

Logic Masters 2019 Round 4 – Mixed

Time: 100 minutes

4.1 Pyramid	5 points
4.2 Skyscrapers	10 points
4.3 Double block	15 points
4.4 Geisterbahn-Tapa	15 points
4.5 Fillomino	25 points
4.6 Masyu	15 points
4.7 Simple Loop	35 points
4.8 Slither Link	40 points
4.9 Touching Fences	60 points
4.10 Land measurement	25 points
4.11 Land measurement	40 points
4.12 Tilted Aquarium	35 points
4.13 Elastic Bands	45 points
4.14 Clockfaces Sudoku	25 points
4.15 Daisho	50 points
4.16 Starbattle	50 points
4.17 Yin Yang	55 points
4.18 Infection	65 points
4.19 Heyawake	20 points
4.20 Yajiwake	50 points

Total680 points

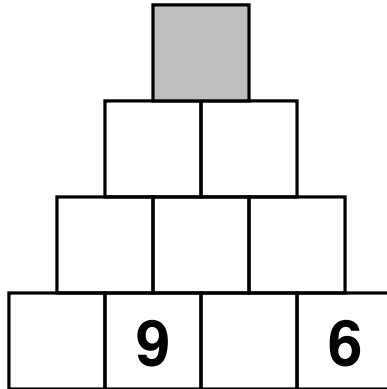
Bonus for every 30 seconds remaining2 points

PUNKTE

4.1 Pyramid

5 Punkte

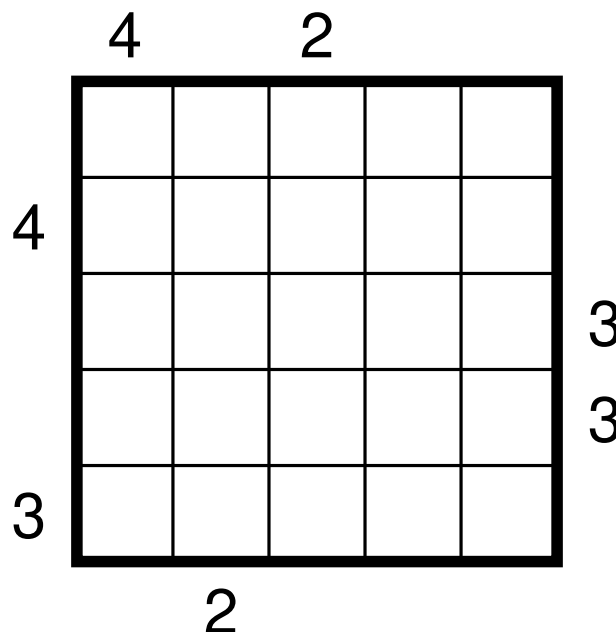
Fill the diagram with numbers from 1 to 9, such that every number is either the sum or difference of the two numbers below. In gray rows, no number may occur twice. In white rows at least one number does occur at least twice.



4.2 Skyscrapers

10 Punkte

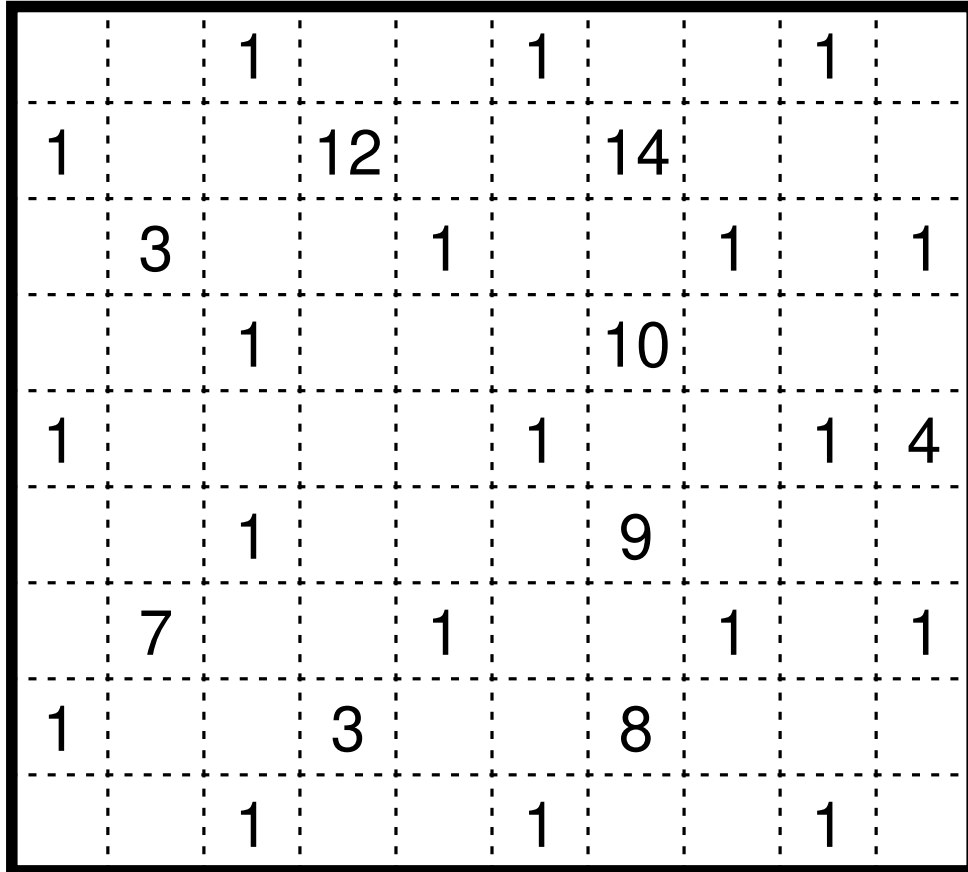
Fill the grid with skyscrapers of heights 1 to n (n the number of rows) such that every height occurs exactly once in every row and column. Numbers at the edge of the grid determine how many skyscrapers are visible in this direction. Higher skyscrapers hide lower skyscrapers.



4.5 Fillomino

25 Punkte

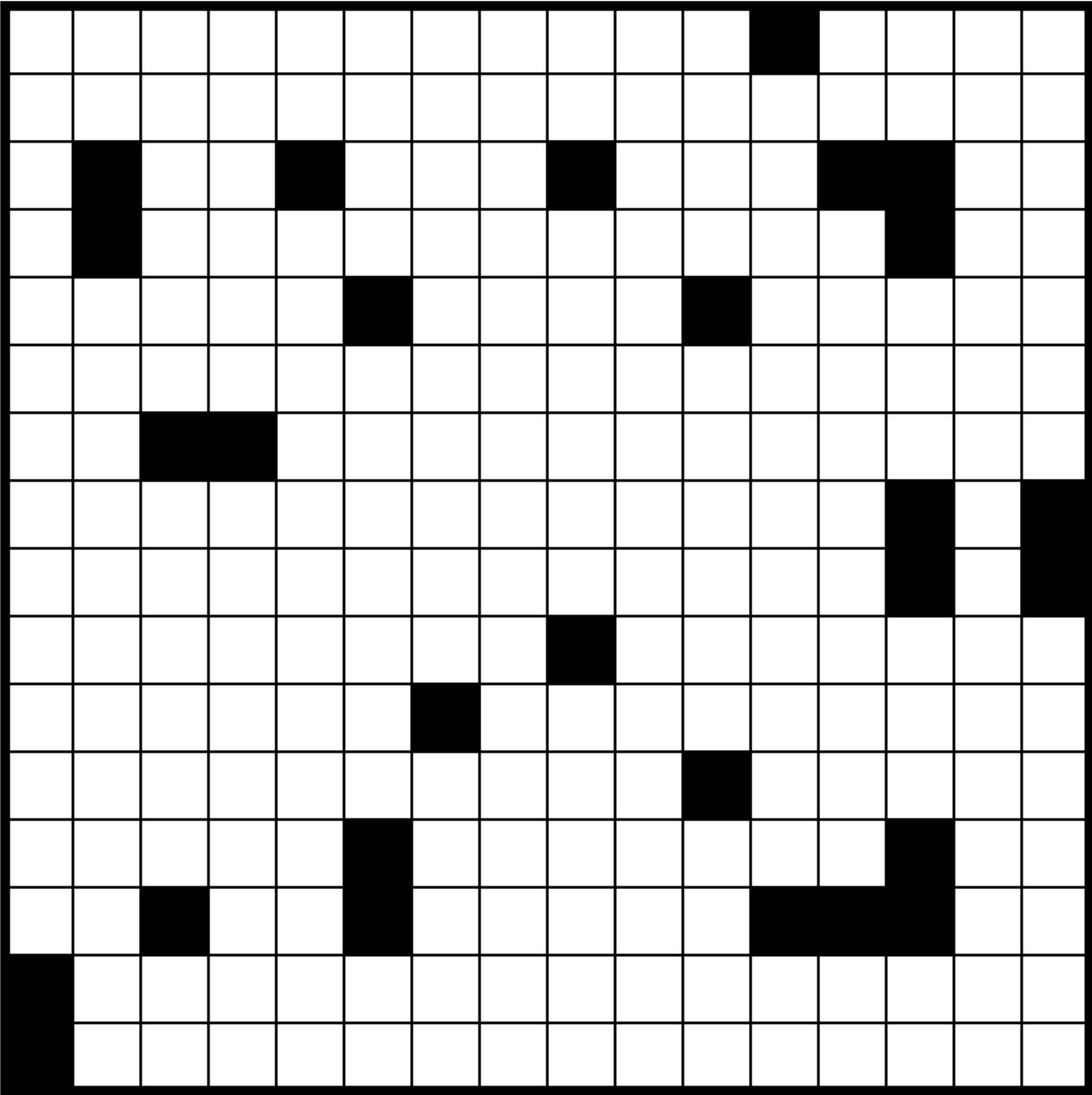
Divide the grid into regions and write a number into each cell, indicating the region's area. Regions of the same area do not share an edge. Given numbers may belong to the same region. There may be regions not containing any given number, even with numbers bigger than any given number.



4.7 Simple Loop

35 Punkte

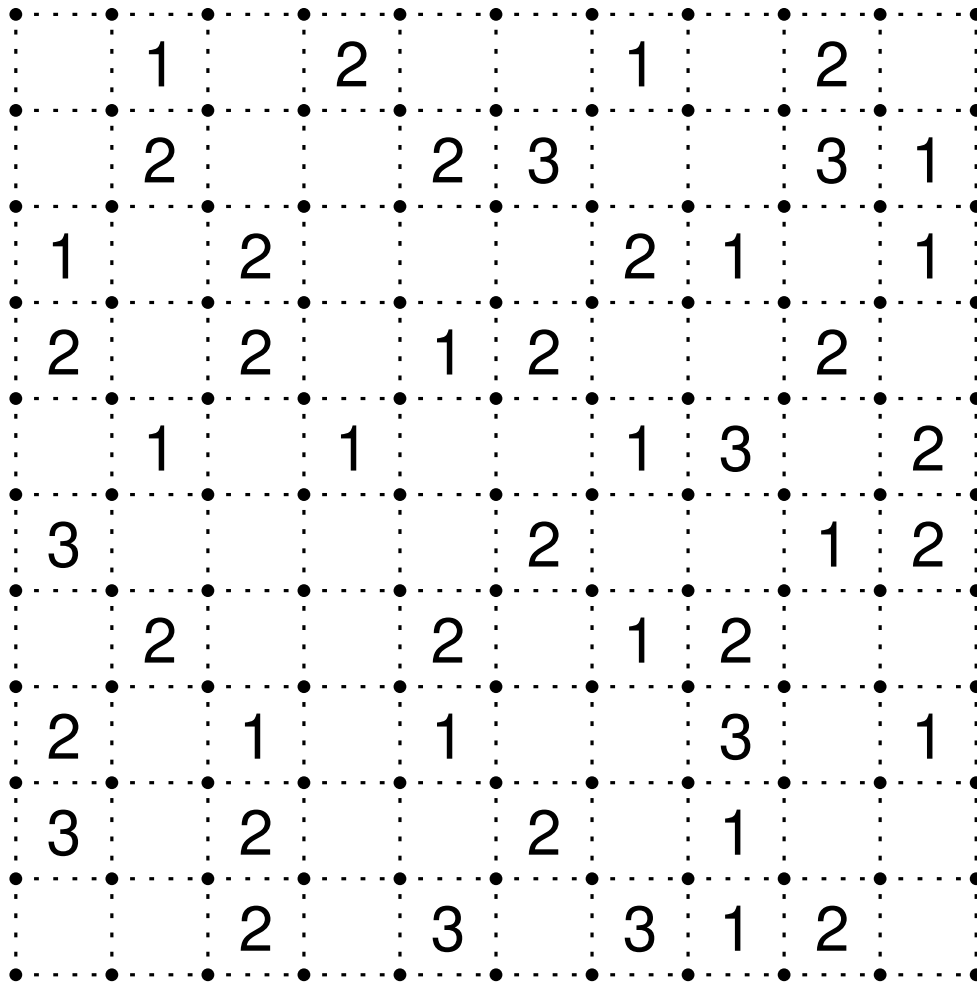
Draw a loop into the grid connecting the centers of horizontally or vertically adjacent cells using every white cell exactly once.



4.8 Slither Link

40 Punkte

Draw a loop along the dotted lines using every point of the grid at most once. Numbers indicate how many edges of the cell are used by the loop.



4.9 Touching Fences

60 Punkte

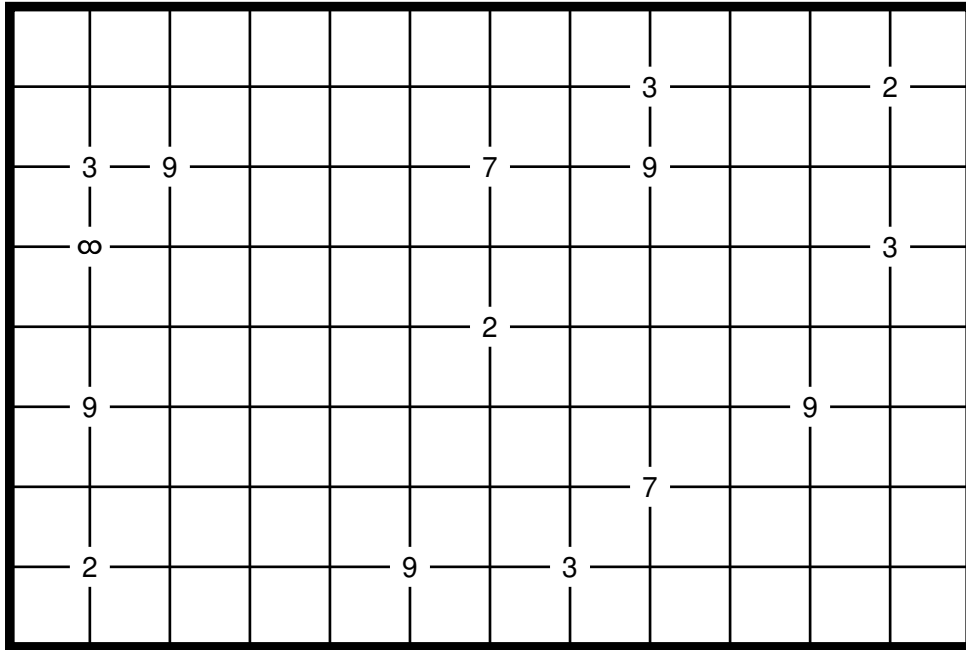
Draw a loop along the dotted lines using every point of the grid at most once. Numbers indicate how often the loop touches the respective cell.



4.10 Land measurement

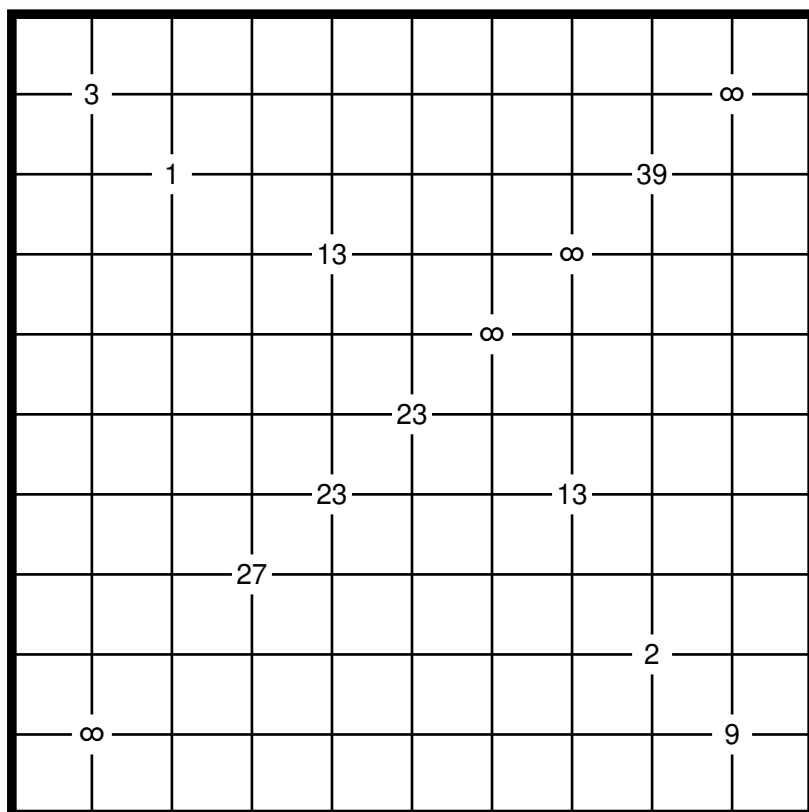
25 Punkte

Blacken some cells of the grid such that for any two black cells there is at most one path along black cells connecting them. The path connects horizontally and vertically neighboring black cells. That means, there cannot be a closed loop on the black cells. Numbers indicate the length of the shortest path that visits all black cells among the four touched cells. An infinity symbol ∞ means that there is no such path.



4.11 Land measurement

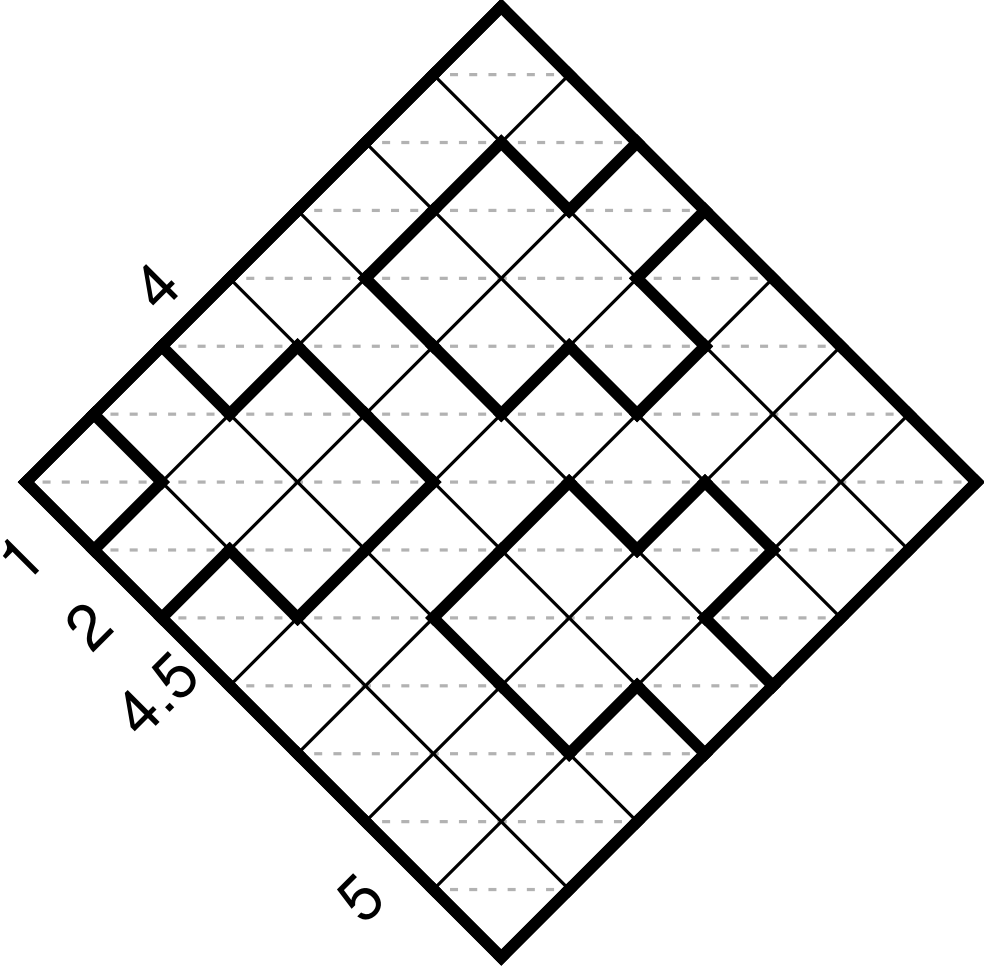
40 Punkte



4.12 Tilted Aquarium

35 Punkte

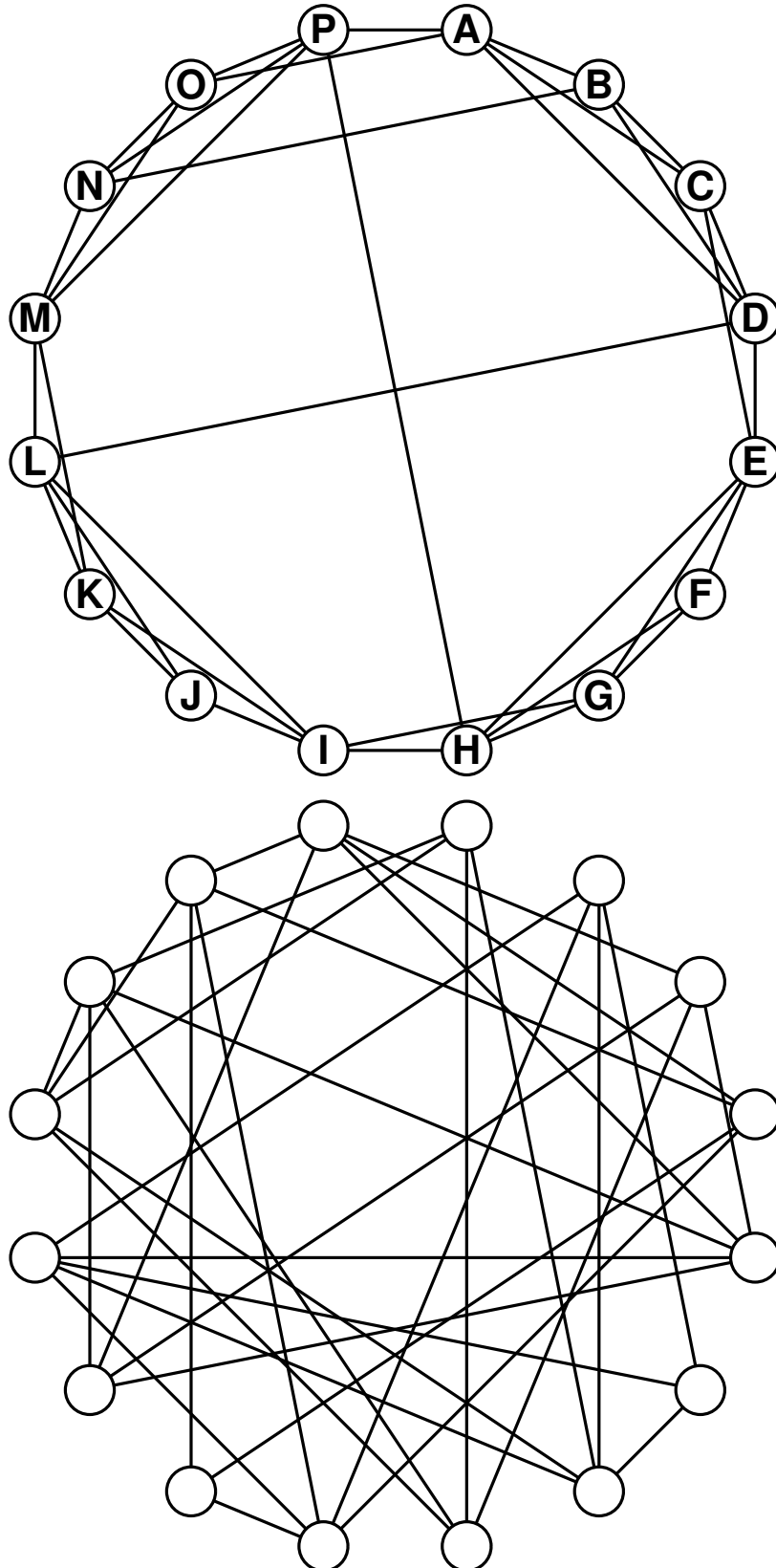
Fill some cells or half cells with water. Regions are filled with water from bottom to top. Within one row of a region, the water-level of all cells is identical. Numbers at the edge of the grid indicate how much water there is in the respective (diagonal) line.



4.13 Elastic Bands

45 Punkte

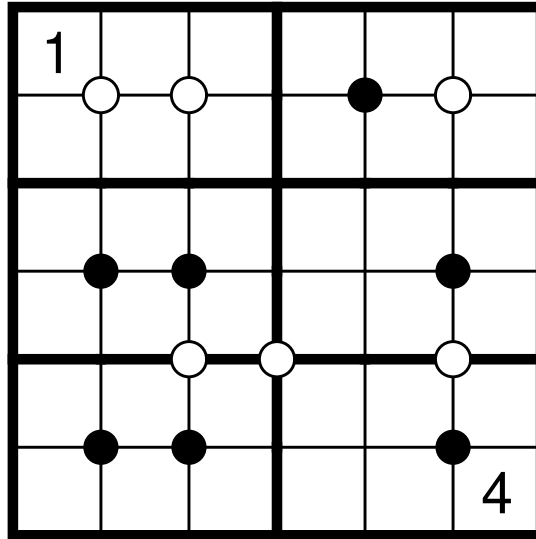
The first diagram shows labelled balls that are connected by elastic bands. In the second diagram, the balls have changed their position, but the connections stayed the same. Find the labels of the balls in the second diagram.



4.14 Clockfaces Sudoku

25 Punkte

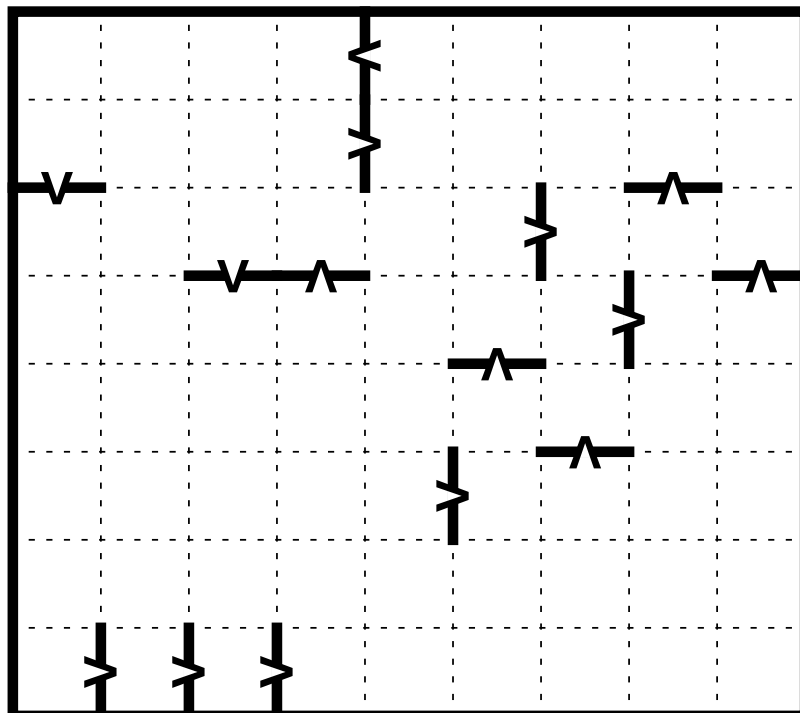
Fill the diagram with numbers from 1 to n (n the number of rows), such that every number occurs exactly once in every row, column and region. Numbers around a white circle are sorted increasingly clockwise, beginning in any cell. Numbers around a black circle are sorted increasingly counter-clockwise, beginning in any cell. If there is no circle, the numbers are not sorted.



4.15 Daisho

50 Punkte

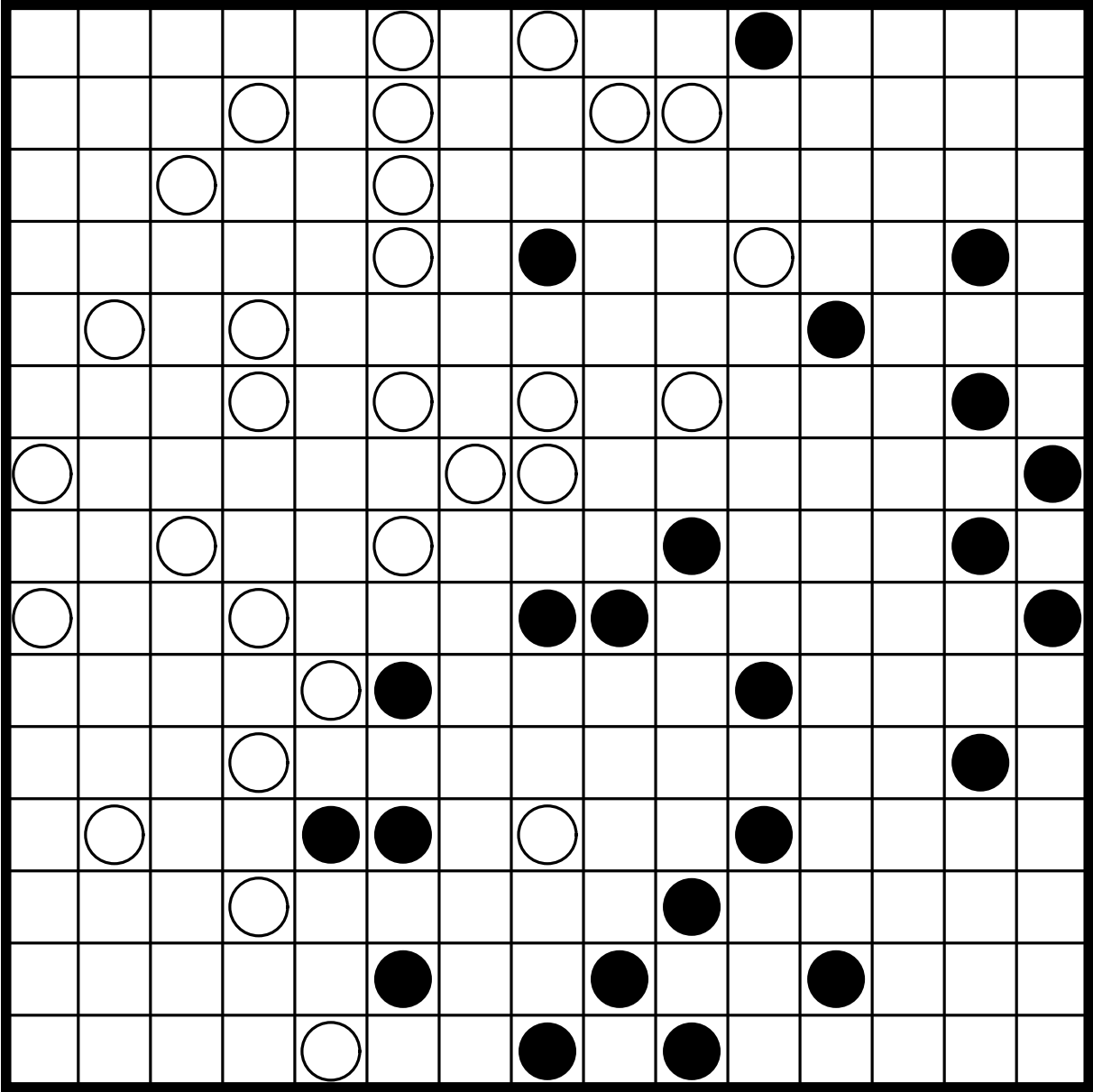
Divide the diagram into rectangles along the dotted lines. Each rectangle occupies at least 2 cells. The relation symbols indicate which of the two adjacent rectangles has the larger area.



4.17 Yin Yang

55 Punkte

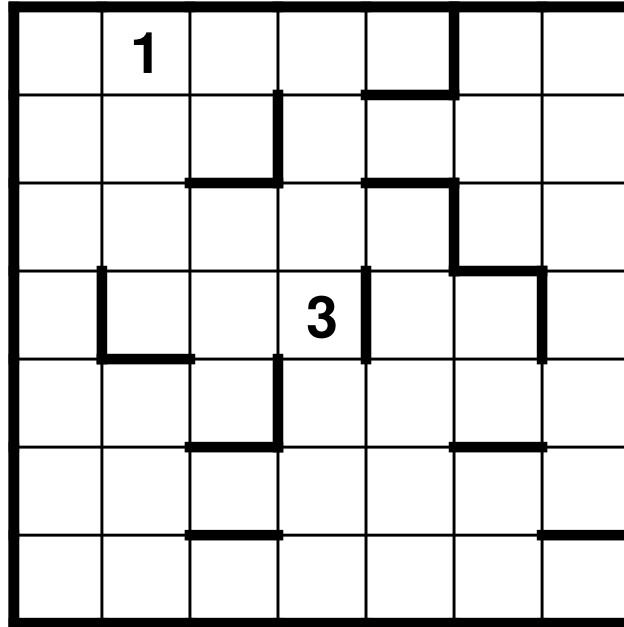
Fill each cell with either a black or a white circle, such that all circles of the same color are horizontally and vertically connected and no 2x2 area is completely filled with circles of the same color.



4.18 Infection

65 Punkte

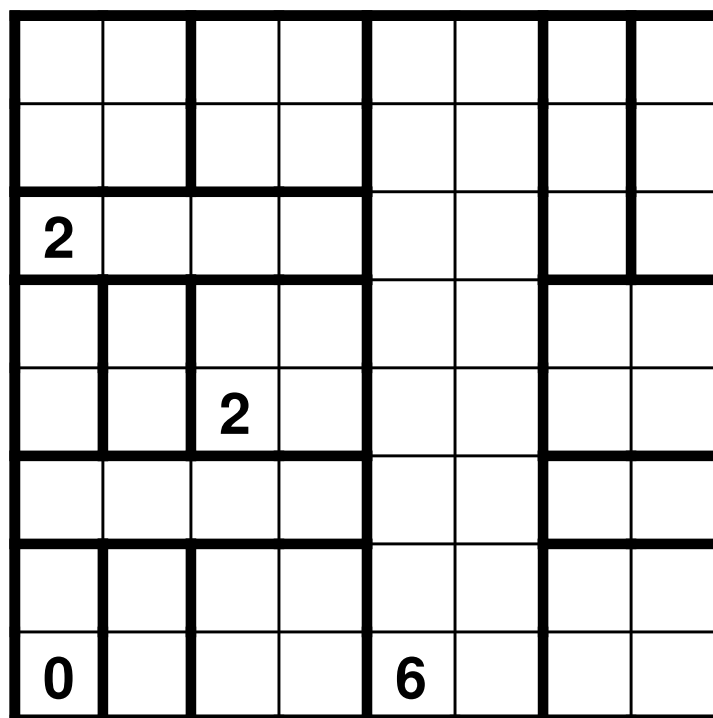
Fill the grid with numbers from 1 to 4. Every number indicates the number of different numbers in the vertically and horizontally adjacent cells. Numbers separated by a thick line are not considered adjacent.



4.19 Heyawake

20 Punkte

Blacken some cells, such that no two black cells share an edge and all white cells are connected. It is allowed to blacken cells containing numbers. There is no connected sequence of white cells in any row or column which extends to more than two regions. Numbers determine the number of black cells in the respective regions.



4.20 Yajiwake

50 Punkte

Blacken some cells, such that no two black cells share an edge and all white cells are connected. It is allowed to blacken cells containing numbers. There is no connected sequence of white cells in any row or column which extends to more than two regions. Numbers determine the number of black cells in the respective regions. Draw a loop through all remaining cells (including white cells with numbers) that connects the centers of horizontally or vertically adjacent cells.

