

WPF PUZZLE GP 2026 COMPETITION BOOKLET

Host Country: Germany

Christian König, Martin Ender

Special Notes: For this round, the phrase “valid die” means a cube where each face is labeled with a different number of pips (dots) from 1 through 6, and opposite (non-touching) faces have numbers that sum up to 7. While there are two possible arrangements of numbers (they are mirror images of each other), both arrangements satisfy the condition of being a “valid die”. If the puzzle gives pip arrangements, then the orientation of pips must match that of the die (meaning that there are 16 possible valid dice arrangements), but if the puzzle gives numbers, then the number just has to match the number of pips, in any orientation (meaning that there are only 2 possible valid dice arrangements).

The puzzles in the later half of the round have the actual grid on the surface of the cube, where the printed grid represents an unfolded cube. The corners of the cube are labeled with partial diamonds to help you visualize how the cube is to be folded; these diamonds have no special function in the puzzles. The special geometry of the cube requires appropriate changes to the rules, which are described in a paragraph that starts with the bolded word “**Cube**”. For answer submission purposes, “rows” and “left to right” should be treated on the unfolded grid as printed, not on a folded three-dimensional cube.

As an exception to the general rules of Puzzle GP, you are allowed to use scissors, tape, glue, and cubes (blank or labeled like dice) to help you solve this round, although the puzzles have been solveable by testers without any of these tools.

1. Country Road [Christian König] (45 points)

Draw a single loop that passes orthogonally through centers of cells. The loop cannot intersect itself or enter the same cell more than once.

The loop must enter every outlined region exactly once (that is, for each region, all used cells must be consecutive along the loop’s path and there must be at least one used cell).

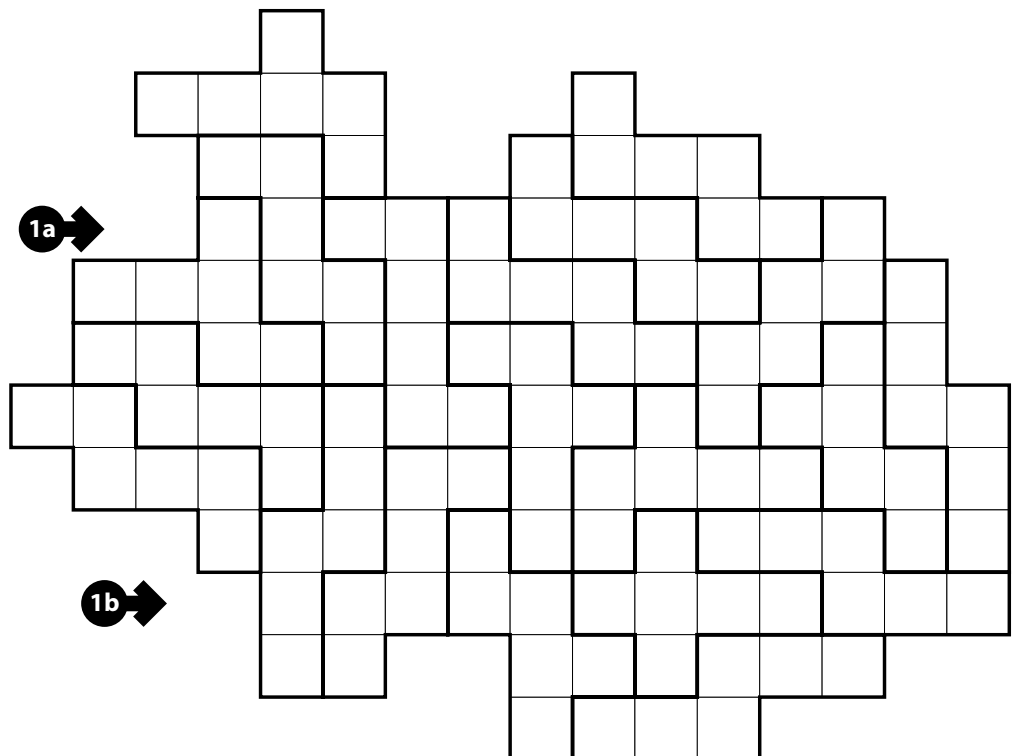
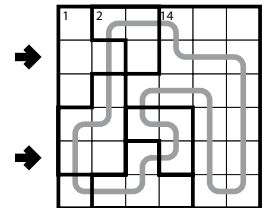
Cells not in the loop cannot share a region-boundary edge (that is, any pair of unused cells that share an edge must belong to the same region).

If a region contains a number, then exactly that number of cells in the region must be used by the loop. The cell that contains the number may or may not be used.

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:

XIXLIL, IXLLII





2-3. Statue Park (Subset) [Christian König] (48, 114 points)

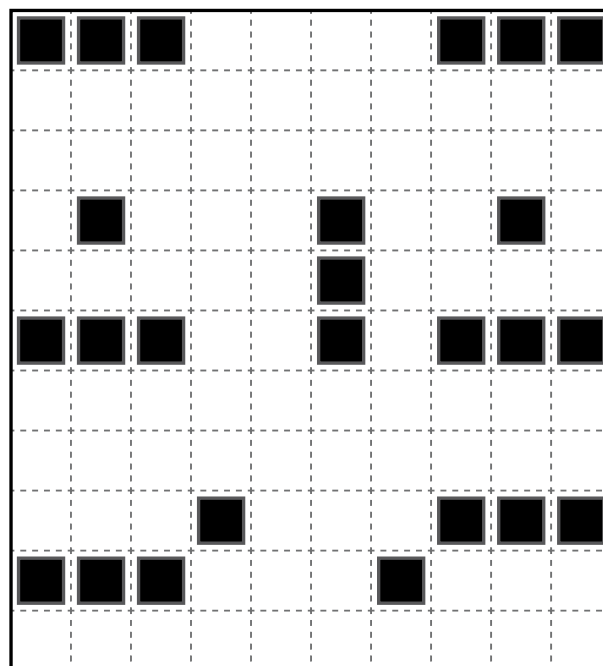
Shade some cells black (leaving the other cells white) so that the grid is divided into non-overlapping regions; cells of the same color are considered in the same region if they are adjacent along edges. The black regions must form (part of) the set of given shapes; each shape may be rotated and/or reflected in the solution. Shapes cannot touch along an edge, but can touch at a corner. All white cells must be in the same region.

A cell with a black square must be shaded and a cell with a white circle must not be shaded.

There may be given shapes that are not used in the grid.

The letters on the given shapes are only for entering your answer.

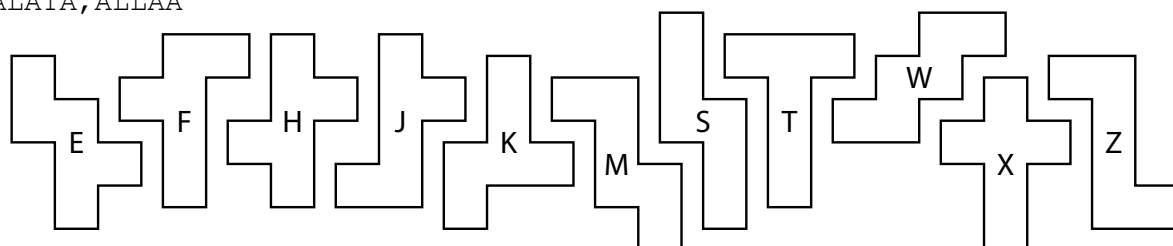
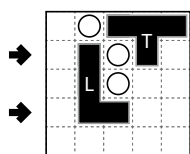
Answer: For each designated row, enter the contents of each cell, from left to right. For each cell, its contents are the letter of the shape occupying that cell, or the letter 'A' if the cell is not shaded.



2a →

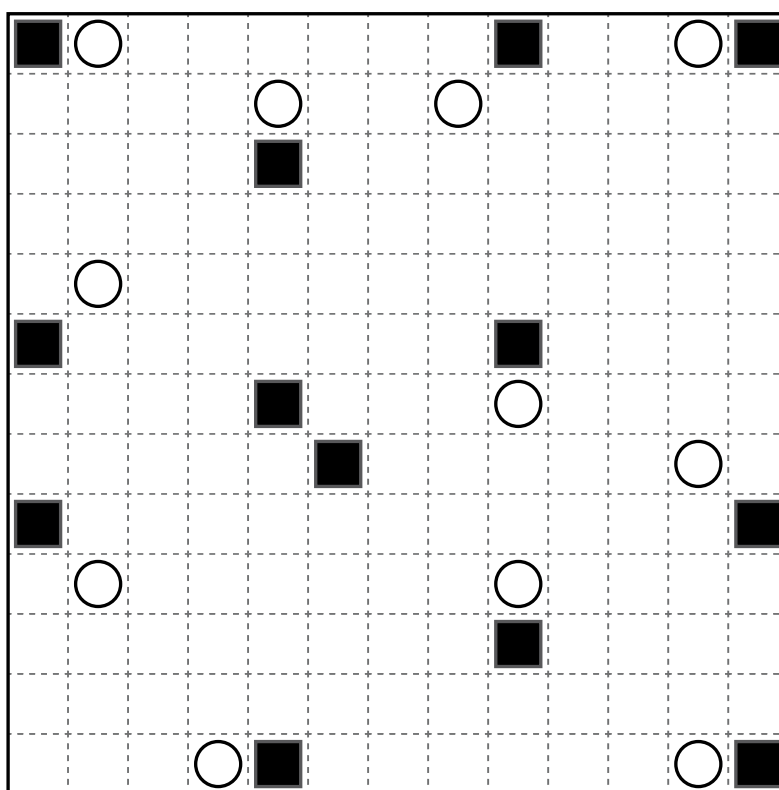
2b →

Example Answer: ALATA, ALLAA



3a →

3b →





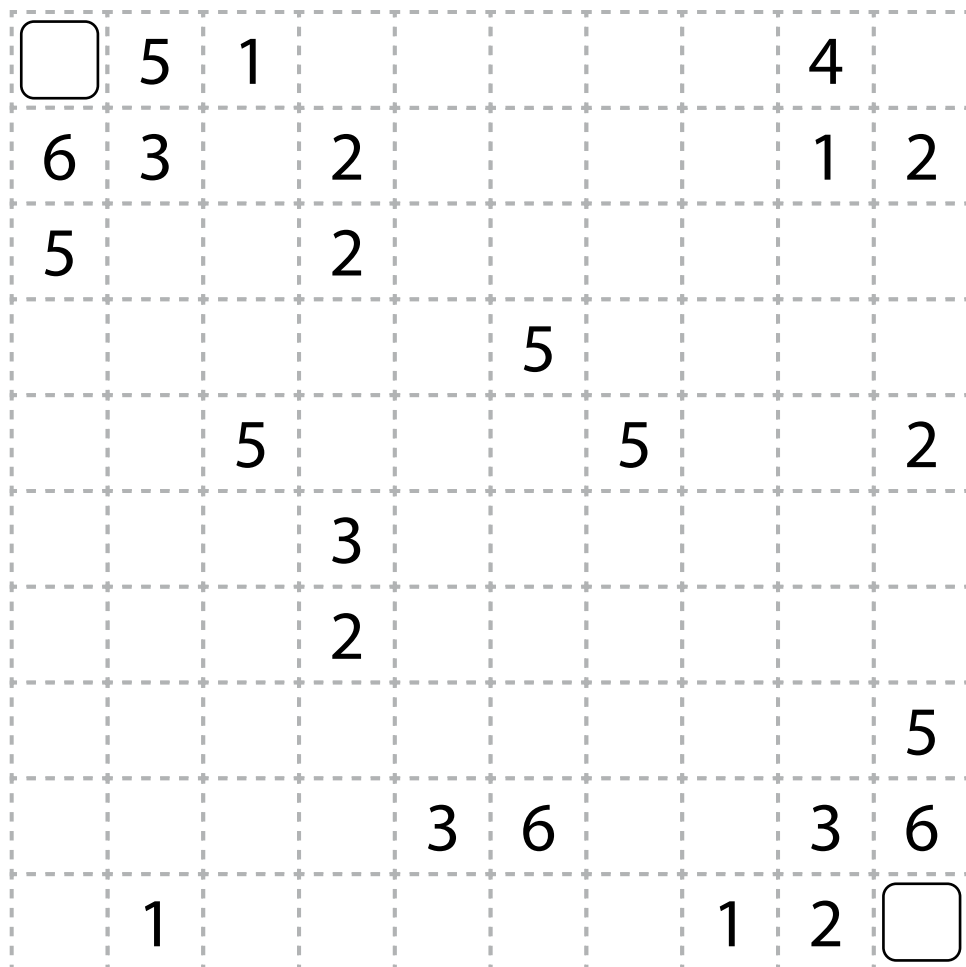
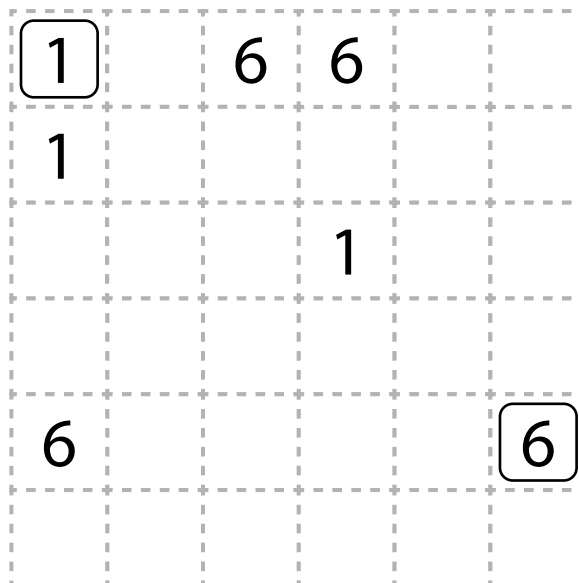
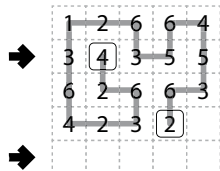
4-5. Die Roll [Martin Ender, Christian König] (13, 175 points)

Draw a path that passes orthogonally through centers of cells. There are two cells marked with rounded squares; the path's two ends must be on those cells. The path cannot use any cell more than once (but does not have to use every cell).

Some cells are marked with digits. It must be possible to take a valid die with faces the same size as a cell, position it at one end of the path, and roll it along the path, tipping it over its edges, such that any time the die is on a space with a digit, the die's top face matches that digit. The path must use all cells with digits. (Note that it is sufficient to draw the path to solve the puzzle; there might be more than one way to have a valid die.)

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 (including the endpoints). You may use other letters or numbers, as long as they are distinct.

Example Answer: IXLILI, XXXXX





6-7. Die Roll (Pips, Ice) [Martin Ender, Christian König] (34, 76 points)

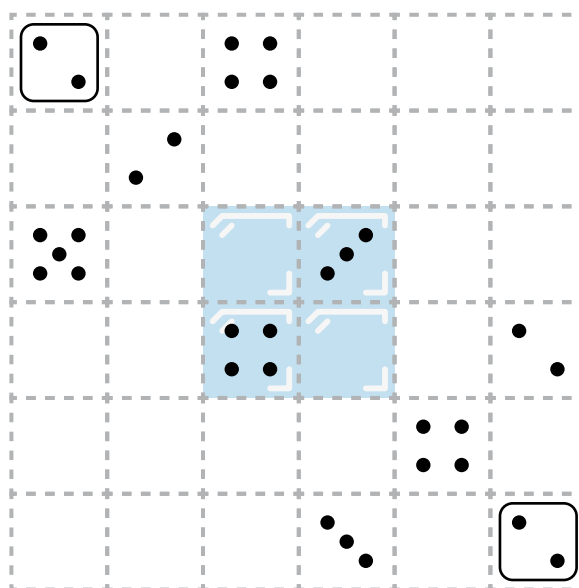
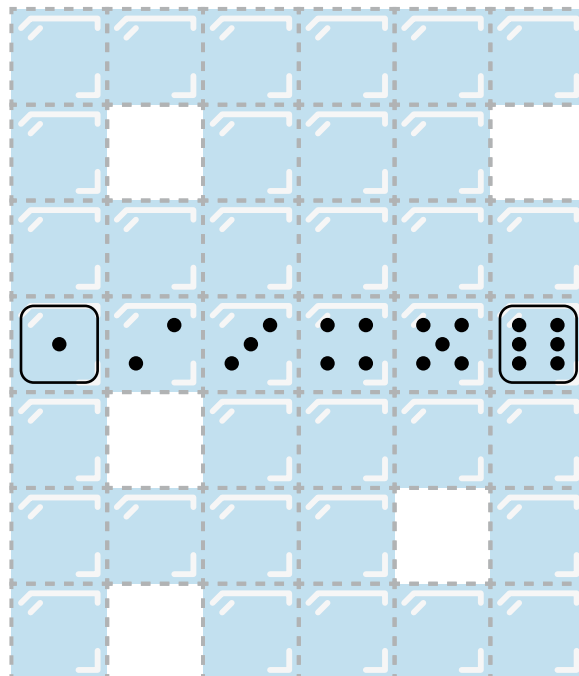
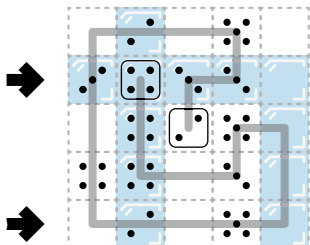
Draw a path that passes orthogonally through centers of cells. There are two cells marked with rounded squares; the path's two ends must be on those cells. The path cannot use any cell more than once (but does not have to use every cell).

Some cells are marked with pips. It must be possible to take a valid die with faces the same size as a cell, position it at one end of the path, and roll it along the path, tipping it over its edges, such that any time the die is on a space with pips, the die's top face matches those pips (with an orientation matching the pip arrangement). The path must use all cells with pips. (Note that it is sufficient to draw the path to solve the puzzle; there might be more than one way to have a valid die, such as the example solution where the 1 and 6 faces can be swapped.)

In addition, some cells are indicated as having "ice". When the die moves directly from one ice cell to another, it slides without tipping or spinning (keeping the same face on top). Ice cells, like other cells, cannot be used more than once in the path.

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 (including the endpoints). You may use other letters or numbers, as long as they are distinct.

Example Answer: IXLLX, LIILL





10-11. Masyu (Foldable Nets) [Martin Ender] (22, 52 points)

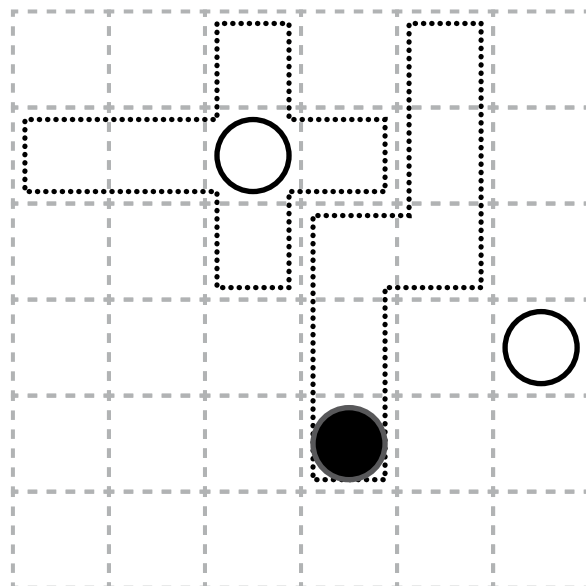
Draw a single loop that passes orthogonally through centers of cells. The loop must go through all cells with a circle. The loop cannot intersect itself or enter the same cell more than once. The loop must go straight through the cells with white circles, with a turn in at least one of the cells immediately 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.

Some groups of cells are indicated by a dotted "cage"; the shape of each cage can be folded up to become a three-dimensional object with the contents of cells as faces. There must be a way to fold each shape such that the resulting object will have exactly one loop drawn on it. (Ignore black/white circle rules when considering the loop's shape on the object.)

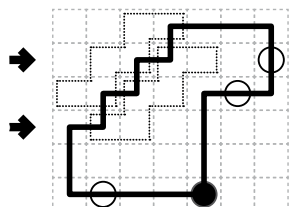
Answer: For each designated row, enter the letter for each cell, from left to right. The letter for a cell is 'I' if the loop goes straight through the cell, 'L' if the loop turns in the cell, and 'X' if the loop does not go through the cell. You may use other characters, as long as they are distinct.

Example Answer: `XXLLXXI, LLXXIXX`

10a →

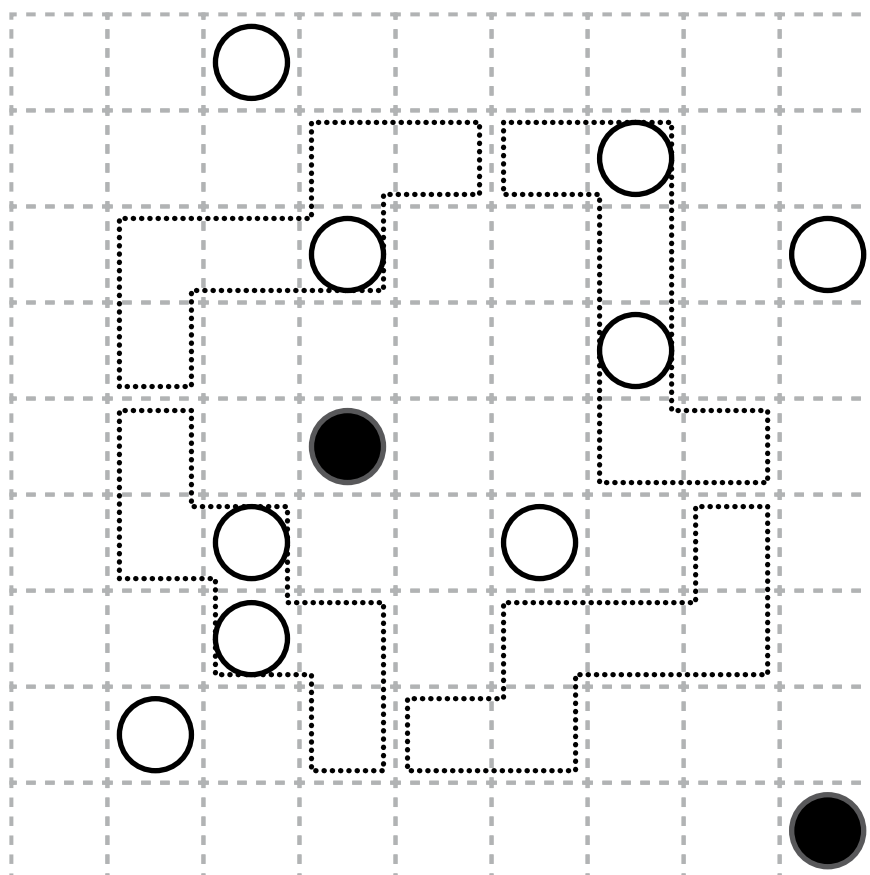


10b →



11a →

11b →





14-15. Tapa (Unknowns, Cube) [Martin Ender, Christian König] (24, 53 points)

Shade some empty cells; cells with numbers cannot be shaded. All shaded 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 cells can be entirely shaded.

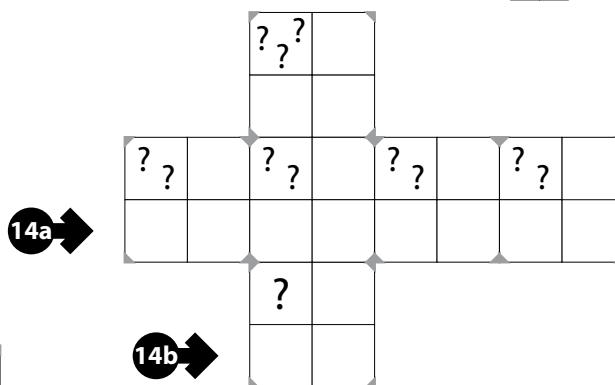
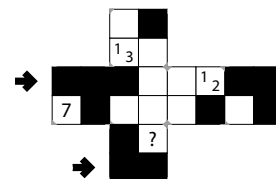
Numbers in a cell indicate the lengths of contiguous shaded cell groups along the "ring" of 8 cells touching that cell (fewer for cells along the outside edge). If there is more than one number in a cell, then there must be at least one white (unshaded) cell between the shaded cell groups. The numbers 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.

Some numbers may be replaced with question marks ('?'). Ignore the arrangement of numbers; for example, a "? 2" could be a "1 2", "2 2", "3 2", or "4 2". If there is more than one number or question mark in a cell, none of them can be zero (0).

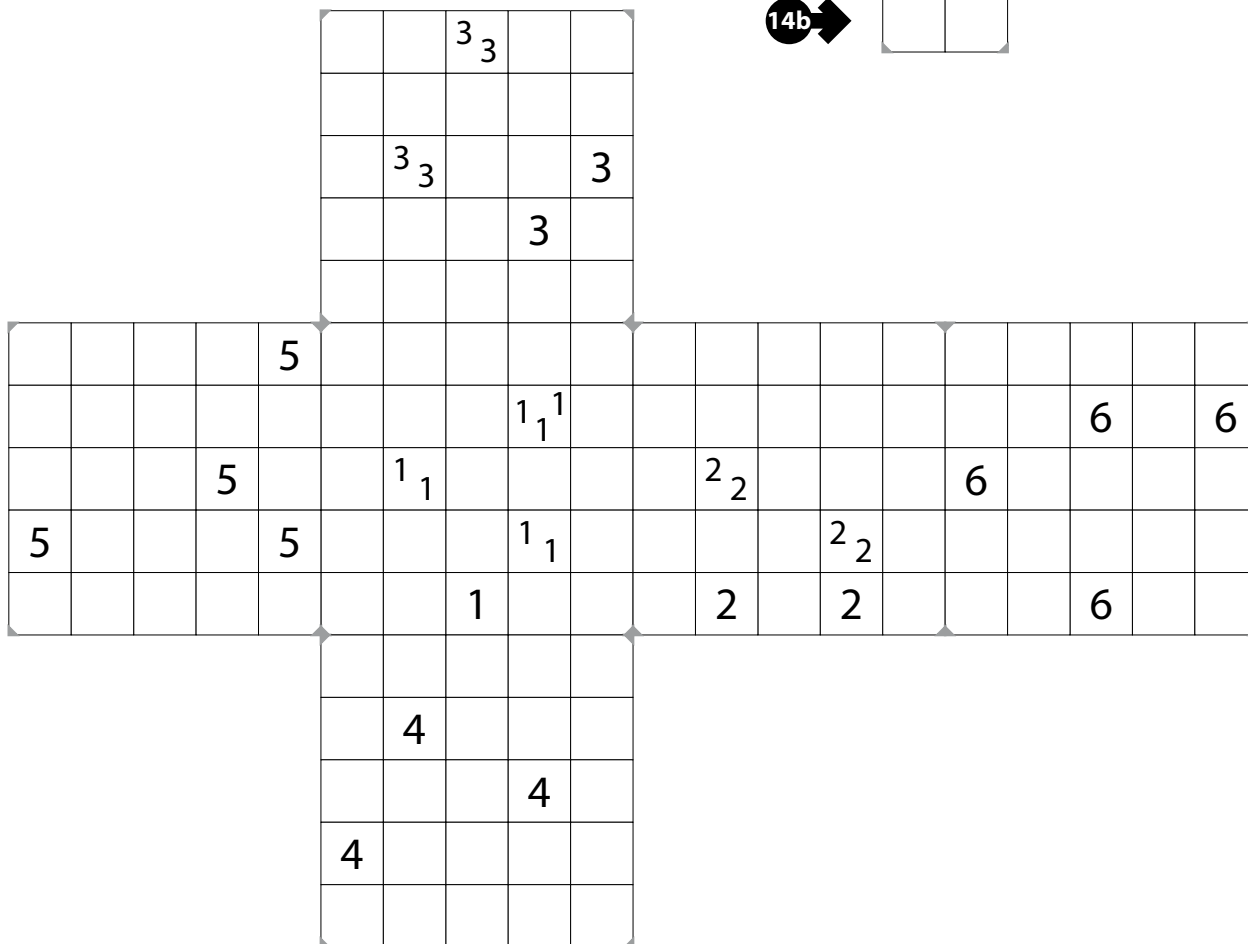
Cube: Each cell touching a corner of the cube has a "ring" of 7 touching cells instead of 8, and no group of three cells touching the same corner of the cube can be entirely shaded.

Answer: For each designated row, enter its contents from left to right. Use 'x' for an unshaded cell and 'o' for a shaded cell. You may use two other letters or numbers, as long as they are distinct.

Example Answer: 000XXX00, 00



15a →



15b →



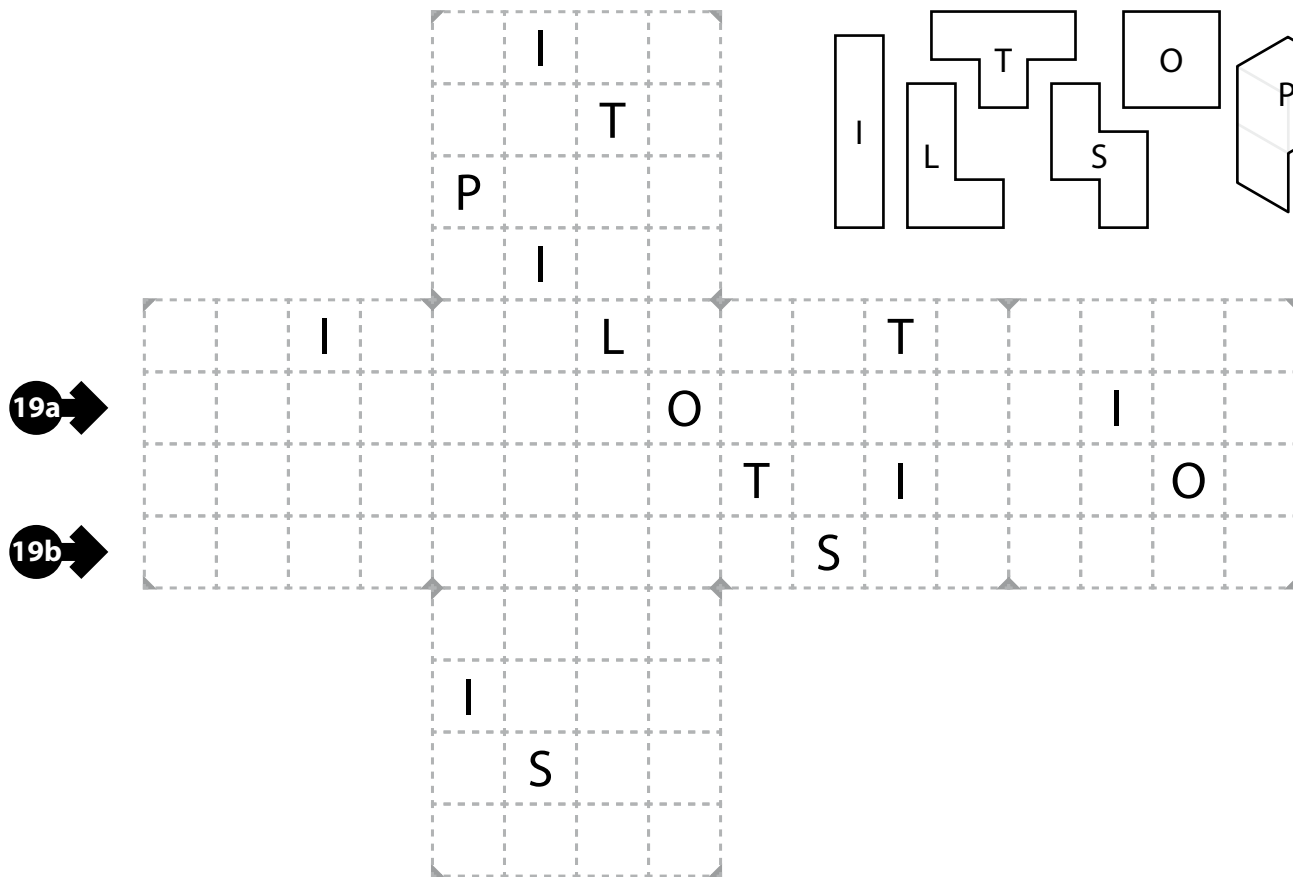
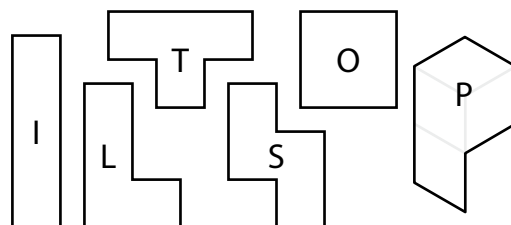
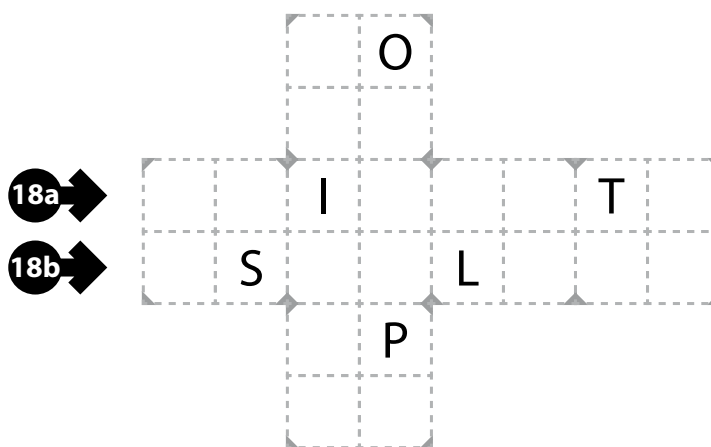
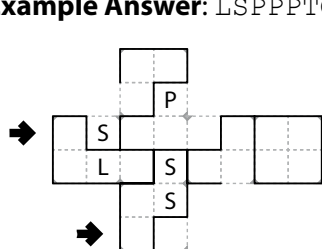
18-19. Tetriminous (Cube) [Martin Ender] (16, 71 points)

Divide the grid along the dashed lines into tetriminoes such that every cell in the grid is part of exactly one tetrimino. Tetriminoes of the same shape (rotations and reflections of a tetrimino 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 tetrimino with that letter's shape. It is permissible for a tetrimino to contain more than one letter. (It is possible for some tetrimino shapes to never appear in the grid, or more than once.)

Cube: Regions may be folded over the edges of the cube (despite the word "tetrimino" normally meaning a flat shape made out of 4 squares). It is permissible for a "tetrimino" to include all three cells touching the same corner of the cube; such a shape is given the letter "P" (which is considered distinct from "L", "T", and "S" even though it could unfold to all three of those tetriminoes, depending on where it is cut).

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

Example Answer: LSPPTOO, ST





20-21. Star Battle (Cube) [Christian König] (14, 48 points)

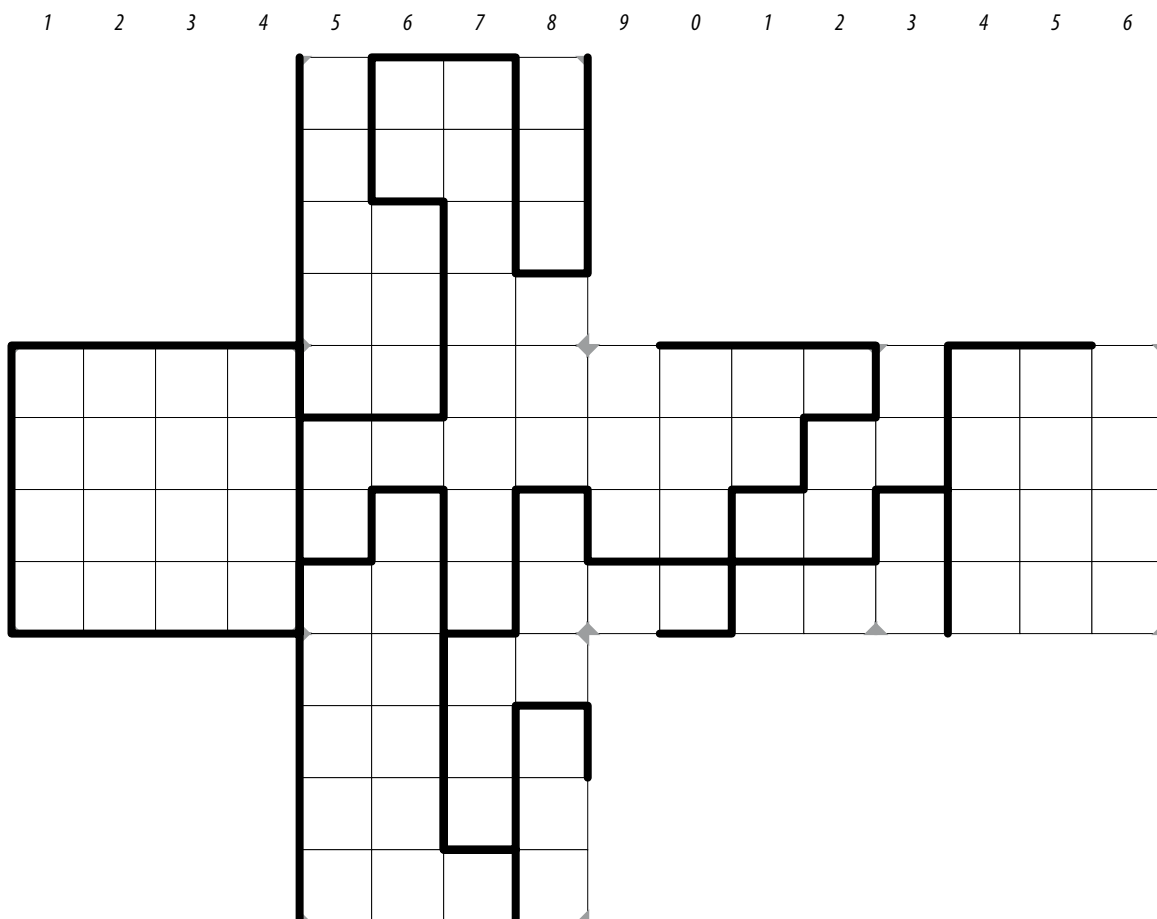
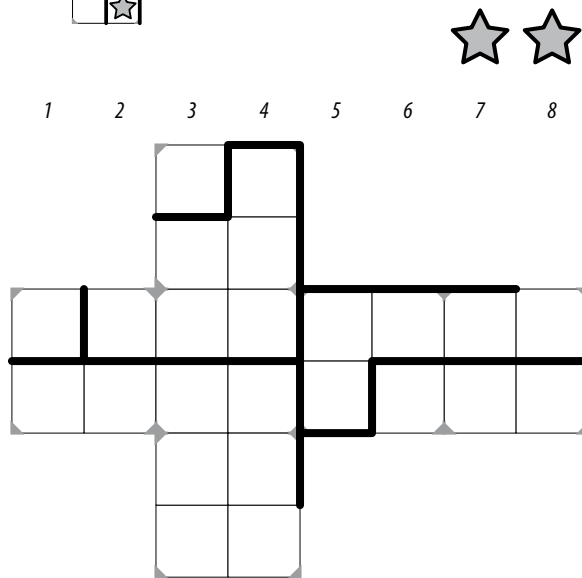
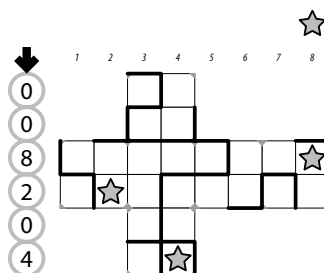
Place stars into some cells in the grid, no more than one star per cell. Each row and each outlined region must contain exactly the same number of stars; that number of stars is shown outside the upper-right of the grid. Cells with stars cannot touch each other along an edge or a corner.

Cube: Instead of flat rows and columns, each "row" is a ring of touching cells that goes across four faces of the cube, connecting cells by opposite edges of that cell.

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). (Note that not all rows will start in column 1.) Use only the last digit for two-digit numbers; e.g., use '0' if the first star appears in column 10.

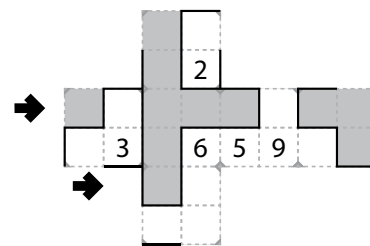
Example Answer: 008204





22-23. Cave (Cube) [Christian König, Martin Ender] (24, 58 points)

Shade some cells to leave behind a single orthogonally-connected group—the cave—with no shaded cells enclosed within the cave. 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*.

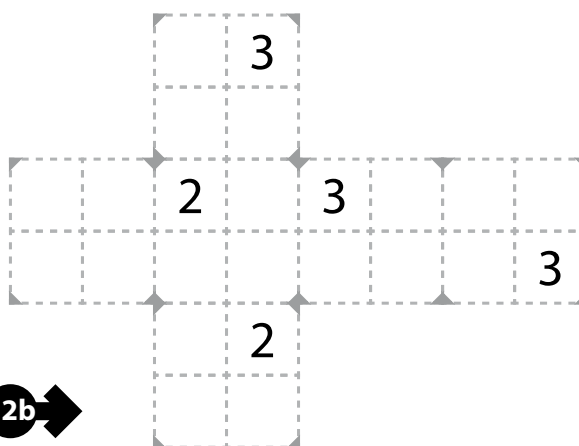


Cube: All shaded cells (“outside the cave”) must be in a single orthogonally-connected group (as there is no “edge of the grid”). It is possible for a cell to be “connected in line” in multiple directions to the same numbered cell; in such cases, the cell should only be counted once for purposes of checking the number.

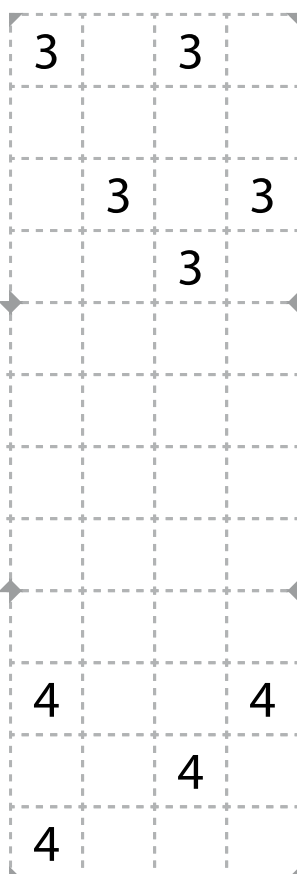
Answer: For each designated row, enter its contents from left to right. Use ‘o’ for an (unshaded) cell occupied by the cave and ‘x’ for a (shaded) cell not occupied by the cave. You may use other characters, as long as they are distinct.

Example Answer: xoxxxxoxxx, xo

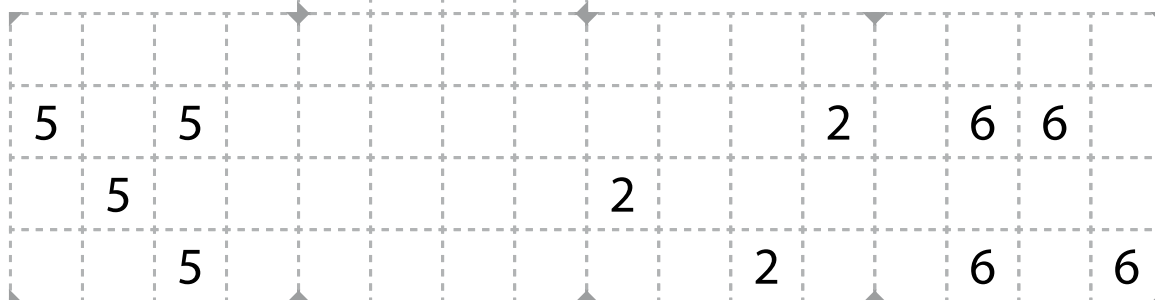
22a →



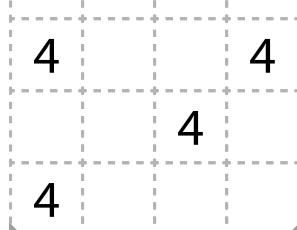
22b →



23a →



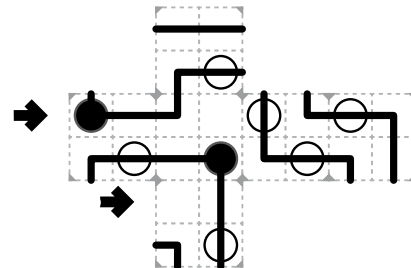
23b →





24-25. Masyu (Cube) [Martin Ender] (13, 54 points)

Draw a single loop that passes orthogonally through centers of cells. The loop must go through all cells with a circle. The loop cannot 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.



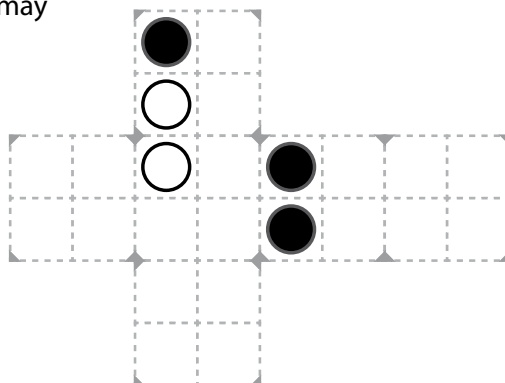
Cube: when the loop goes over an edge of the cube, it is to be considered as if it were a straight line connecting the two cells touching that edge (that is, as if that edge was unfolded and flat, even though the actual line would bend at a right angle when going over the cube's edge).

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 does not go through the cell. You may use other characters, as long as they are distinct.

Example Answer: LILXILIL, XI

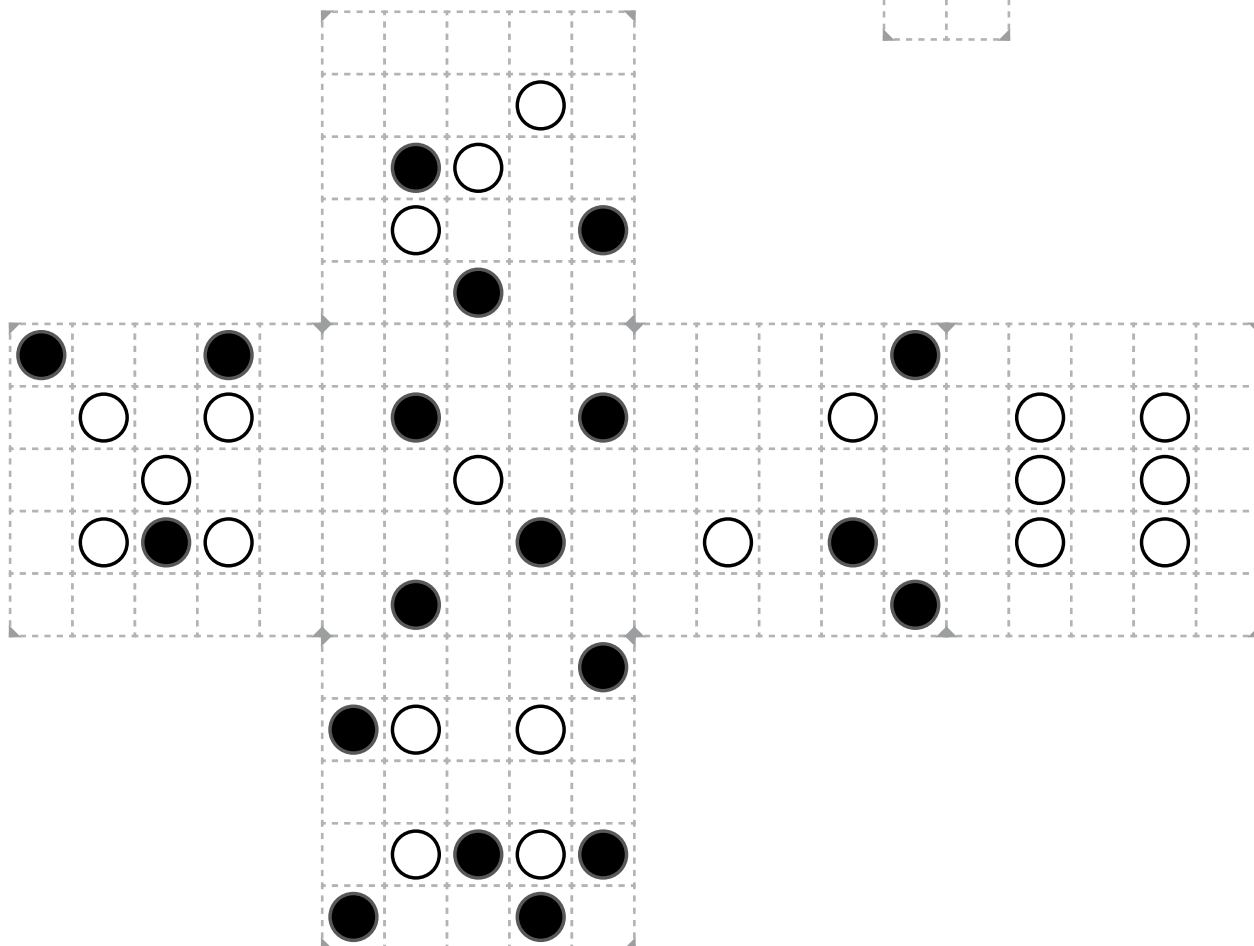
24a →

24b →



25a →

25b →





26-27. Slitherlink (Cube) [Christian König, Martin Ender] (37, 48 points)

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

Cube: Each of the eight corners of the cube (as represented by partial diamonds) should be considered a single dot. Each dot and dashed line at an edge of the cube might appear in two places on the flat printed grid, but they should be considered the same dot and dashed line for this puzzle. As there is no outer edge of the grid, the "inside" and "outside" of the loop could be swapped; either solution is valid.

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 other characters, as long as they are distinct.

Example Answer:
XOOXOXXX, OO

