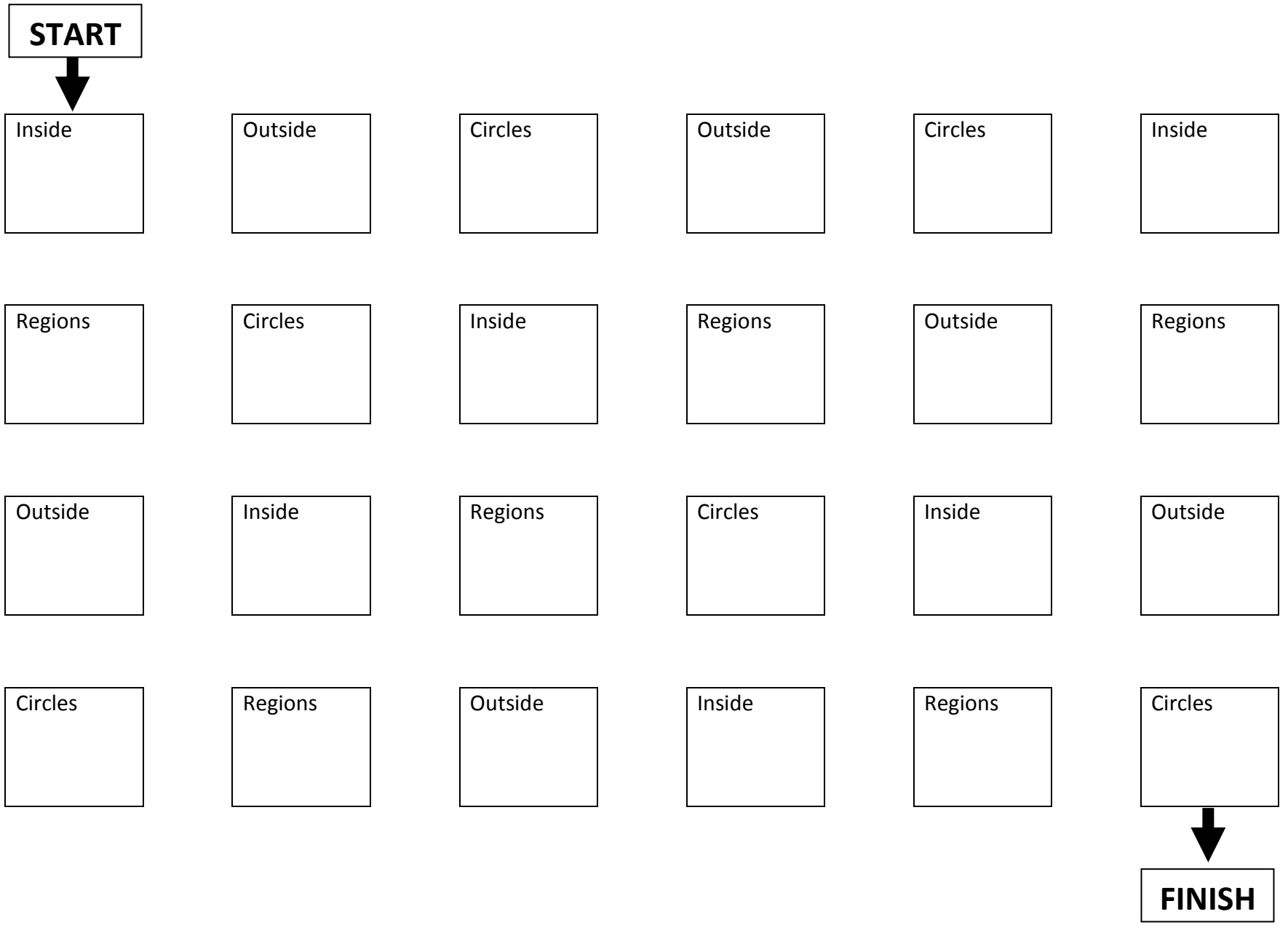

START
Inside
Outside
Circles
Outside
Circles
Inside
Regions
Circles
Inside
Regions
Outside
Regions
Outside
Inside
Regions
Circles
Inside
Outside
Circles
Regions
Outside
Inside
Regions
Circles
FINISH

Each solved puzzle give 2 clues.

Clue 1: Type of previous puzzle
Clue 2: The path continues in the following direction

This table is just help for collecting the clues.

Inside

Tapa		
Yajilin		
Lighthouses		
Cave		
Number Sea		
Kurotto		

Outside

Thermometers		
Haido		
First Seen Coral		
Grades		
Catloop		
Laser		

Regions

LITS		
Regional Akari		
Loop Extra		
Retrograde Battleships		
Star Battle		
Tetromino Areas		

Circles

Crossing Loop		
Yin Yang		
L-Dissection		
Penta blokus		
Masyu		
Finnish Snake		

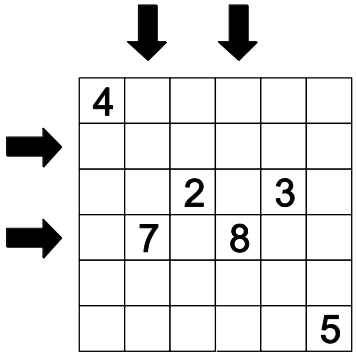
This is an **INSIDE** puzzle.

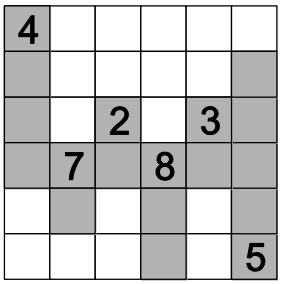
Cave

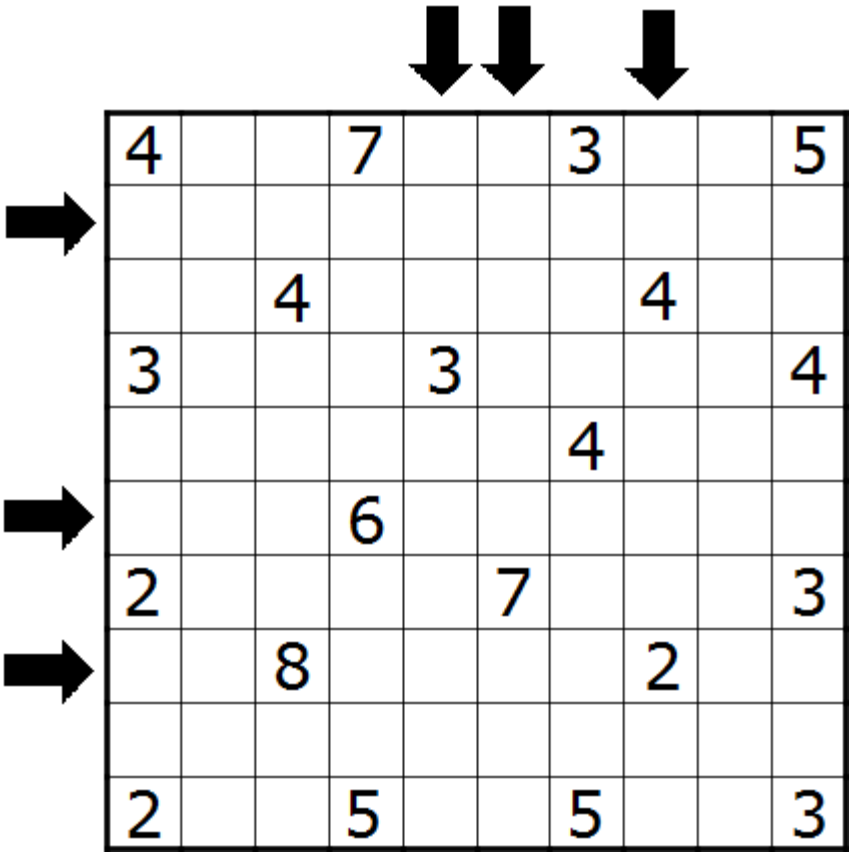
Draw a closed loop over the grid lines. The loop goes around all numbers. The numbers in the grid indicate how many cells inside the loop can be seen horizontally and vertically from that cell, including the cell itself.

Answer String: Total number of cells that part of the cave in the marked rows and colums respectively.

This example has the key 8 (2+6) & 5 (2+3).







Sum of horizontal numbers	Previous puzzle
20	LITS
21	Haido
22	Loop Extra

Sum of vertical numbers	Direction of next puzzle
16	↙
17	↓
18	→

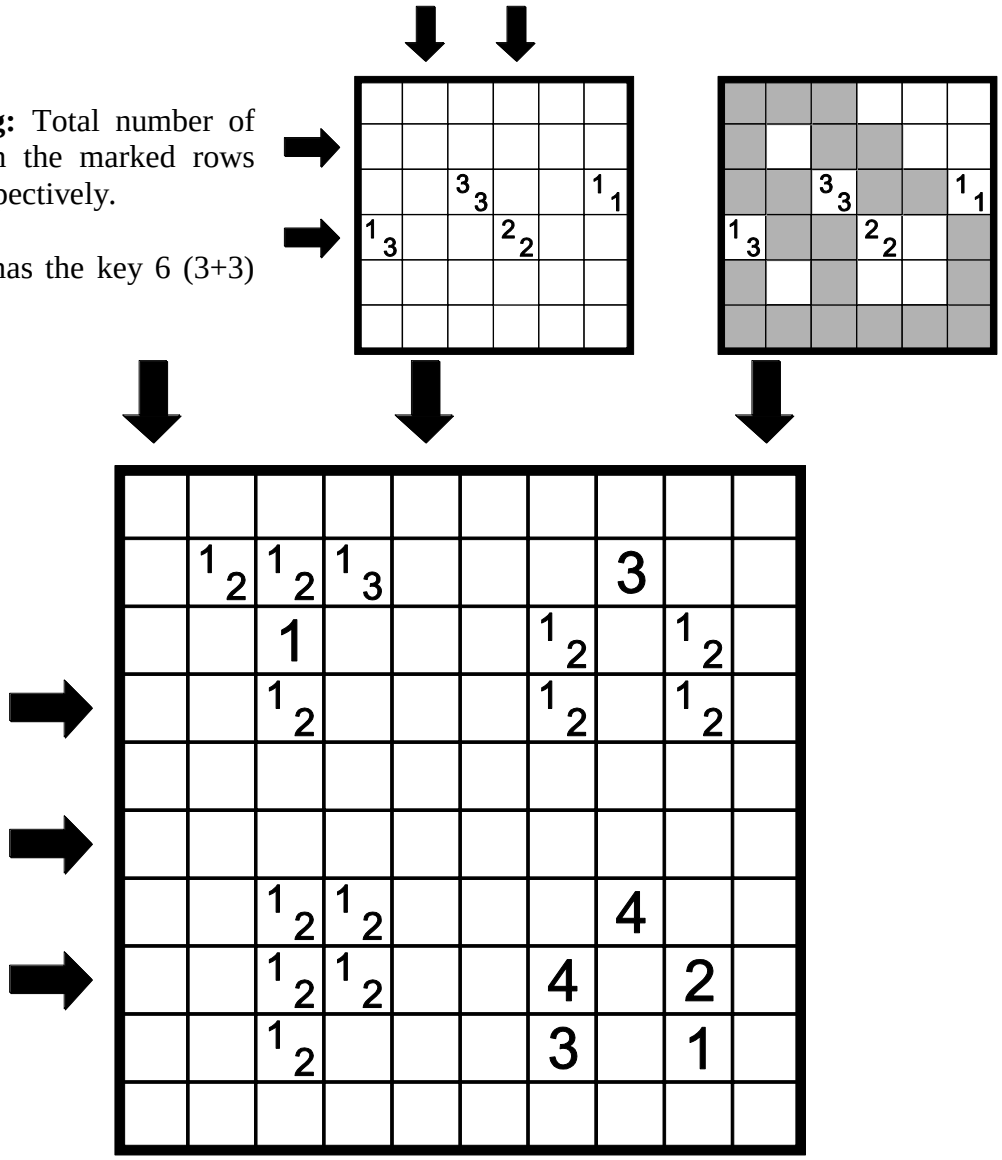
This is an **INSIDE** puzzle.

Tapa

Shade some empty cells black to create a single connected wall. Numbers in a cell indicate the length of consecutive shaded blocks in the neighboring cells. 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. Cells with numbers cannot be shaded, and the shaded cells cannot form a 2×2 square anywhere in the grid.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 6 (3+3) & 7 (4+3).



Sum of horizontal numbers	Previous puzzle
14	Crossing Loop
15	Loop Extra
16	Cave

Sum of vertical numbers	Direction of next puzzle
17	↙
18	←
19	↘

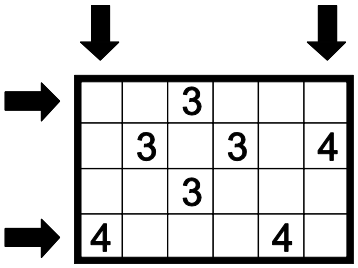
This is an **INSIDE** puzzle.

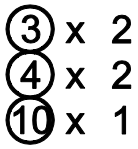
Number Sea

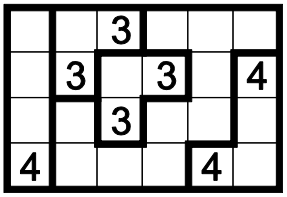
Divide the given shapes into several regions along the grid lines. The sizes of the regions are given. Each number equals to the size of the region it is in. It is possible for a region to contain multiple numbers or none at all. It is also possible for two regions of identical size to share corners or edges. Black cells are not part of any region.

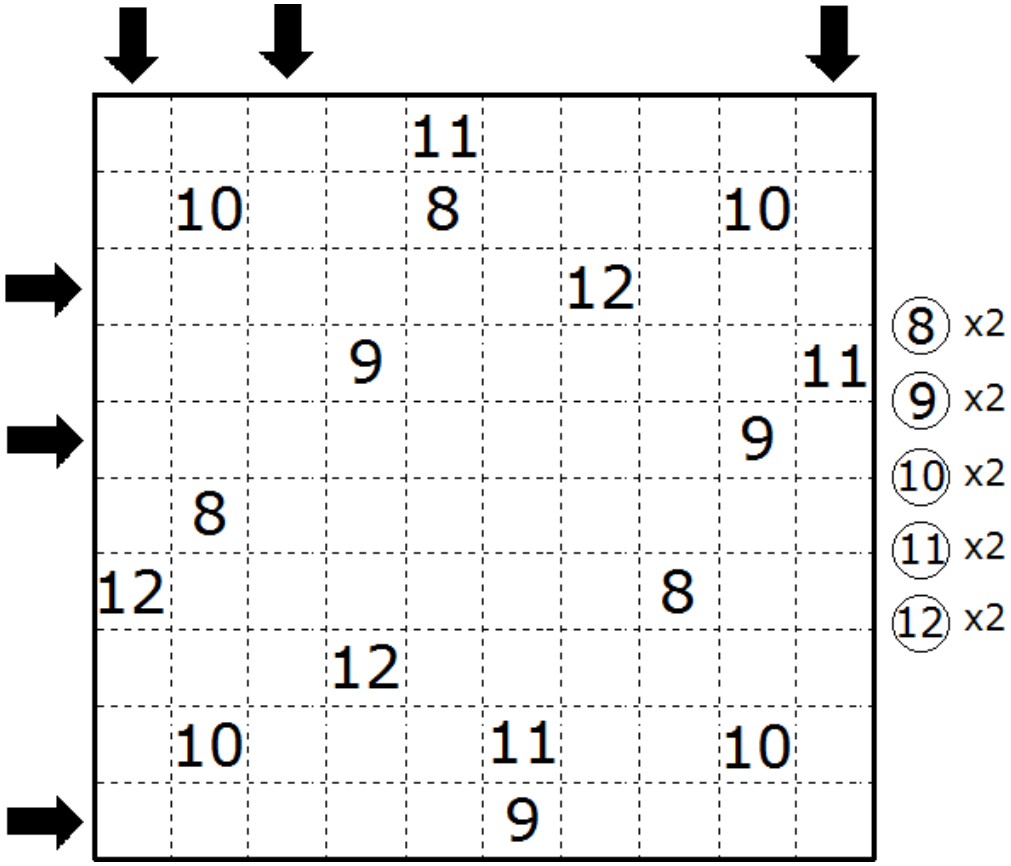
Answer String: Sum of longest segments in the marked rows and columns respectively.

This example has the key 6 (3+3) & 7 (4+3).









Sum of horizontal numbers	Previous puzzle
14	Yin Yang
15	Masyu
16	LITS

Sum of vertical numbers	Direction of next puzzle
11	→
12	↓
13	↙

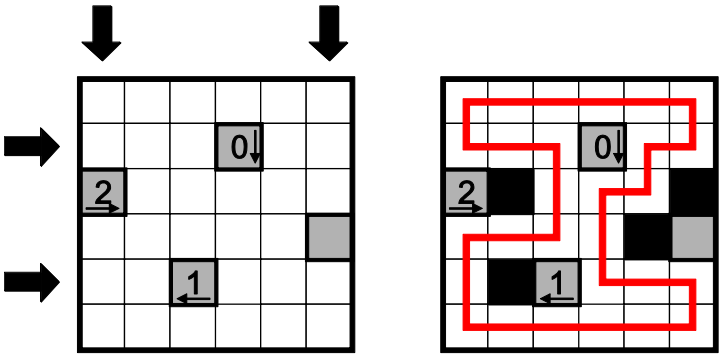
This is an **INSIDE** puzzle.

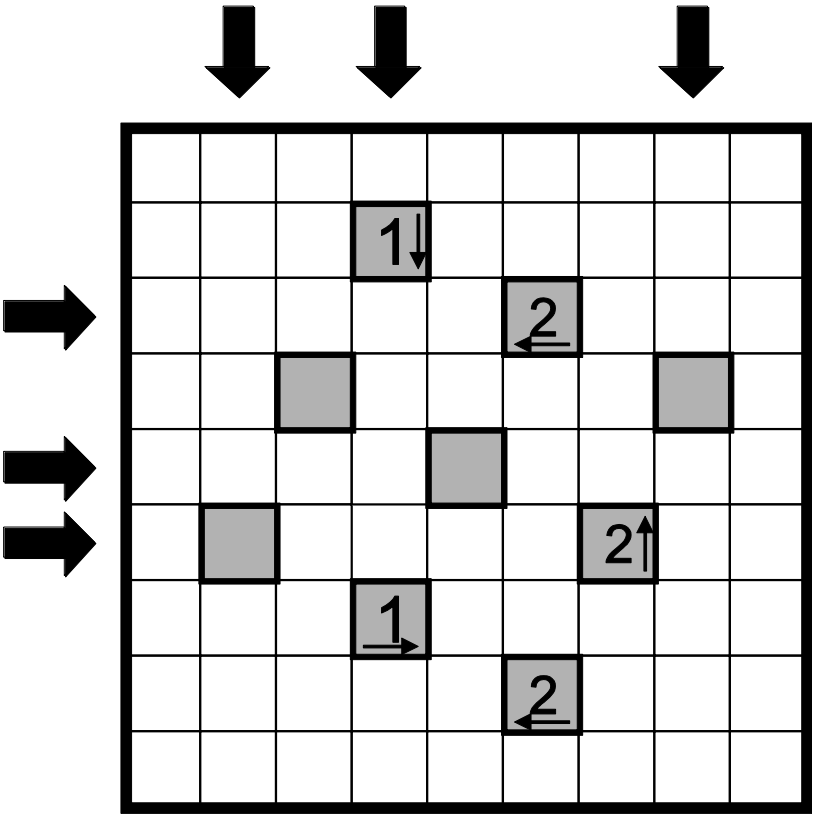
Yajilin

Blacken some white cells and then draw a single closed loop (without intersections or crossings) through all remaining white cells. Blackened cells cannot share an edge with each other. Some cells are outlined and in gray and cannot be part of the loop. Numbered arrows in such cells indicate the total number of blackened cells that exist in that direction in the grid.

Answer String: Sum of longest line segments in the marked rows and columns respectively.

This example has the key 4 (2+2) & 3 (2+1).





Sum of horizontal numbers	Previous puzzle
4	Cave
5	Penta blokus
6	Tetromino Areas

Sum of vertical numbers	Direction of next puzzle
4	↓
5	←
6	↗

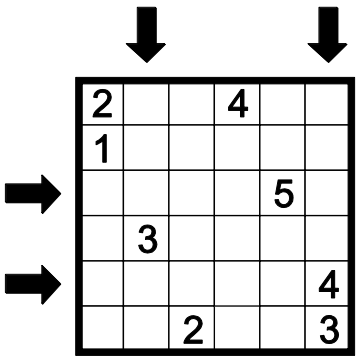
This is an **INSIDE** puzzle.

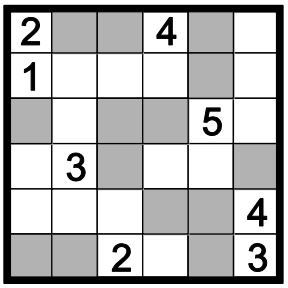
Kurotto

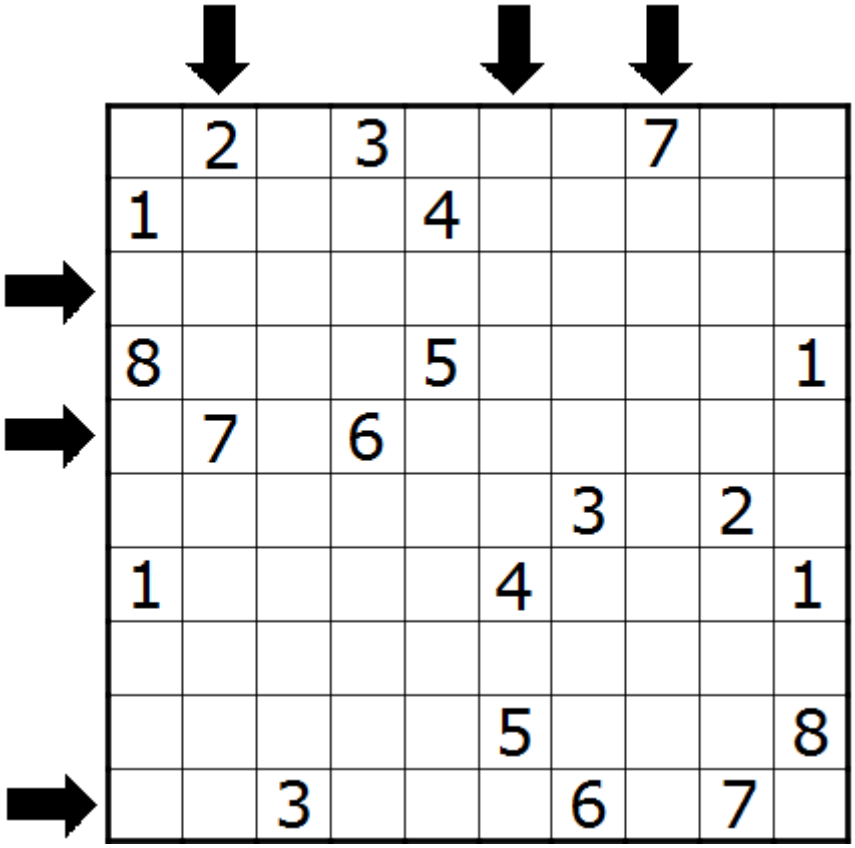
Shade some cells so that each number represents the total count of shaded cells in connected groups sharing an edge with that number. Cells with numbers cannot be shaded.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 5 (3+2) & 3 (2+1).







Sum of horizontal numbers	Previous puzzle
17	Haido
18	Catloop
19	L-Dissection

Sum of vertical numbers	Direction of next puzzle
14	↙
15	↓
16	↑

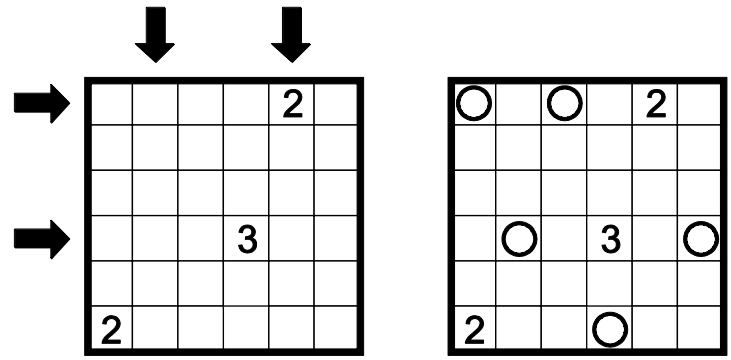
This is an **INSIDE** puzzle.

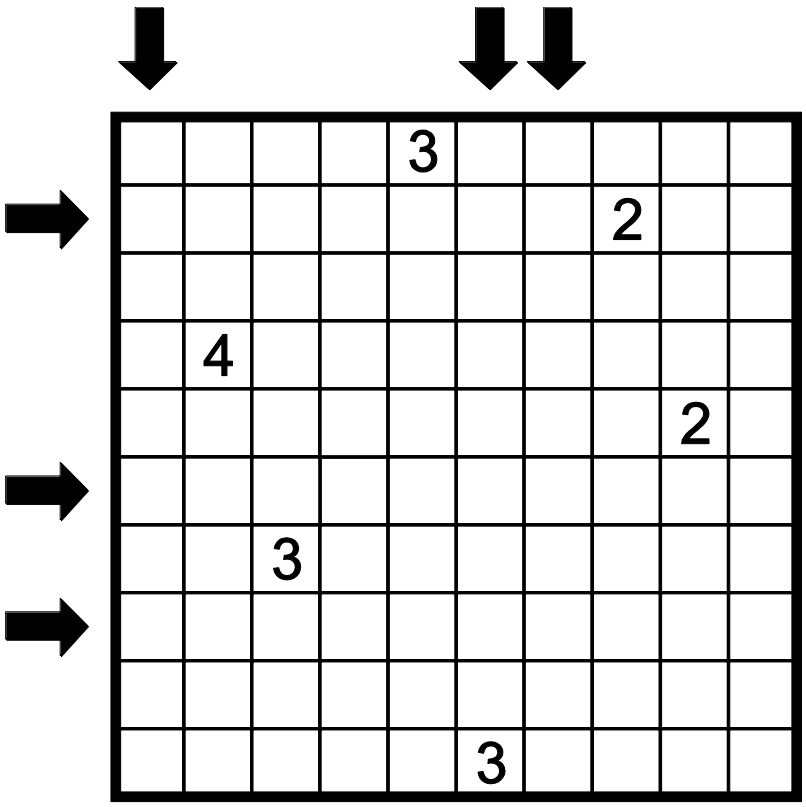
Lighthouses

Place some 1x1 boats into the grid so that they do not touch each other and the cells with the given numbers not even diagonally. The given numbers show the total number of boats in their rows and columns.

Answer String: Total number of boats in the marked rows and colums respectively.

This example has the key 4 (2+2) & 1 (1+0).





Sum of horizontal numbers	Previous puzzle
4	Crossing Loop
5	Retrograde Battleships
6	Kurotto

Sum of vertical numbers	Direction of next puzzle
2	←
3	↓
4	↙

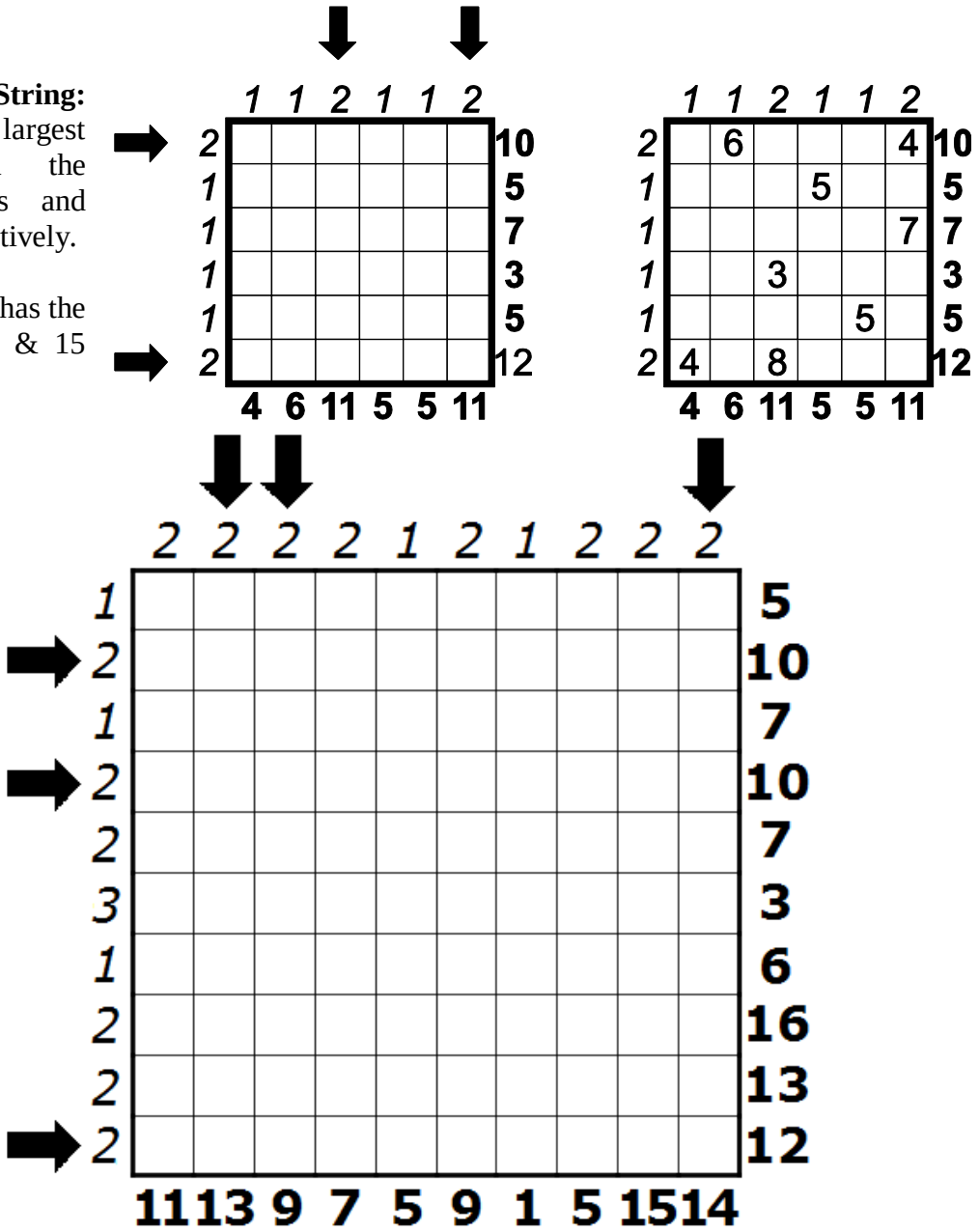
This is an **OUTSIDE** puzzle.

Grades

Enter digits from 1 to 9 into the grid, such that no two horizontally, vertically or diagonally adjacent cells contain a digit. The numbers above and to the left of the grid give the number of digits in each row or column, while the numbers below and to the right of the grid show the sum of the digits in each row or column.

Answer String: Sum of the largest numbers in the marked rows and colums respectively.

This example has the key 14 (6+8) & 15 (8+7).



Sum of horizontal numbers	Previous puzzle
22	Thermometers
23	L-Dissection
24	Yajilin

Sum of vertical numbers	Direction of next puzzle
20	↘
21	↖
22	→

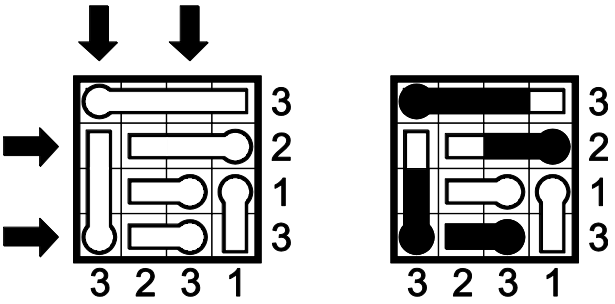
This is an **OUTSIDE** puzzle.

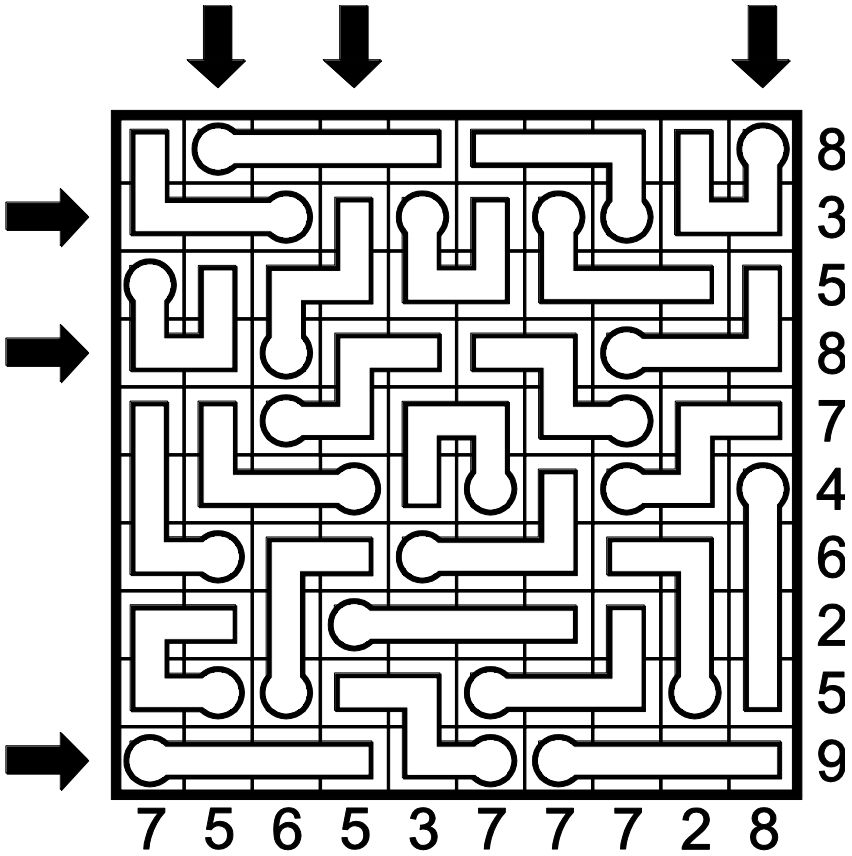
Thermometers

Fill in all, some or none of each thermometer so that numbers outside the grid indicate how many cells are filled in that row/column. Each thermometer is filled from the bulb upwards, it is not allowed to have empty cells between two filled cells in any thermometer.

Answer String: Total of the longest shaded segments in the marked rows and colums respectively.

This example has the key 5 (2+3) & 4 (2+2).





Sum of horizontal numbers	Previous puzzle
11	Lighthouses
12	Retrograde Battleships
13	Finnish Snake

Sum of vertical numbers	Direction of next puzzle
8	↖
9	→
10	↑

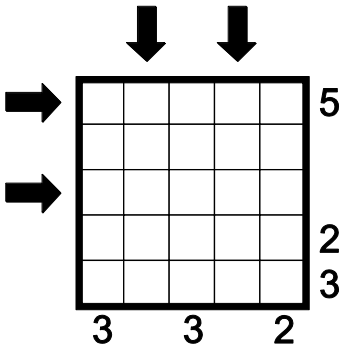
This is an **OUTSIDE** puzzle.

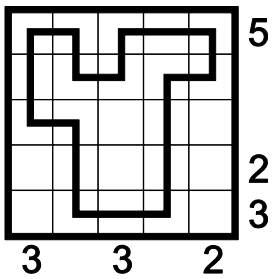
Catloop

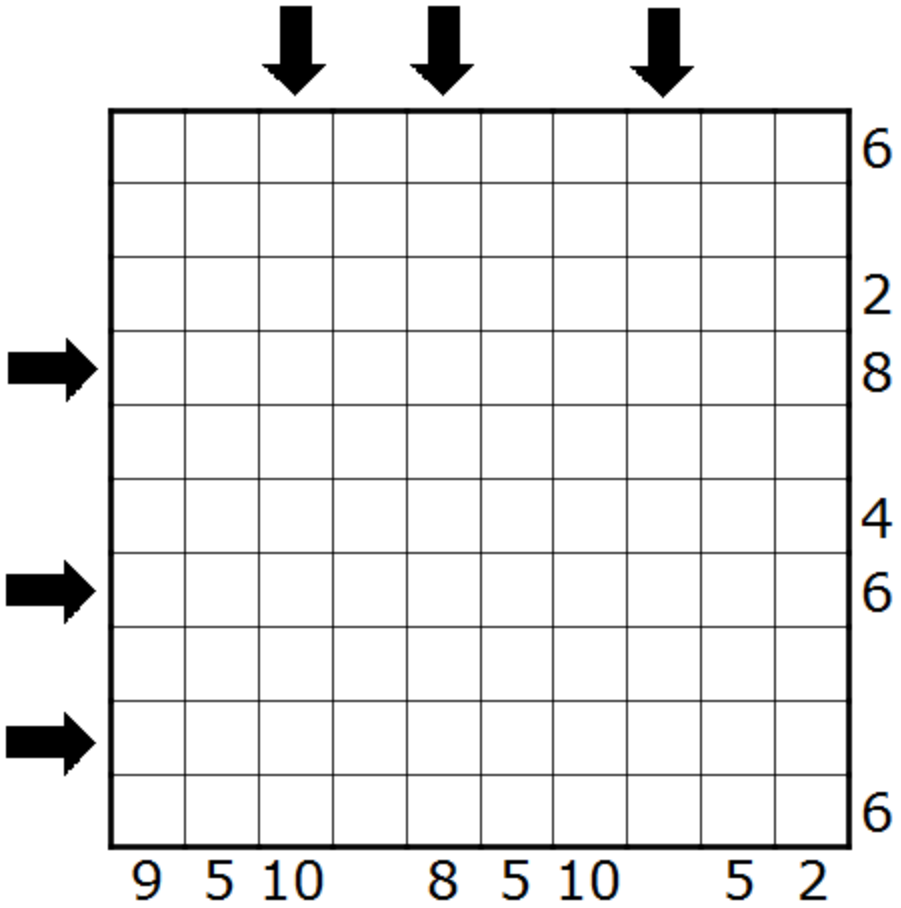
Draw a continuous loop consisting of straight sections into the grid in a way that the loop must not touch and cross itself. The numbers outside the grid show how many squares are used in that row or column by the loop.

Answer String: Total of the longest loop segments in the marked rows and colums respectively.

This example has the key 3 (2+1) & 5 (2+3).







Sum of horizontal numbers	Previous puzzle
6	Yajilin
7	Number Sea
8	Grades

Sum of vertical numbers	Direction of next puzzle
7	→
8	↓
9	↗

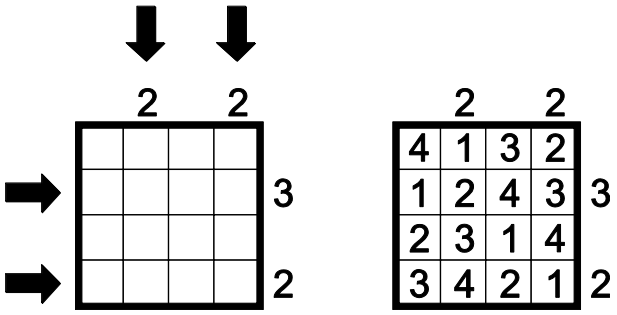
This is an **OUTSIDE** puzzle.

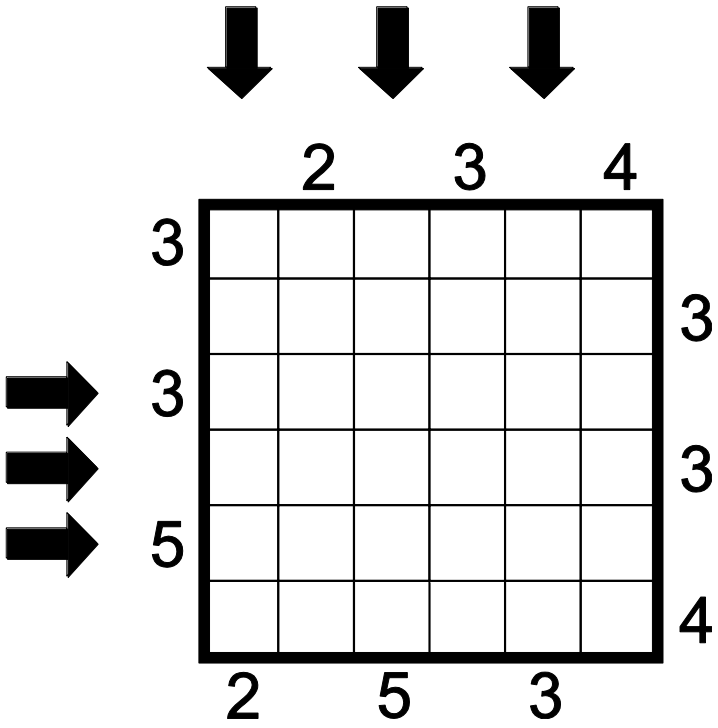
Haido

Place the digits in the given range once in every row and column. The digits represent skyscrapers of that height. The clues on the outside indicate that the building of this height is visible in that row or column from that side. Larger skyscrapers block the view of smaller ones.

Answer String: Sum of the position (from left to right or top to bottom) of number 4 in the marked rows and colums respectively.

This example has the key 5 (3+2) & 7 (4+3).





Sum of horizontal numbers	Previous puzzle
8	Grades
9	Regional Akari
10	L-Dissection

Sum of vertical numbers	Direction of next puzzle
8	↘
9	↑
10	↙

This is an **OUTSIDE** puzzle.

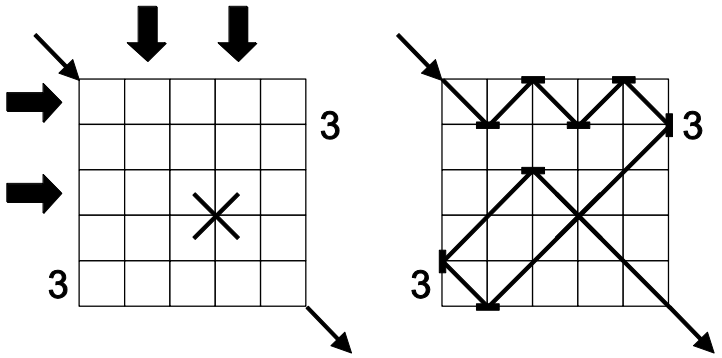
Laser

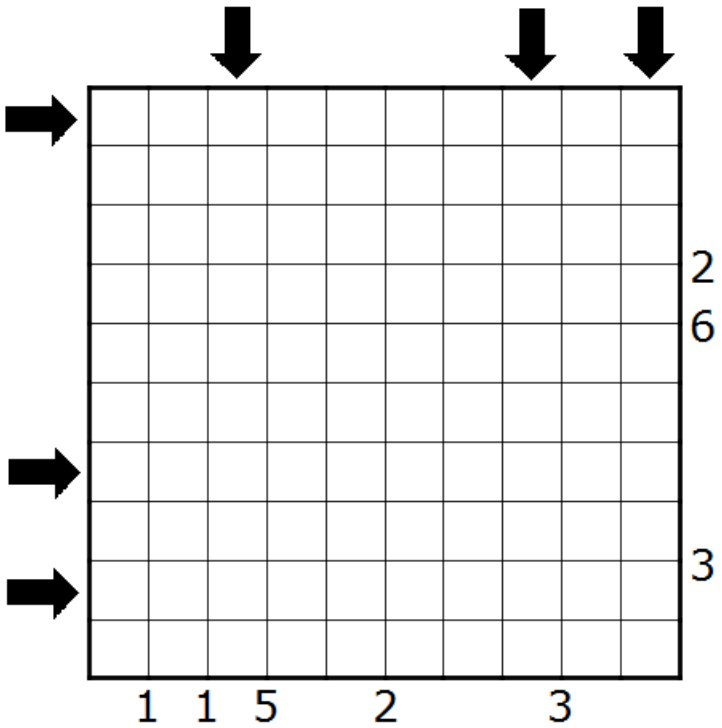
Draw a laser beam into the grid that only travels through the main diagonals of unit squares. **The laser starts in the top-left corner and ends in the bottom-right corner.** Place a number of mirrors that are capable of reflecting the beam. Mirrors can be placed onto grid nodes (including nodes on the border) and should be oriented horizontally or vertically. Only one side of a mirror can be used this way, the beam cannot hit a mirror on both its sides. The beam can cross itself, though: each node where such crossing occurs is marked.

Numbers on the left side of and above the grid, aligned with rows/columns of squares, indicate the number of unit squares in that row/column that are visited by the beam. Numbers on the right side of and below the grid, aligned with grid lines, indicate the number of mirrors of any orientation placed onto that grid line.

Answer String: Total number of the cells that passes the beam in the marked rows and colums respectively.

This example has the key 8 (5+3) & 6 (3+3).





Sum of horizontal numbers	Previous puzzle
15	Star Battle
17	Masyu
19	Kurotto

Sum of vertical numbers	Direction of next puzzle
11	↑
13	↗
15	↓

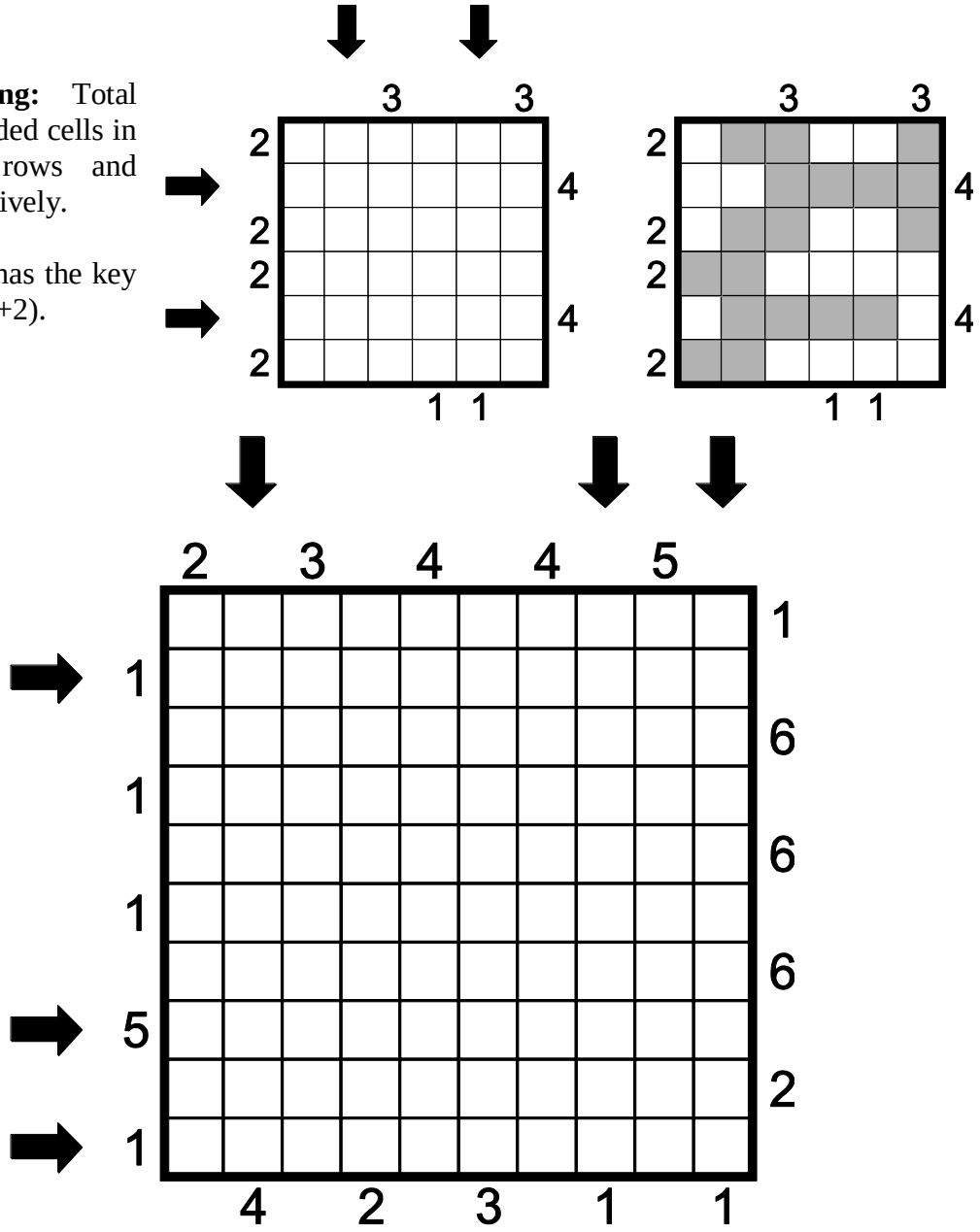
This is an **OUTSIDE** puzzle.

First Seen Coral

Fill in some cells to create a connected shape which does not touch itself, not even diagonally, and does not contain 2x2 fully filled cells. The corral cannot have an island inside it. The clues outside the grids represent the length of the first filled cell block in that direction.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 8 (4+4) & 7 (5+2).



Sum of horizontal numbers	Previous puzzle
13	Regional Akari
14	Yin Yang
15	First Seen Coral

Sum of vertical numbers	Direction of next puzzle
8	↙
9	→
10	↑

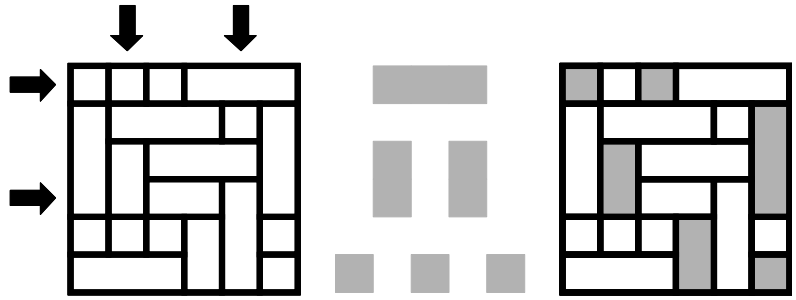
This is a **REGIONS** puzzle.

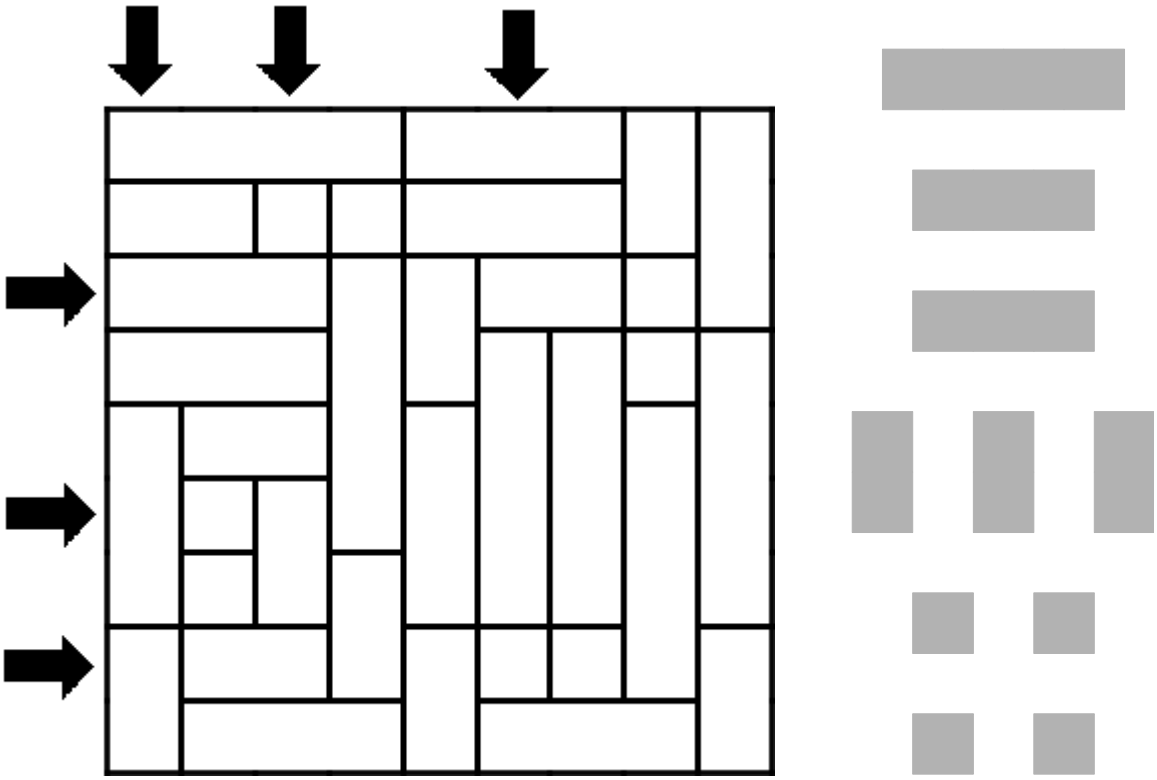
Retrograde Battleships

Locate the position of the given fleet in the grid. Each segments of a ship occupies a single cell. Ships are oriented either horizontally or vertically, and do not touch each other, not even diagonally. The possible placements of the ships are given.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 4 (2+2) & 2 (2+0).





Sum of horizontal numbers	Previous puzzle
7	Laser
8	Number Sea
9	Catloop

Sum of vertical numbers	Direction of next puzzle
7	↗
8	↘
9	↙

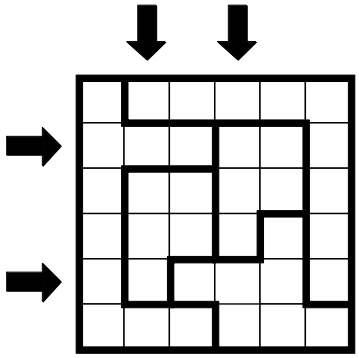
This is a **REGIONS** puzzle.

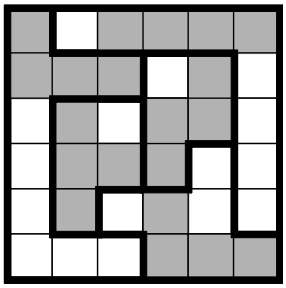
LITS

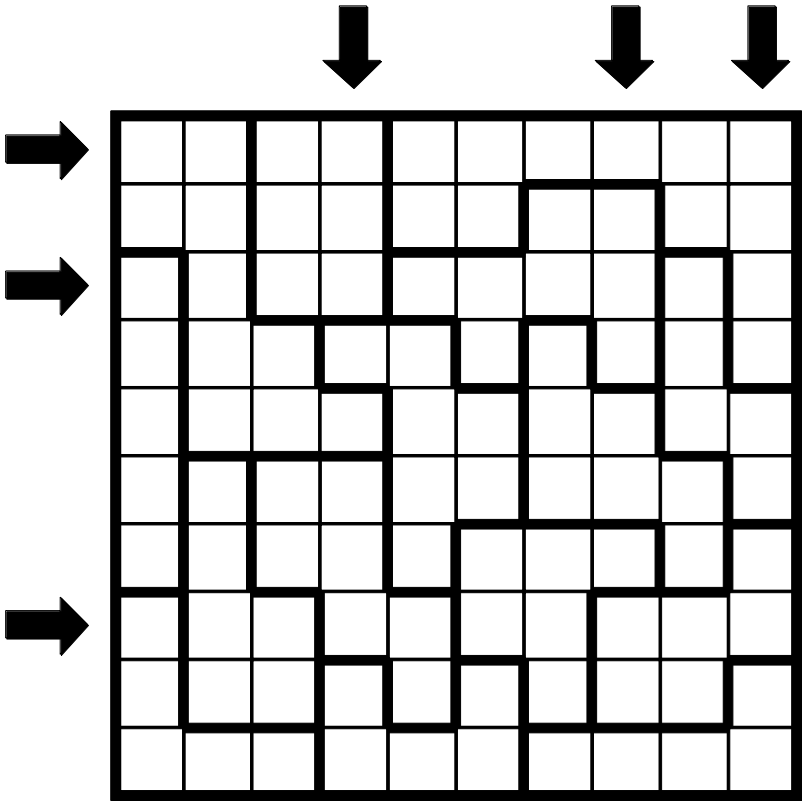
Colour a shape of 4 orthogonally connected squares in each black bordered region so that all coloured squares form a single contiguous area. This area can't contain any 2x2 coloured squares. Two identical shapes in different regions can't touch eachother by a side. Rotations and reflections are considered the same shape.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 6 (4+2) & 9 (4+5).







Sum of horizontal numbers	Previous puzzle
21	Masyu
22	Star Battle
23	Thermometers

Sum of vertical numbers	Direction of next puzzle
18	↑
19	↘
20	→

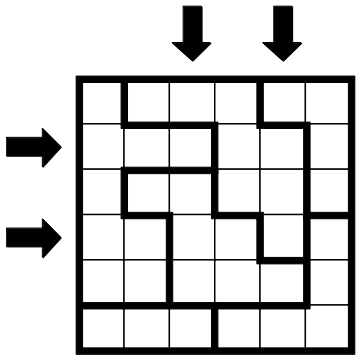
This is a **REGIONS** puzzle.

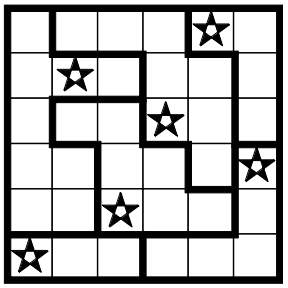
Star battle

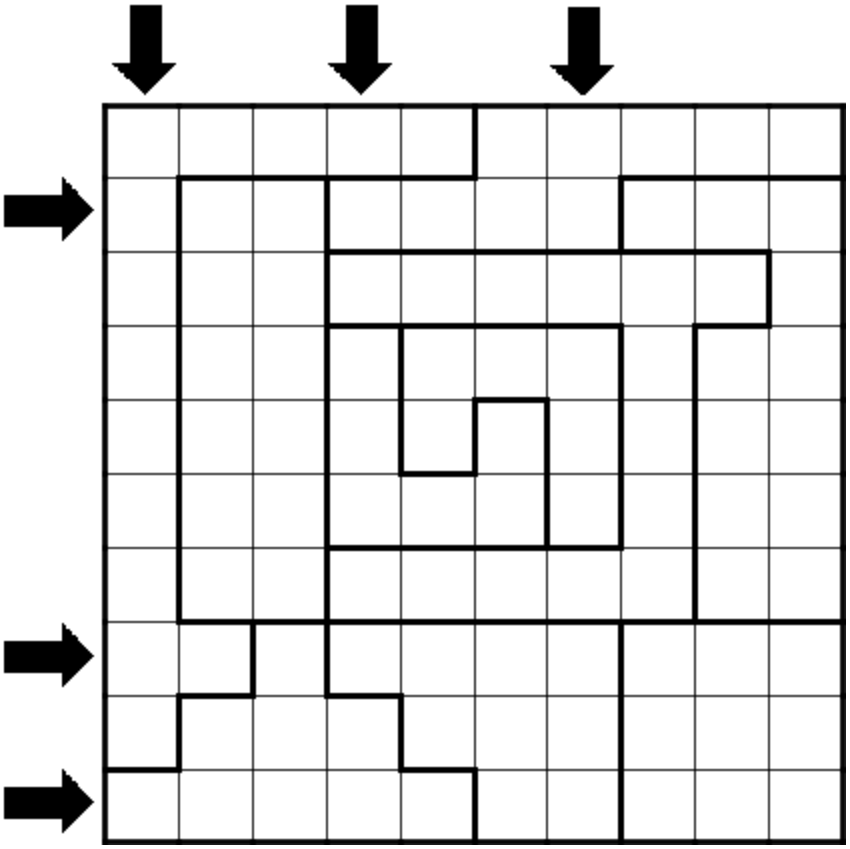
Place 2 stars in every row, column and black bordered area. The stars can't touch eachother, not even diagonally. The example uses only 1 star.

Answer String: Sum of the position of the first star in the marked rows and colums respectively.

This example has the key 8 (2+6) & 6 (5+1).







Sum of horizontal numbers	Previous puzzle
10	Finnish Snake
11	First Seen Coral
12	LITS

Sum of vertical numbers	Direction of next puzzle
8	↑
9	→
10	↓

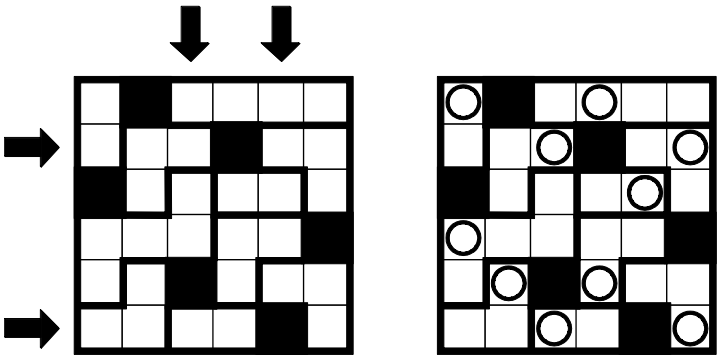
This is a **REGIONS** puzzle.

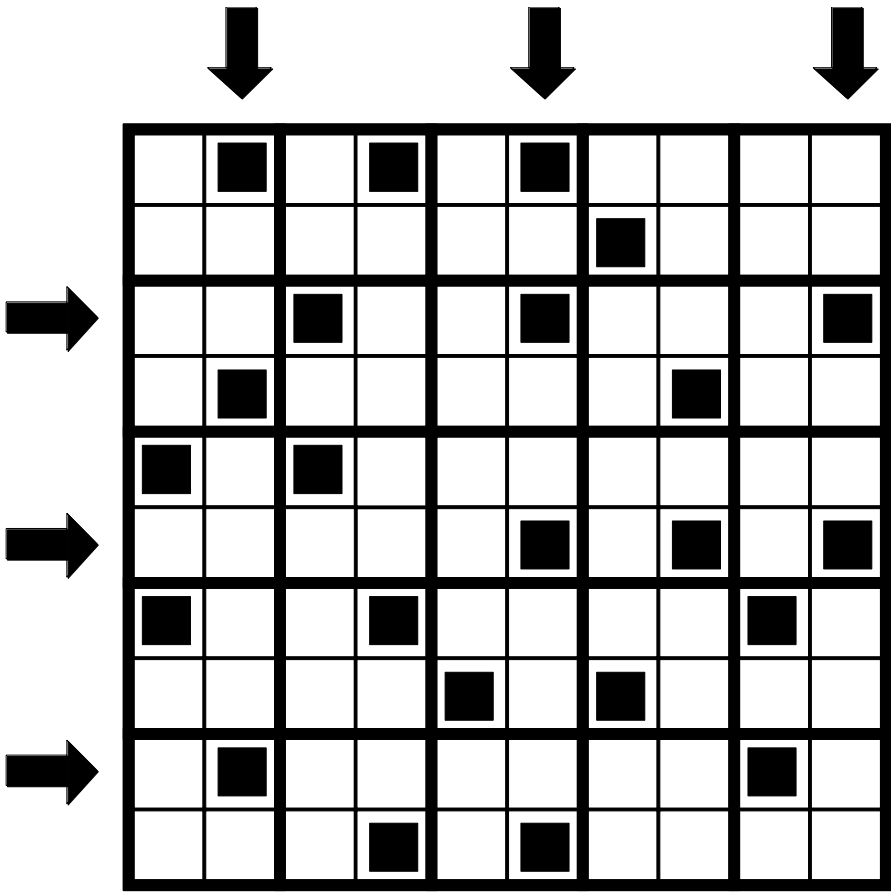
Regional Akari

Place one lightbulb in each blackbordered region, so that every cell in the grid is illuminated by at least one lightbulb. Lightbulbs illuminate all cells they can see in a horizontal and vertical direction. Black cells block their sight. No two lightbulbs can illuminate eachother.

Answer String: Total number of light bulbs in the marked rows and colums respectively.

This example has the key 4 (2+2) & 3 (2+1).





Sum of horizontal numbers	Previous puzzle
6	Laser
7	Crossing Loop
8	Kurotto

Sum of vertical numbers	Direction of next puzzle
8	↙
9	↗
10	→

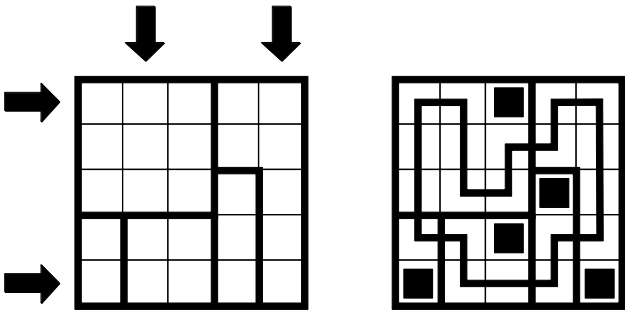
This is a **REGIONS** puzzle.

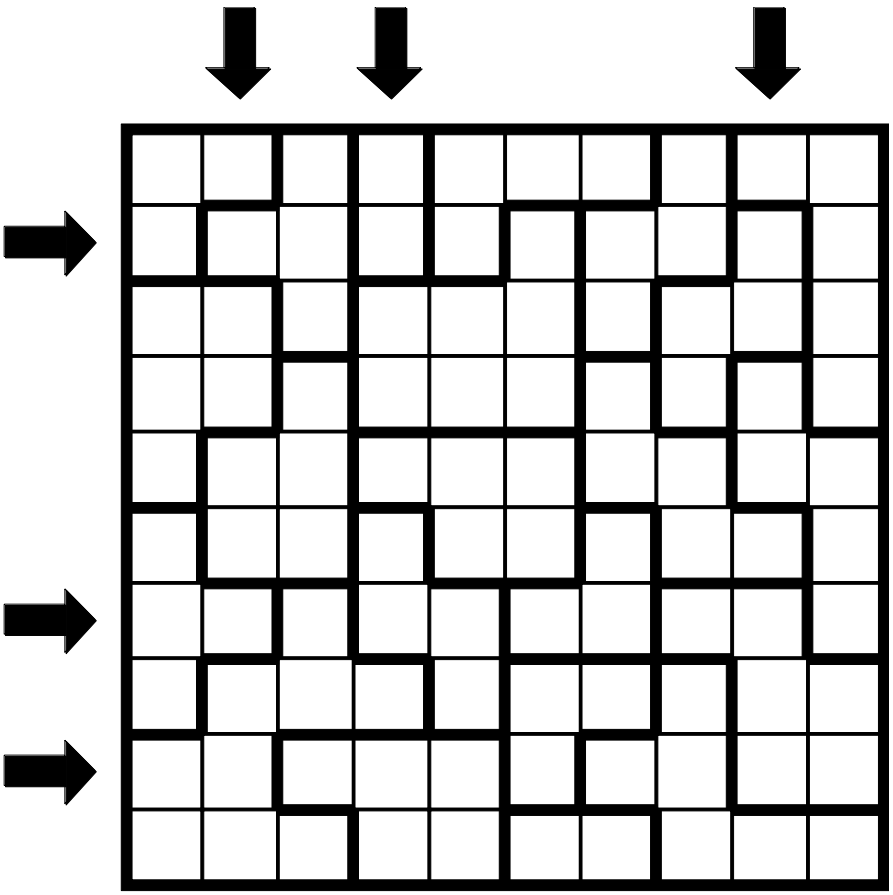
Loop Extra

Blacken exactly one white cell in each region and then draw a single closed loop (without intersections or crossings) through all remaining white cells. Blackened cells cannot share an edge with each other.

Answer String: Total of the longest loop segments in the marked rows and colums respectively.

This example has the key 3 (1+2) & 5 (2+3).





Sum of horizontal numbers	Previous puzzle
5	Lighthouses
6	Grades
7	Tetromino Areas

Sum of vertical numbers	Direction of next puzzle
5	↙
6	→
7	↓

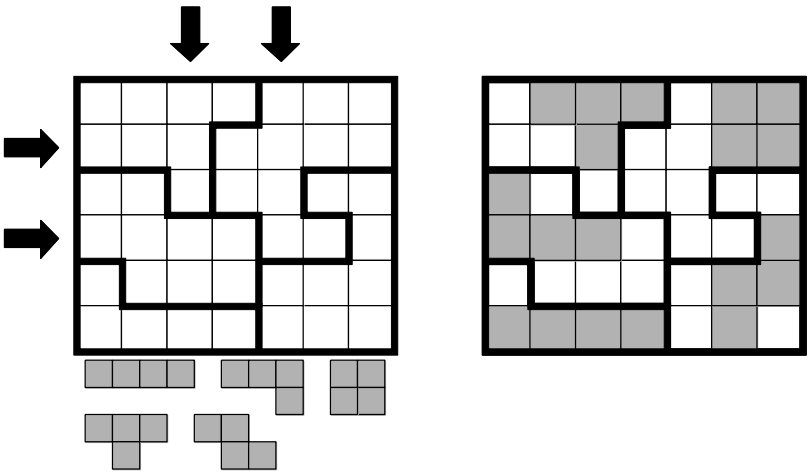
This is a **REGIONS** puzzle.

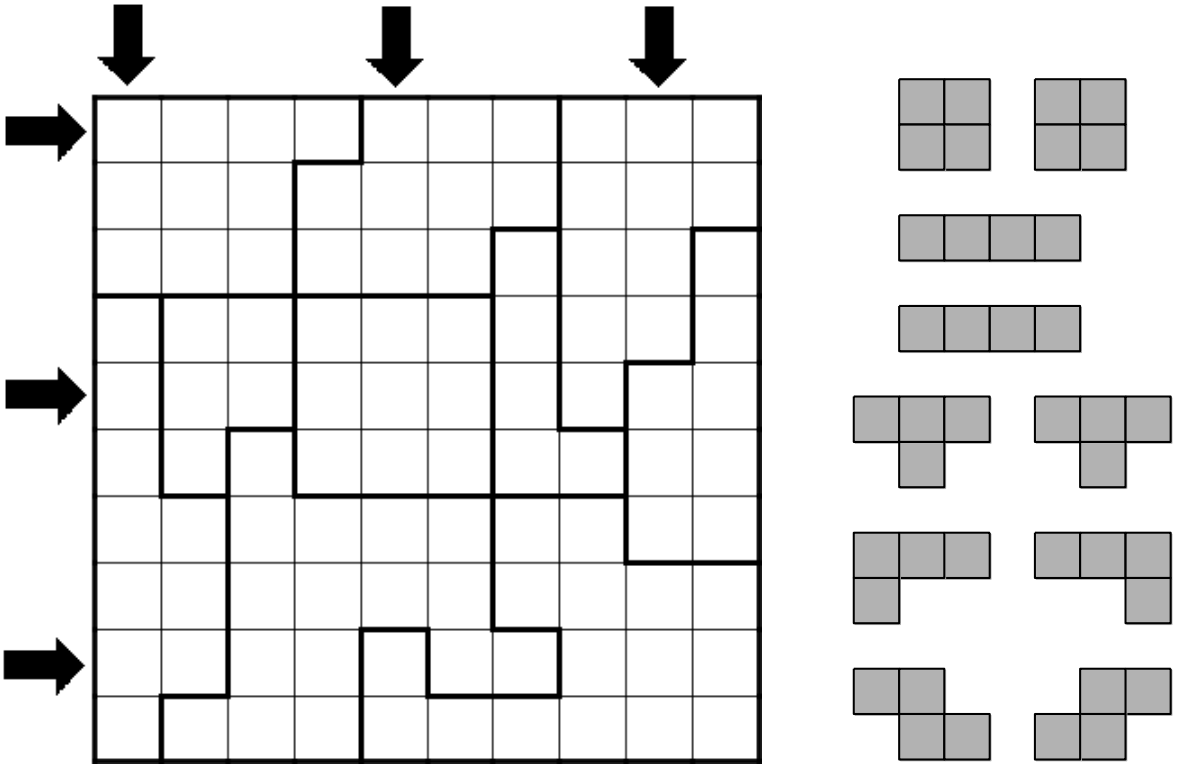
Tetromino Areas

Place two complete tetromino sets, one in each of the outlined area. Pieces can be rotated and / or reflected, but they cannot touch each other even at a point. Only one set in the example.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 7 (3+4) & 4 (4+0).





Sum of horizontal numbers	Previous puzzle
15	Tapa
16	Haido
17	Yin Yang

Sum of vertical numbers	Direction of next puzzle
15	↗
16	↙
17	→

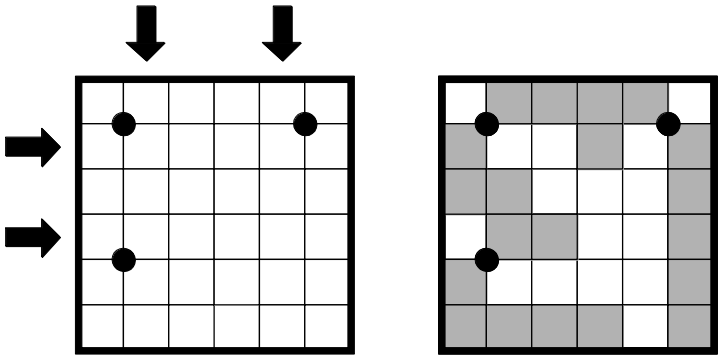
This is a **CIRCLES** puzzle.

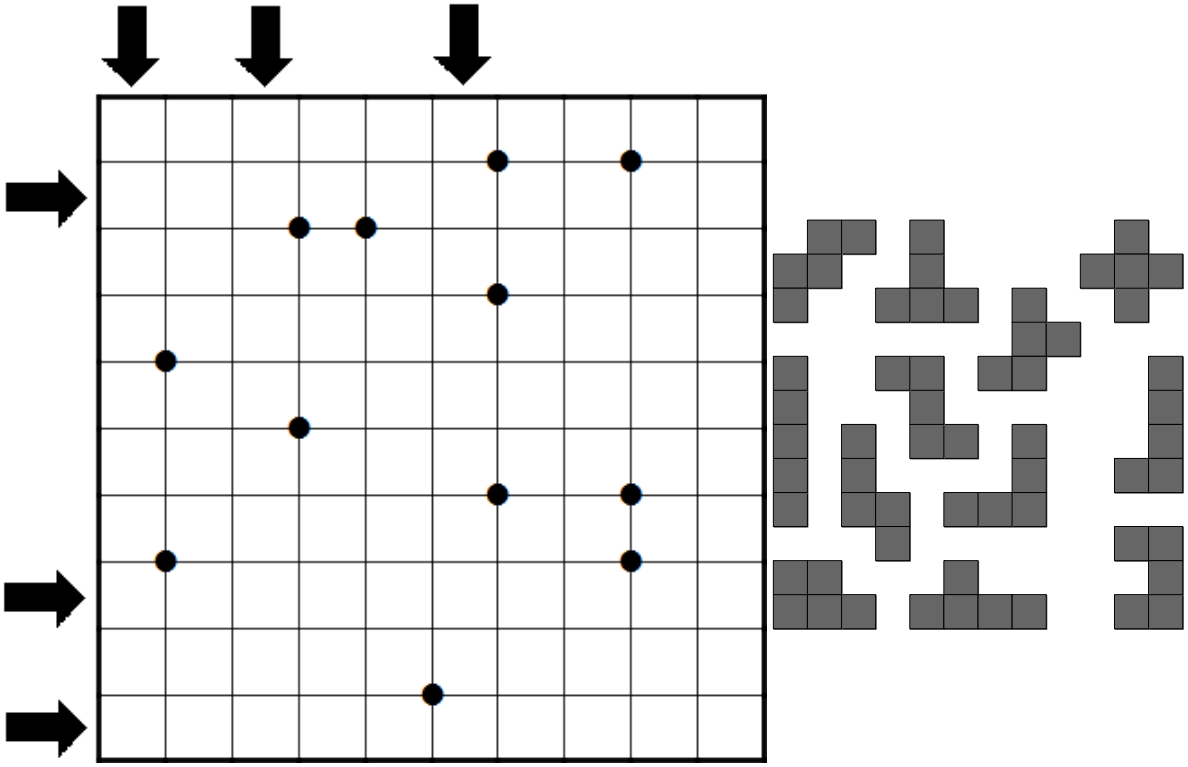
Penta Blokus

Place some of the given pentomino pieces into the grid so that no two of them shares an edge. They can touch diagonally, though: every node where two pentomino pieces share a corner are marked with a dot.

Answer String: Total number of shaded cells in the marked rows and colums respectively.

This example has the key 6 (3+3) & 5 (4+1).





Sum of horizontal numbers	Previous puzzle
16	First Seen Coral
17	Yajilin
18	Star Battle

Sum of vertical numbers	Direction of next puzzle
16	↙
17	↑
18	→

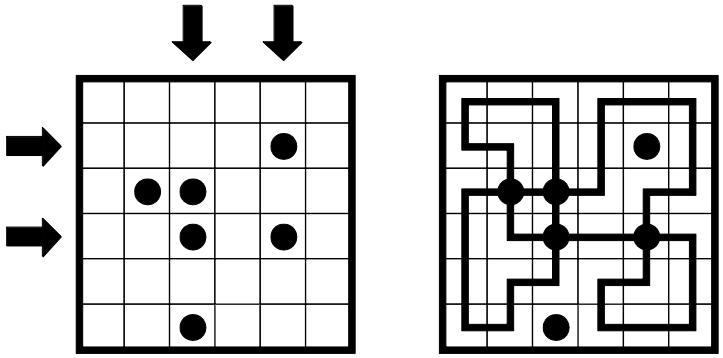
This is a **CIRCLES** puzzle.

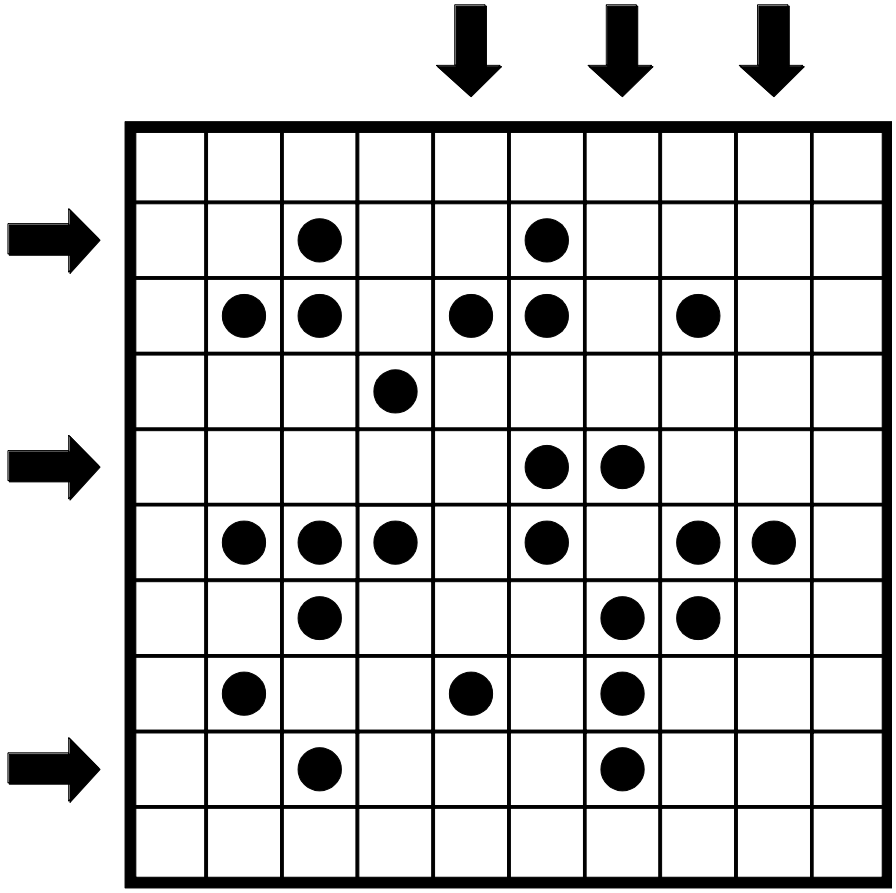
Crossing Loop

Draw a loop into the grid that go only horizontally or vertically and passes all empty cells. Cells with circle are either visited by the loop two times or remain unused. When the loops go through a square with a circle it cannot turn.

Answer String: Total of the longest loop segments in the marked rows and colums respectively.

This example has the key 5 (1+4) & 6 (4+2).





Sum of horizontal numbers	Previous puzzle
5	Penta Blokus
6	Tetromino Areas
7	Cave

Sum of vertical numbers	Direction of next puzzle
8	→
9	↑
10	↙

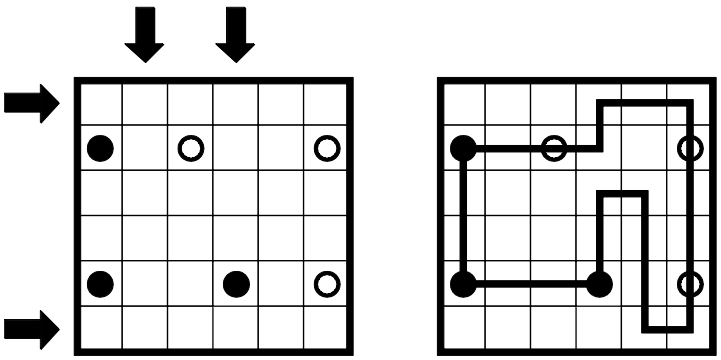
This is a **CIRCLES** puzzle.

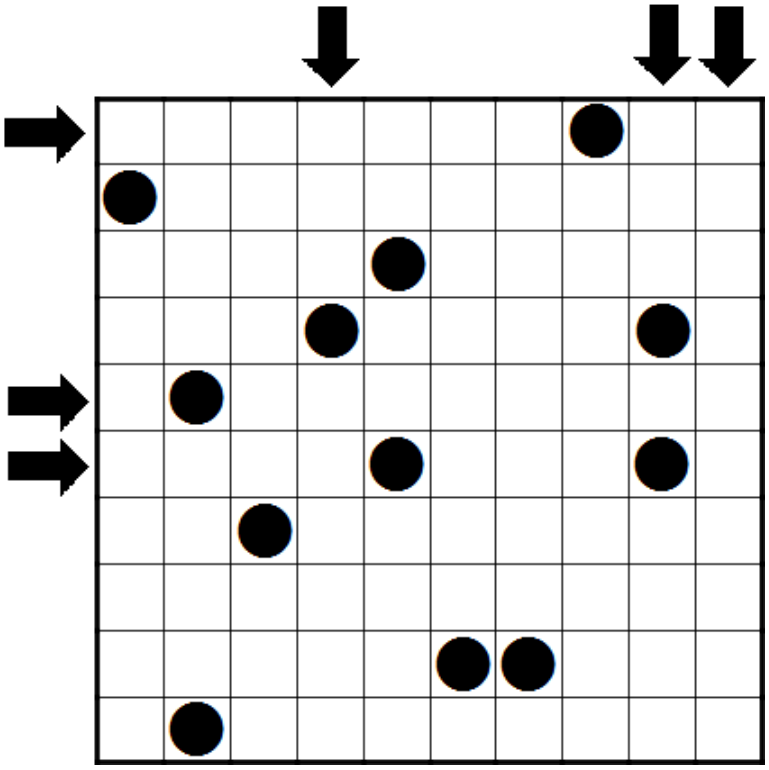
Masyu

Draw a single, non-intersecting loop that passes through all circled cells. The loop must go straight through the cells with white circles, with a turn in at least one of the cells immediately before/after each white circle. The loop must make a turn in all the black circles, but must go straight in both cells immediately before/after each black circle.

Answer String: Total of the longest loop segments in the marked rows and colums respectively.

This example has the key 3 (2+1) & 2 (0+2).





Sum of horizontal numbers	Previous puzzle
9	Loop Extra
10	Penta Blokus
11	Lighthouses

Sum of vertical numbers	Direction of next puzzle
9	↑
10	↙
11	↘

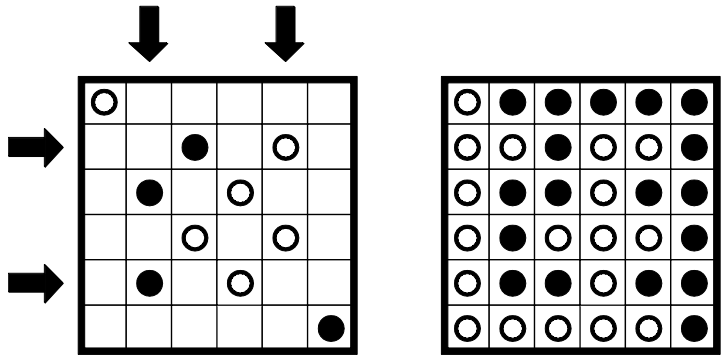
This is a **CIRCLES** puzzle.

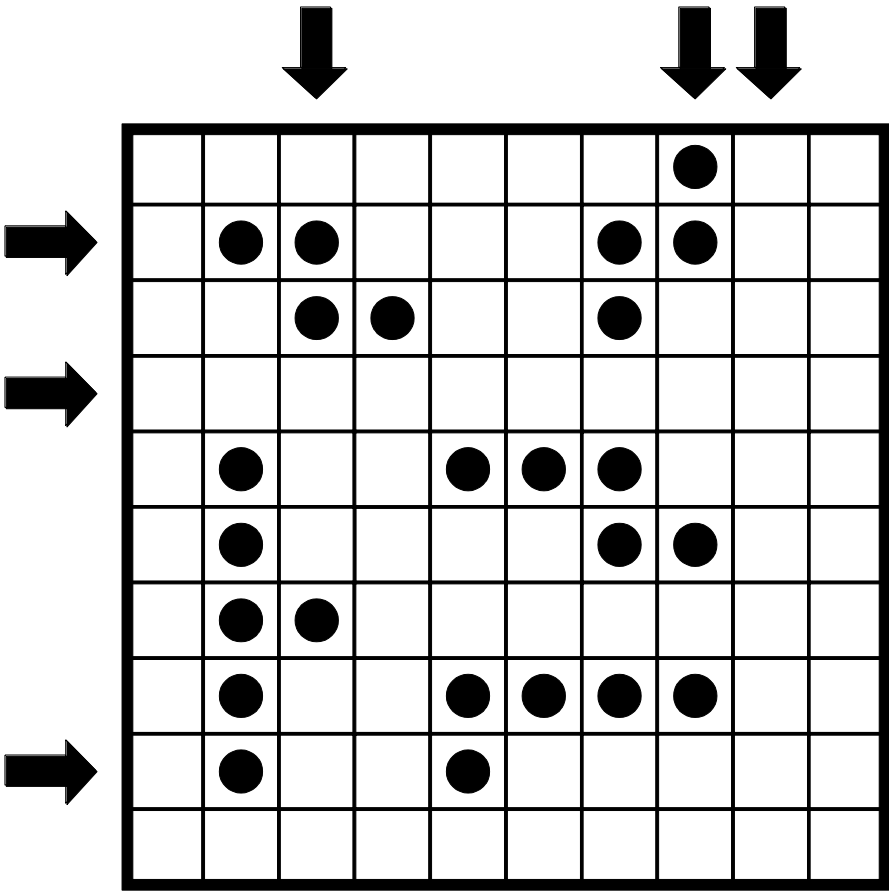
Yin Yang

Place a black circle or a white circle into every empty cell so that all cells with black circles form a connected area and all cells with white circles also form a connected area. Circles in an area of 2x2 cells cannot all have the same colour.

Answer String: Total number of white circles in the marked rows and colums respectively.

This example has the key 6 (4+2) & 5 (2+3).





Sum of horizontal numbers	Previous puzzle
17	Laser
18	Finnish Snake
19	Number Sea

Sum of vertical numbers	Direction of next puzzle
16	→
17	↘
18	↑

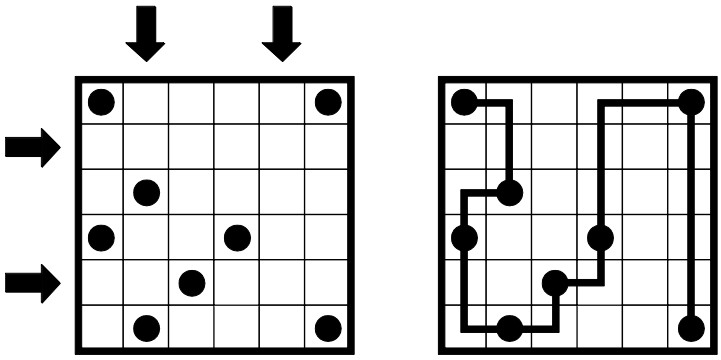
This is a **CIRCLES** puzzle.

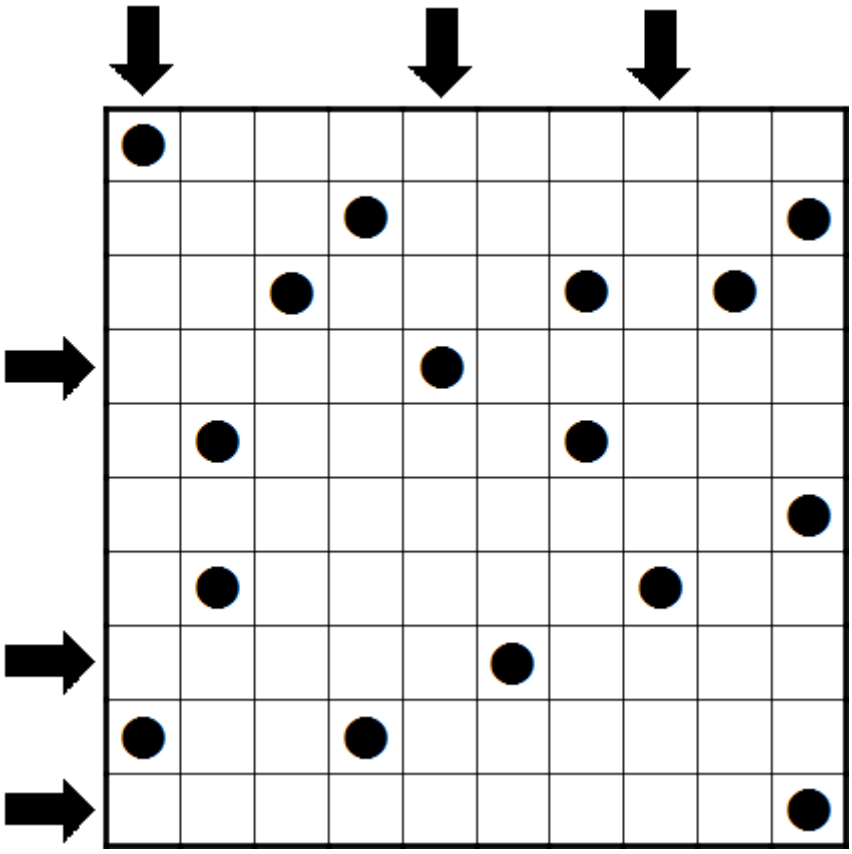
Finnish snake

Draw a snake into the grid which consists of horizontal and vertical segments, never crosses itself and never touches itself, not even diagonally. The snake starts at top-left corner and finishes in the bottom-right corner. The snake goes through all given circles.

Answer String: Total number of cells that contain the snake in the marked rows and colums respectively.

This example has the key 7 (3+4) & 5 (4+1).





Sum of horizontal numbers	Previous puzzle
16	Catloop
17	Tapa
18	Regional Akari

Sum of vertical numbers	Direction of next puzzle
17	↑
18	→
19	↙

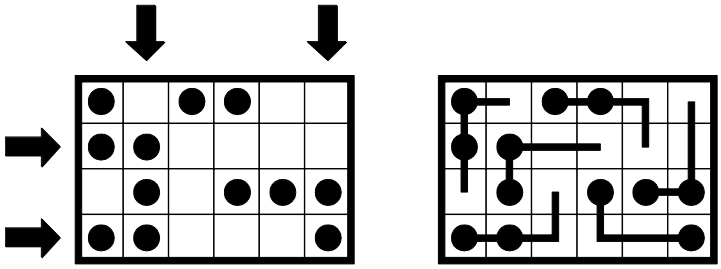
This is a **CIRCLES** puzzle.

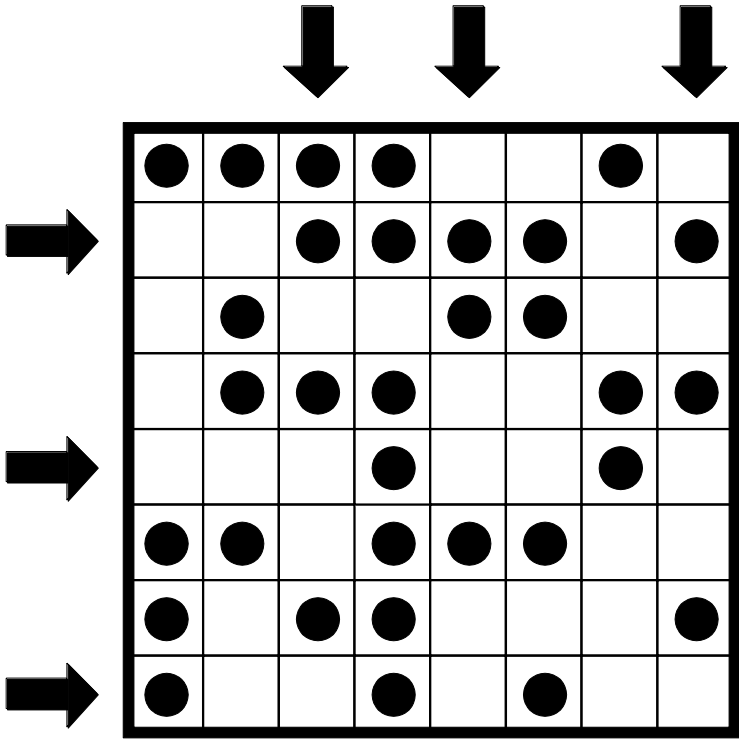
L-Dissection

Divide the grid into L tetrominoes so that each piece contains exactly two given circles.

Answer String: Total number of different shapes in the marked rows and colums respectively.

This example has the key 6 (4+2) & 5 (3+2).





Sum of horizontal numbers	Previous puzzle
13	Thermometers
14	Tapa
15	Retrograde Battlehsips

Sum of vertical numbers	Direction of next puzzle
13	↙
14	→
15	↗