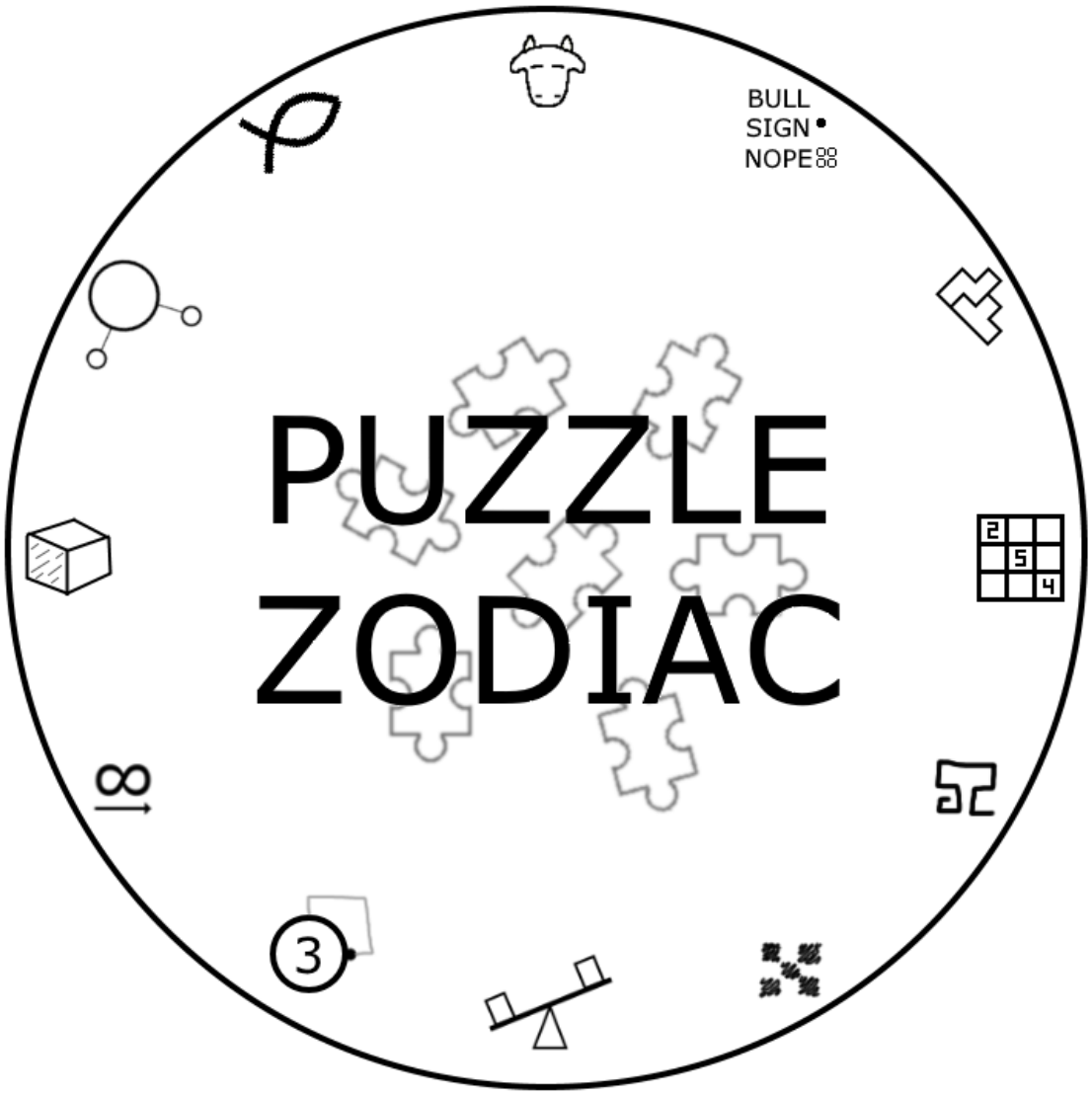


October 9th - 14th

A puzzle contest by Jeffrey Bardon (IHNN)

Thanks to edderiofer and lovermathboy for testsolving, Hornlitz for proofreading the rules to ensure they're understandable, sabo2 for creating pzv.jp, rob for extending it into puzz.link, and opt-pan for creating penpa-edit, which was used for generating the puzzle images.

To participate:

- Understand the instructions to the puzzle types in this contest.
- Download the password protected puzzle booklet before beginning the contest.
- Log in to your LMI account and hit “Begin Test” to obtain the password for the puzzle booklet. The puzzle booklet will have 14 pages.
- You will then have 120 minutes (2 hours) to solve as many puzzles as you can. To obtain points for a puzzle, you must input the answer key for that puzzle and hit submit.
- Instant Grading is enabled- you will know if your answer is correct or incorrect as soon as you submit it, and you can submit a different answer if it was incorrect.
- Each incorrect answer will reduce the value of the puzzle: the 2nd, 3rd, and 4th submissions for a puzzle will be at 90%, 70%, and 40% value respectively. Any further submissions on a puzzle will be worth 0 points.
- A time bonus of 10 points per minute remaining is available if you finish the contest before the time limit. All puzzles must be solved to earn this bonus, even puzzles with their value reduced to 0.

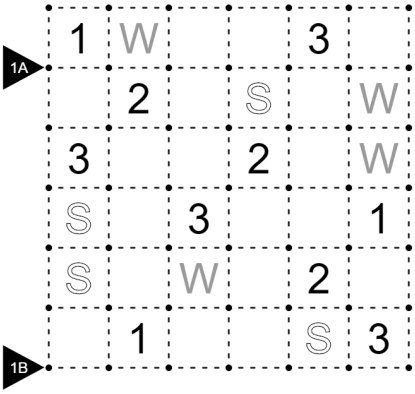
Puzzle Type	Point Values
Slitherlink (Sheep & Wolves)	30, 60
Araf	30, 50
Double Chocolate	30, 80
Foursight	40, 70
Akari	20, 30
Star Battle Sudoku	20, 50
Minarism	20, 70
Cave	20, 50
Sashigane Fillomino	30, 40
Icelom	20, 40
Aquarium	20, 30
Anglers	20, 30
Word Nurikabe	100
Total	1000

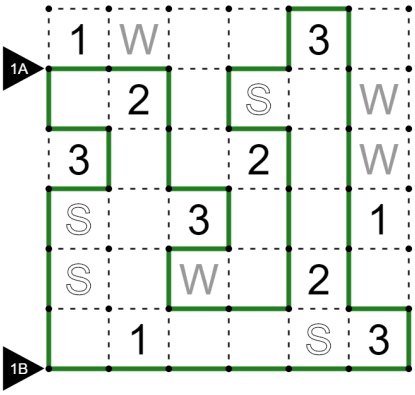
Slitherlink (Sheep & Wolves) (30 points, 60 points)

Draw a loop that consists of horizontal and vertical lines between dots, that does not cross or intersect itself. Numbers inside a cell indicate the number of loop segments on the edges of that cell. All sheep (represented by an S) must be inside the loop, and all wolves (represented by a W) must be outside the loop.

Answer key: The lengths of loop segments in the marked rows/columns. Enter a 0 if there are no loop segments. Enter only the ones digit for double digit numbers.

Example: 21, 6



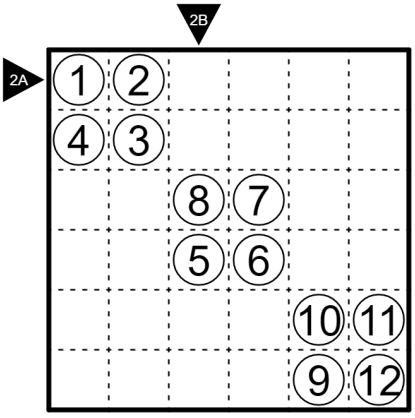


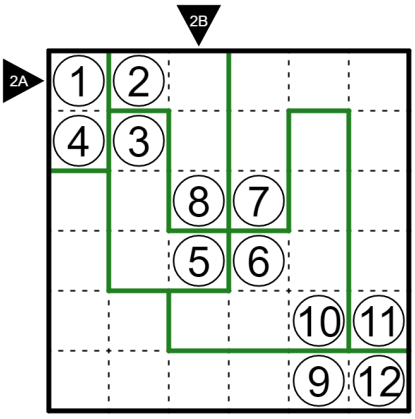
Araf (30 points, 50 points)

Divide the grid into regions along cell boundaries. Each region must contain exactly two numbers, and the number of cells in that region must be strictly between those two numbers.

Answer key: The lengths of cells in the same region in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 123, 3111



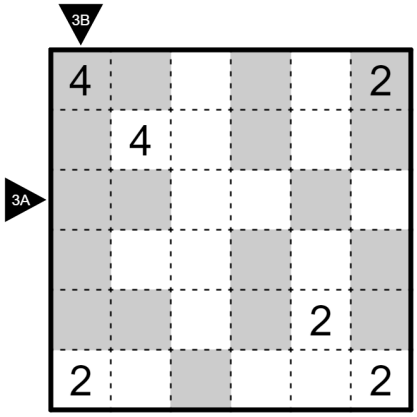


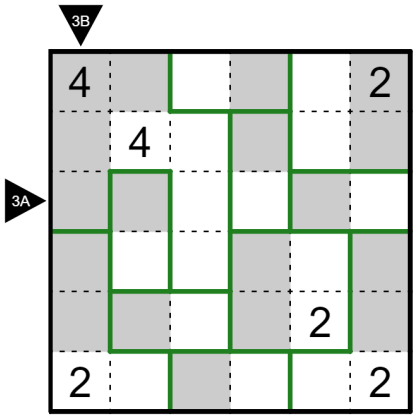
Double Chocolate (30 points, 80 points)

Divide the grid into regions along cell boundaries. Each region must contain one connected group of light cells, and one connected group of dark cells. These groups must be the same shape, but may be rotated and/or reflected. Numbers inside a cell indicate the number of cells in the single-colored shape they are contained in.

Answer key: The lengths of cells in the same region in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 11112, 33



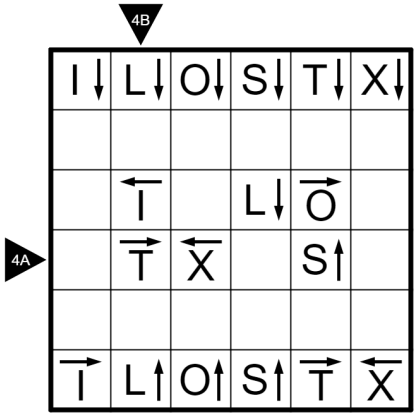


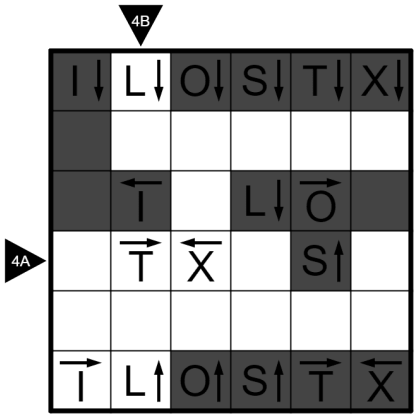
Foursight (40 points, 70 points)

Shade some cells in the grid to form tetrominos such that all unshaded cells are orthogonally connected. A tetromino is an orthogonally connected group of exactly 4 cells. Tetrominos may not share an edge, but may share corners. Clue cells may be shaded, and if they are, give no information. Unshaded clue cells give the shape of the first tetromino in the indicated direction, or X if there is no tetromino in that direction.

Answer key: The lengths of continuous shaded and unshaded cells in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 411, 213



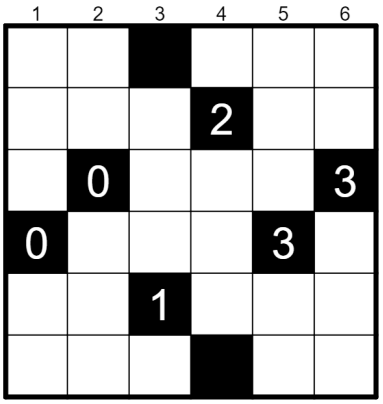


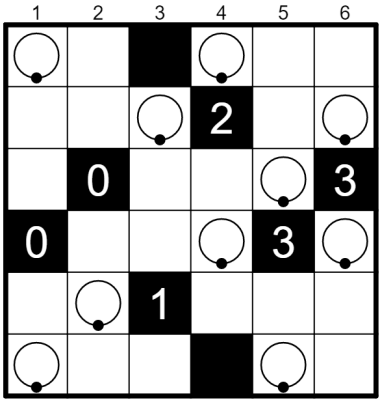
Akari (20 points, 30 points)

Place light bulbs (circles) into some white cells such that all white cells are illuminated. Light bulbs illuminate all cells in horizontal and vertical lines from the bulb until a black cell is reached. Light bulbs may not illuminate other light bulbs. A number indicates the number of light bulbs placed in the four orthogonally adjacent cells.

Answer key: The column of the first light bulb in each row. Enter only the ones digit for double digit numbers. Enter a 0 if there are no light bulbs in a row. Numbers written above the grid are for answer key purposes only.

Example: 135421



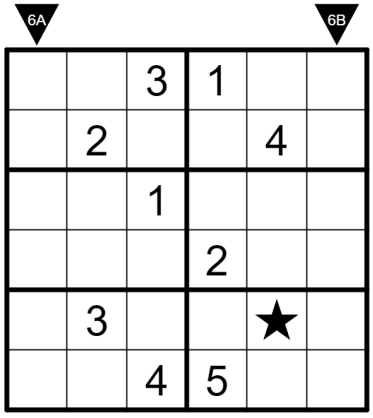


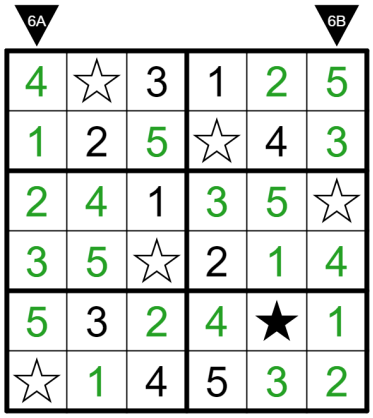
Star Battle Sudoku (20 points, 50 points)

Place a number or star into every cell such that every row, column and region contains exactly the indicated range of numbers and amount of stars (1-5 and 1 star for 6x6, 1-7 and 2 stars for 9x9). Stars may not touch, even at a point.

Answer key: Contents of indicated rows/columns. Use an X for a star.

Example: 41235X, 53X412



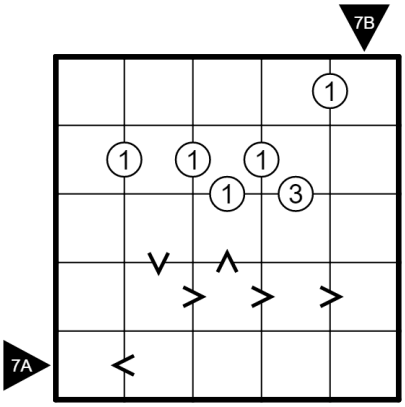


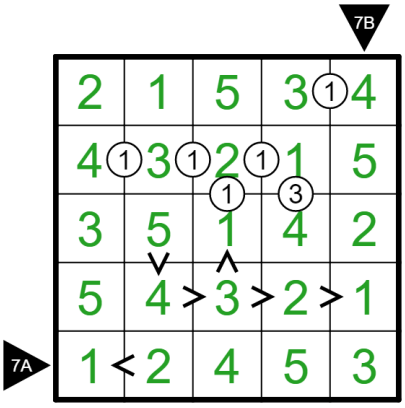
Minarism (20 points, 70 points)

Place a number from 1 to N (where N is the size of the grid) such that every row and column contains each number exactly once. Circled numbers on cell boundaries indicate the difference between the numbers in those cells. Inequality signs on cell boundaries indicate which of those two numbers is larger.

Answer key: Contents of indicated rows/columns.

Example: 12453, 45213



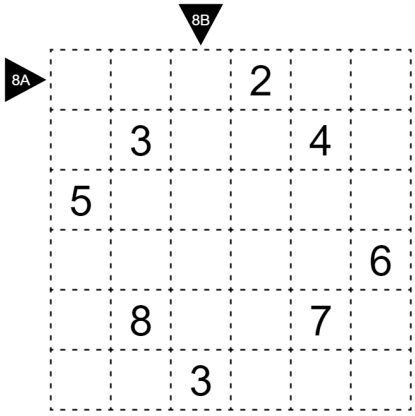


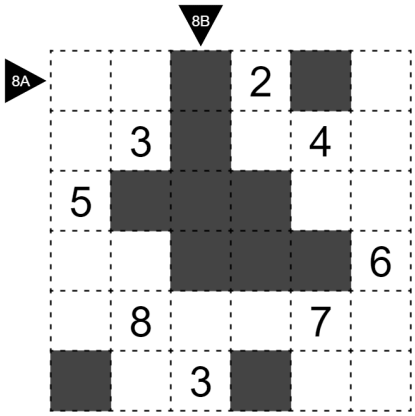
Cave (20 points, 50 points)

Shade some cells in the grid such that all unshaded cells are orthogonally connected, and all shaded cells are orthogonally connected to the edge of the grid. Numbers must be unshaded. A number in the grid indicates the total amount of unshaded cells in horizontal and vertical directions until the next shaded cell or the edge of the grid, including the numbered cell itself.

Answer key: The lengths of continuous shaded and unshaded cells in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 21111, 42



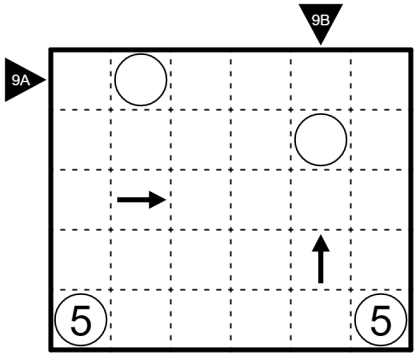


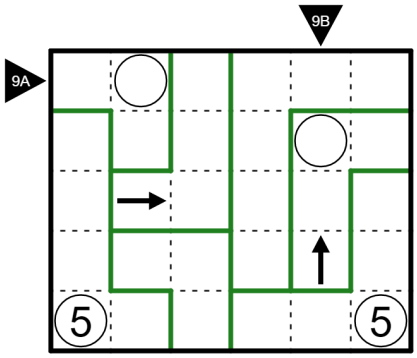
Sashigane Fillomino (30 points, 40 points)

Divide the grid into regions along cell boundaries. Each region must be a one cell wide L shape. A circle in the grid indicates a "bend" in the L shape, and an arrow in the grid indicates one of the extreme ends pointing towards the bend. A region containing a numbered circle must contain exactly that number of cells. An L shape may contain any number of symbols. Additionally, regions containing the same number of cells may not share an edge.

Answer key: The lengths of cells in the same region in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 213, 131



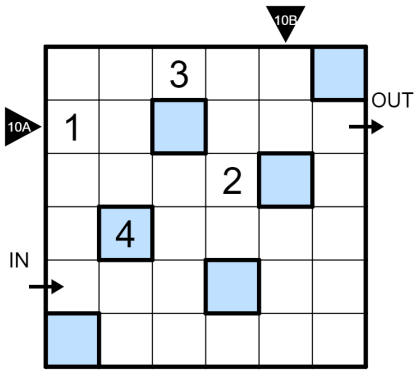


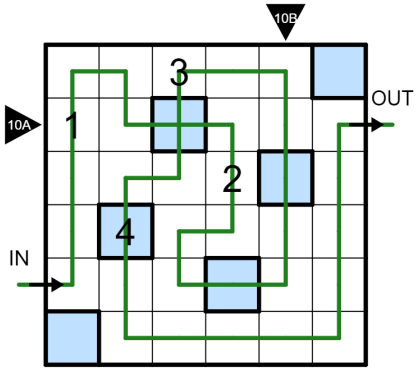
Icelom (20 points, 40 points)

Draw a path from IN to OUT that consists of horizontal and vertical segments between cell centers. The path may cross, but only on ice cells. The path must go straight on ice cells. The path must use all non-ice cells. Following the path, the numbers in the grid must be reached in strictly increasing order.

Answer key: The lengths of path segments in the marked rows/columns. Enter a 0 if there are no path segments. Enter only the ones digit for double digit numbers.

Example: 21, 4



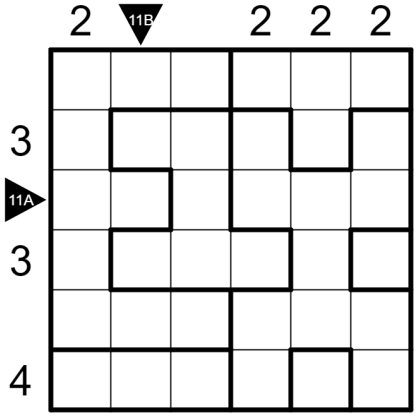


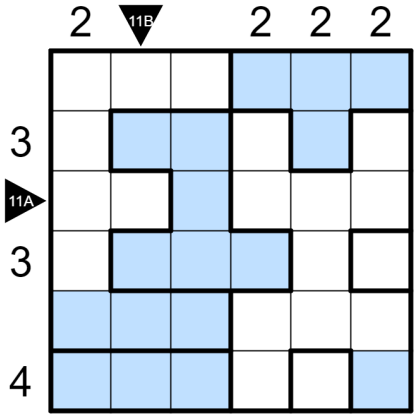
Aquarium (20 points, 30 points)

Shade some cells in the grid such that each number outside a row or column indicates the number of shaded cells in that row or column. Within each region, a shaded cell may not have an unshaded cell directly to the left, right, or below it. Additionally, a continuous group of shaded cells within a region must have a constant height, if possible. (In the example, if the top left of the X region was shaded, then the top right would also have to be shaded.)

Answer key: The lengths of continuous shaded and unshaded cells in the marked rows/columns. Enter only the ones digit for double digit numbers.

Example: 213, 1113



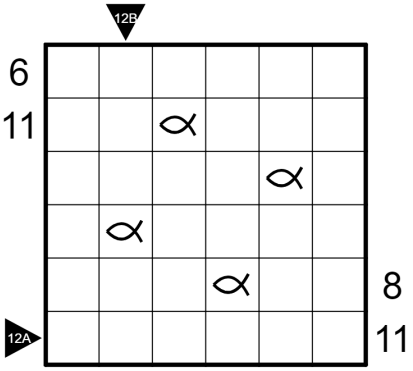


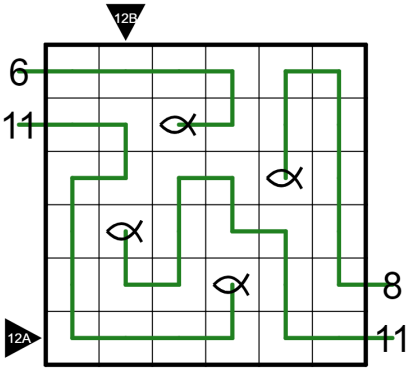
Anglers (20 points, 30 points)

Draw a path from each number that consists of horizontal and vertical segments between cell centers. Each number indicates the length of the path beginning from that number. Each path must have a number on one end, and a fish on the other end. A fish may only connect to one path.

Answer key: The lengths of path segments in the marked rows/columns. Enter a 0 if there are no path segments. Enter only the ones digit for double digit numbers.

Example: 32, 11





Word Nurikabe (100 points)

Shade some cells in the grid such that all shaded cells are orthogonally connected, and no 2x2 square is fully shaded. Additionally, fill all unshaded cells with a single letter so that each word from the word list can be found within the grid. Each word will use exactly one given letter in the grid, and must be able to be read only moving between orthogonally adjacent cells with no branching or 2x2 squares within a word.

Answer key: Contents of the marked rows/columns. Use an X for a shaded cell.

Example: XLMIXX, LXXXTXS