tree matches one tent, and each white tree matches two tents. A tent must be in a cell that shares a corner or edge with the cell of its matching tree. (It is permissible for a tent's cell to share corners or edges with non-matching trees.)

Some rows and columns may be numbered. A number indicates the number of tents that must be in that row or column.

Answer: For each row from top to bottom, enter the number of the first column from the left where a tent appears (the number on the far top of that column). Use only the last digit for two-digit numbers; e.g., use '0' if the first tent appears in column 10. If the row has no tents, enter '0'.

Example Answer: 10201



5. Yajilin [Théophane] (24 points)

Draw a single closed loop passing through some empty cells in the grid. The loop connects centers of adjacent cells, makes only right-angle turns or goes straight, and does not intersect or cross itself.

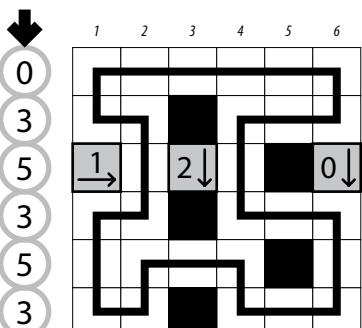
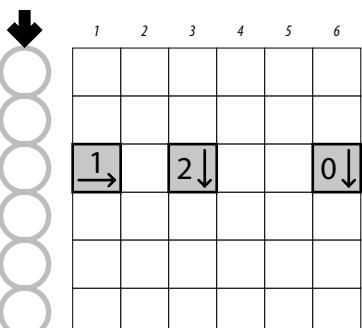
Some cells will remain empty; such cells are “unused” and cannot share an edge with each other.

The grid contains some outlined gray cells that cannot be part of the loop. Numbered arrows in such cells indicate the total number of unused cells along the direction of the arrow, starting in the arrowed cell and going along a row or column to the edge of the grid.

The numbers on top of the diagram are for Answer purposes only. It may be helpful to shade the unused cells, as per the example answer.

Answer: For each row from top to bottom, enter the column number of the left-most unused cell. (Outlined cells are not unused.) Use only the last digit for two-digit numbers; e.g., use '0' for column 10. If none of the cells in a row are blackened, enter '0' for that row.

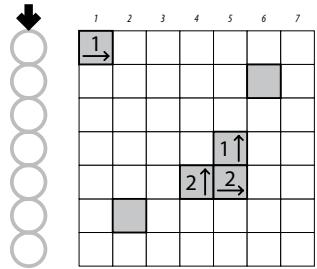
Example Answer: 035353





6. Yajilin (Battleship) [Théophane] (35 points)

Locate the indicated fleet in the grid. Each piece of a ship occupies a single cell. A cell that does not contain a ship piece is considered "sea". Ships can be rotated. Ships do not touch each other, not even diagonally (that is, if two ship pieces are in adjacent cells, they must be part of the same ship). Some cells are outlined and in gray and cannot be occupied by ships. Numbered arrows in such cells indicate the total number of cells occupied with a ship piece along the direction of the arrow, starting in the arrowed cell and going along a row or column to the edge of the grid.



Then, draw a single closed loop (without intersections or crossings) through all remaining white cells (not including outlined gray cells). Loop paths must be orthogonal.

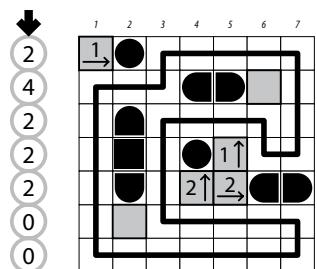
The numbers on top of the diagram are for Answer purposes only.

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: 2422200

7. Loop [Théophane] (43 points)

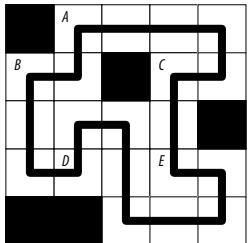
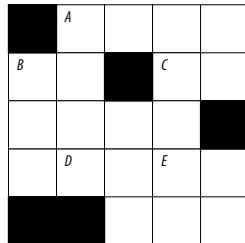
Draw a single closed loop (without intersections or crossings) through the centers of all white cells. Loop paths must be orthogonal.



The letters in the grid are for Answer purposes only.

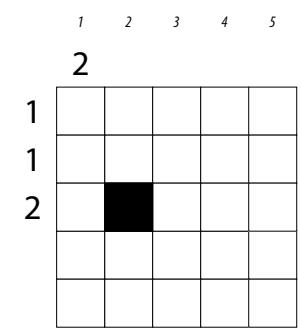
Answer: Starting at the "A" in the upper-left and heading to the right, enter all the letters in the grid in the order in which the loop encounters them, ending at the letter "A" (again). Your answer must end in the letter "A".

Example Answer: ACEDBA



8. Loop (Shaded) [Théophane] (43 points)

Shade some cells so that no shaded cells touch along an edge. Each number to the top and left of the grid reveals the number of shaded cells that must be located in that row or column (including any that might be given for you).

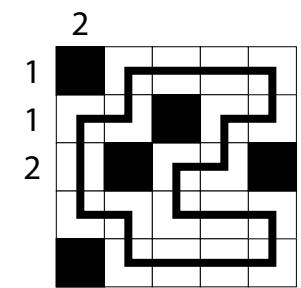


You must be able to draw a single closed loop (without intersections or crossings) through the centers of all unshaded cells. Loop paths must be orthogonal.

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

Answer: For each row from top to bottom, enter the number of the first column (the number on the far top of that column) from the left where a shaded cell appears (included any that might be given for you). Use only the last digit for two-digit numbers; e.g., use '0' if the first shaded cell appears in column 10. If the row is empty, enter '0'.

Example Answer: 13201





9. Masyu [Théophane] (20 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.

10. Masyu (Colorblind) [Théophane] (39 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.

The positions of the circles are provided, but you must determine which circles are black and which circles are white.

11. Masyu (Colorblind) + Yajilin [Théophane] (56 points)

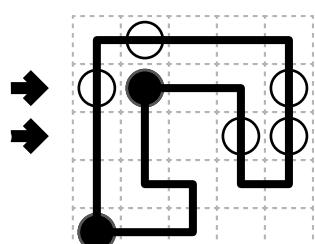
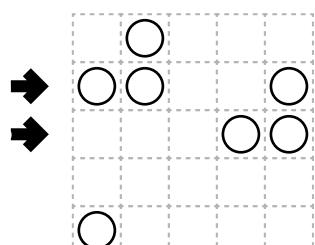
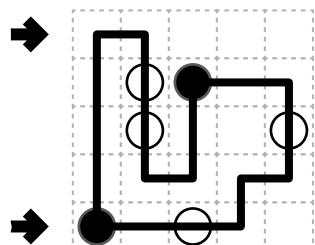
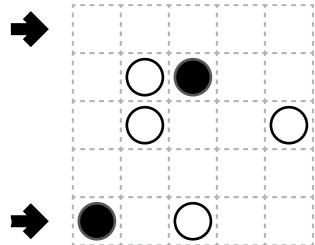
Draw two loops that pass orthogonally through centers of cells. Neither loop may intersect itself or enter the same cell more than once. The two loops must intersect each other at the cells marked with a cross and cannot intersect each other anywhere else.

One of the loops must go through all circled cells (the other loop must not go through any circled cell). That 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. That loop must also make a turn in all the black circles, but must go straight in both cells immediately before and after each black circle.

The positions of the circles are provided, but you must determine which circles are black and which circles are white.

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 letters or numbers, as long as they are distinct.

Example Answer: LLXXX, LIILX

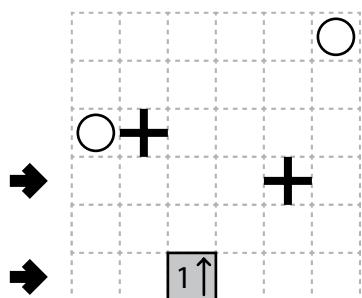


Answer: For each designated row, enter the letter for each cell, from left to right. The letter for a cell is 'I' if the path goes straight through the cell, 'L' if the path turns in the cell, and 'X' if the path does not go through the cell. You may use other letters or numbers, as long as they are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

Example Answer: ILILI, IIXII

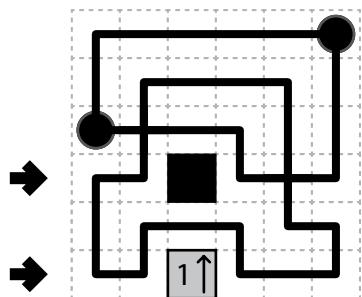
Some cells will remain empty; such cells are "unused" and cannot share an edge with each other.

The grid contains some outlined gray cells that cannot be part of the loop. Numbered arrows in such cells indicate the total number of unused cells along the direction of the arrow, starting in the arrowed cell and going along a row or column to the edge of the grid.



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

Example Answer: LLXLXL, LLXLIL





12. Magnets [Olivier] (25 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.

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 ‘P’ for a “positive” (+) symbol, ‘N’ for a “negative” (−) symbol, and ‘X’ for an empty cell. Alternatively, you may use any three characters instead of ‘PNX’, as long as they are distinct.

Example Answer: PXPXNP

| | | |
|-----|-----|---|
| + | | 2 |
| − | 0 3 | |
| 0 1 | | |
| 2 2 | | |
| 2 3 | | |



| | | |
|-----|-----|---|
| + | | 2 |
| − | 0 3 | |
| 0 1 | | |
| 2 2 | | |
| 2 3 | | |



13. Magnets (Toroidal) [Olivier] (29 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.

For each row and column, the two endpoint cells cannot contain the same symbol (as if the grid “wraps around” to the other side). Note that some regions also “wrap around” similarly.

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.

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 ‘P’ for a “positive” (+) symbol, ‘N’ for a “negative” (−) symbol, and ‘X’ for an empty cell. Alternatively, you may use any three characters instead of ‘PNX’, as long as they are distinct.

Example Answer: PNXP

| | | |
|-----|-------|--|
| + | 1 1 1 | |
| − | 1 2 | |
| 2 1 | | |
| 1 | | |
| 0 1 | | |



| | | |
|-----|-------|---|
| + | 1 1 1 | |
| − | 1 2 | |
| 2 1 | − + | + |
| + | | |
| 1 | − + | |
| 0 1 | | − |





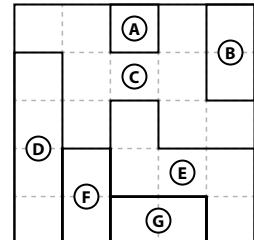
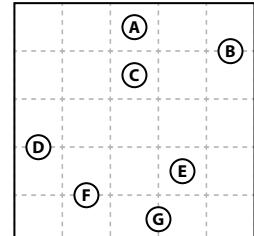
14. Spiral Galaxies [Olivier] (59 points)

Divide the grid into polyomino-shaped regions such that each cell is in exactly one region. You may only draw on the grid, as indicated by the dotted lines. Each region must be rotationally symmetric and contain exactly one circle at the point of symmetry.

The letters inside the circles are for Answer purposes only.

Answer: For each designated row, enter the letter for each cell, from left to right. The letter of a cell is the letter inside the circle that is the point of symmetry for the region that contains that cell.

Example Answer: DCECC, DFEEE



15. Spiral Galaxies + Battleships [Olivier] (75 points)

Locate the indicated fleet of ships in the grid. Ships may be rotated before being placed in the grid. Each piece of a ship occupies a single cell. A cell that does not contain a ship piece is considered "sea". Ships do not touch each other, not even diagonally (that is, if two ship pieces are cells that share an edge or a corner, they must be part of the same ship). The contents of some cells may be given for you.

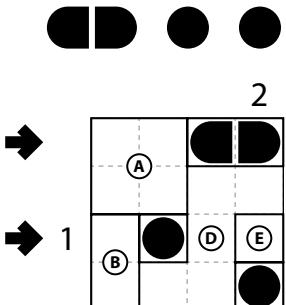
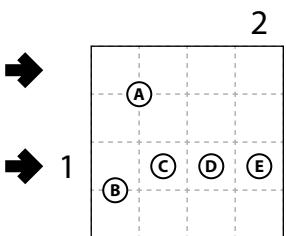
Each number to the top and left of the grid reveals the number of ship pieces that must be located in that row or column (including any that might be given for you).

Then divide the cells *that are not occupied by the fleet* into polyomino-shaped regions such that each such cell is in exactly one region. You may only draw on the grid, as indicated by the dotted lines. Each region must be rotationally symmetric and contain exactly one circle at the point of symmetry. (It is permissible for some circles to be completely within one or more cells that are occupied by ship pieces and therefore not in any region.)

The letters inside the circles are for Answer purposes only.

Answer: For each designated row, enter the letter for each cell, from left to right. The letter of a cell is the letter inside the circle that is the point of symmetry for the region that contains that cell. If a cell is not in any region (because it contains a ship piece), use 'X' for that cell's letter.

Example Answer: AAXX, BXDE

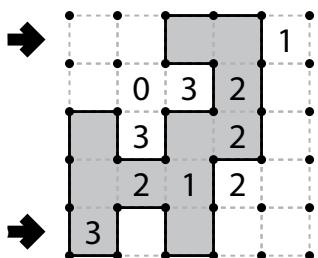
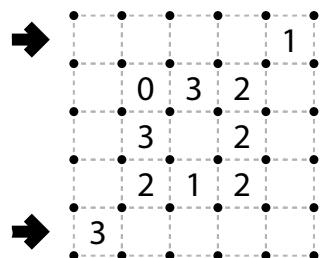


16. Slitherlink [Théophane] (39 points)

Draw a single, non-intersecting loop that only consists of line segments between the dots along the dotted lines. A number inside a cell indicates how many of the edges of that cell are part of the loop.

Answer: For each designated row, enter its contents from left-to-right. Use 'O' for a cell inside the loop and 'X' for a cell outside the loop. You may use two other characters, as long as they are distinct.

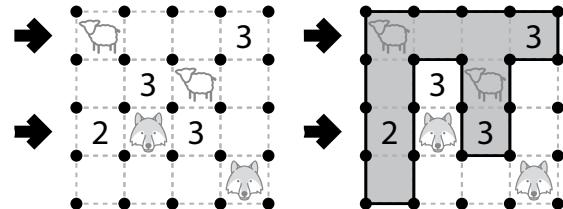
Example Answer: XXOOX, OXOXO





17. Slitherlink (Wolves and Sheep) [Théophane] (51 points)

Draw a single, non-intersecting loop that only consists of horizontal and vertical line segments between the dots. A number inside a cell indicates how many of the edges of that cell are part of the loop. Cells containing a wolf must be outside the loop; cells containing a sheep must be inside the loop.



Answer: For each designated row, enter its contents from left-to-right. Use 'O' for a cell inside the loop and 'X' for a cell outside the loop. You may use two other characters, as long as they are distinct.

Example Answer: OOOO, OXOX

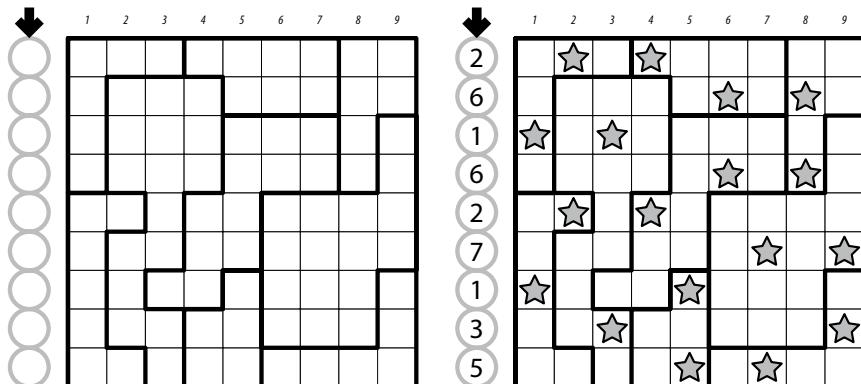
18. Star Battle [Théophane] (53 points)

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 along an edge or a corner.

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: 261627135



19. Pentominous [Théophane] (102 points)

Divide the grid into pentominoes such that every cell in the grid is part of exactly one pentomino. Pentominoes of the same shape (rotations and reflections of a pentomino count as the same shape) cannot touch each other along an edge (but they may touch diagonally). Some letters are given in the grid. Each letter must be part of a pentomino with that letter's shape. It is permissible for a pentomino to contain more than one letter. (It is possible for some pentomino shapes to never appear in the grid, or more than once.)

The letter-to-shape correspondence for pentominoes has been supplied for you.

In the competition puzzle, there may be black areas that are not part of the grid.

Answer: For each designated row, enter the letter for the pentomino that each cell belongs to, from left to right.

Example Answer: IPPPI, IUFUI

