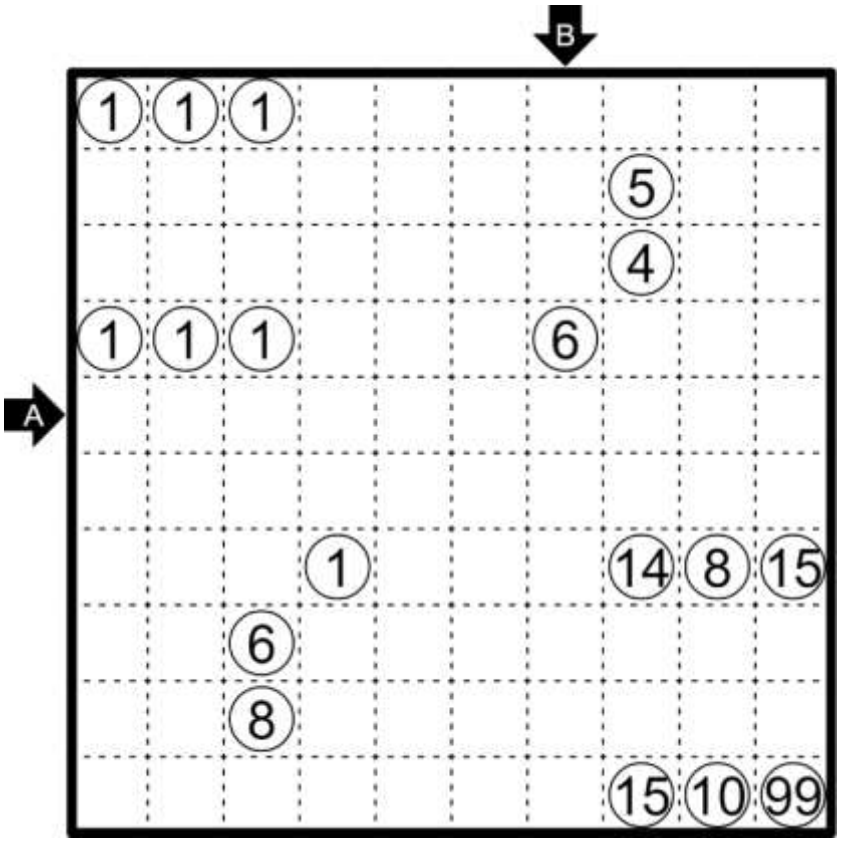
01 Araf

25 points

Divide the grid into some regions containing two circles each. Each cell of the grid is part of one region. Each region must have an area that is strictly between the numbers in the circles contained in it.

Penpa: https://git.io/JUWvh

Answer Key: For the marked rows/columns, enter the number of consecutive cells in each region from left to right/top to bottom Enter only the unit's digit for double digit numbers.



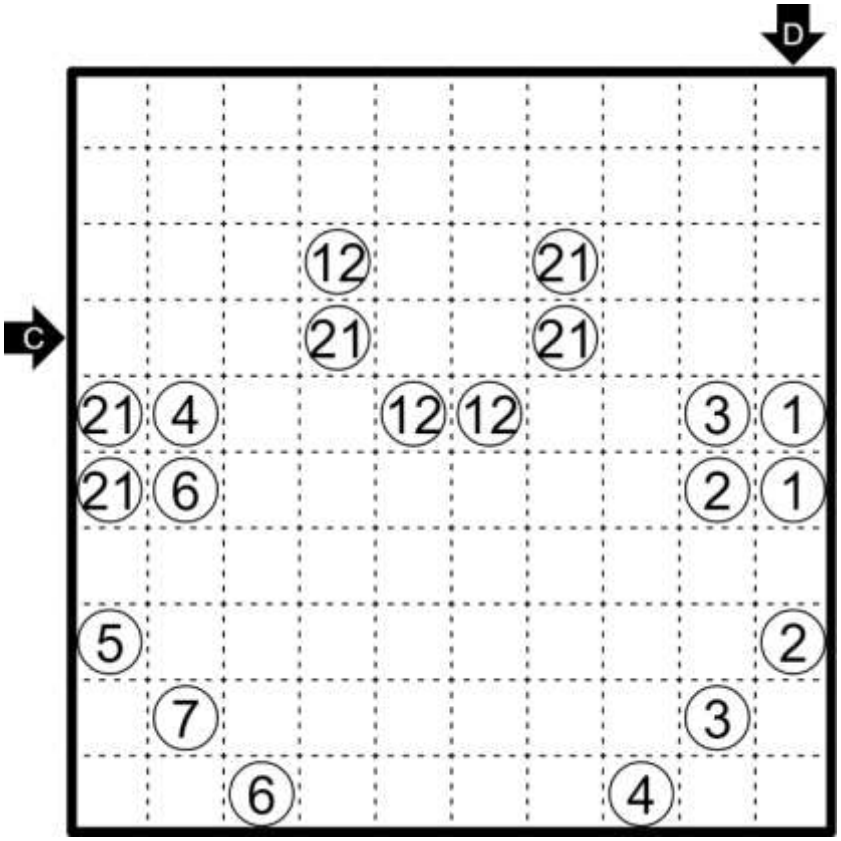
02 Araf Araf

50 points

Follow regular Araf rules as above. Additionally, each region must pair up with another region, **that shares an edge with it,** such that their combined area is strictly between the lowest and the highest numbers within them. Numbers can repeat in paired regions.

Penpa: https://git.io/JUWf3

Answer Key: For the marked rows/columns, enter the number of consecutive cells in each region from left to right/top to bottom Enter only the unit's digit for double digit numbers.



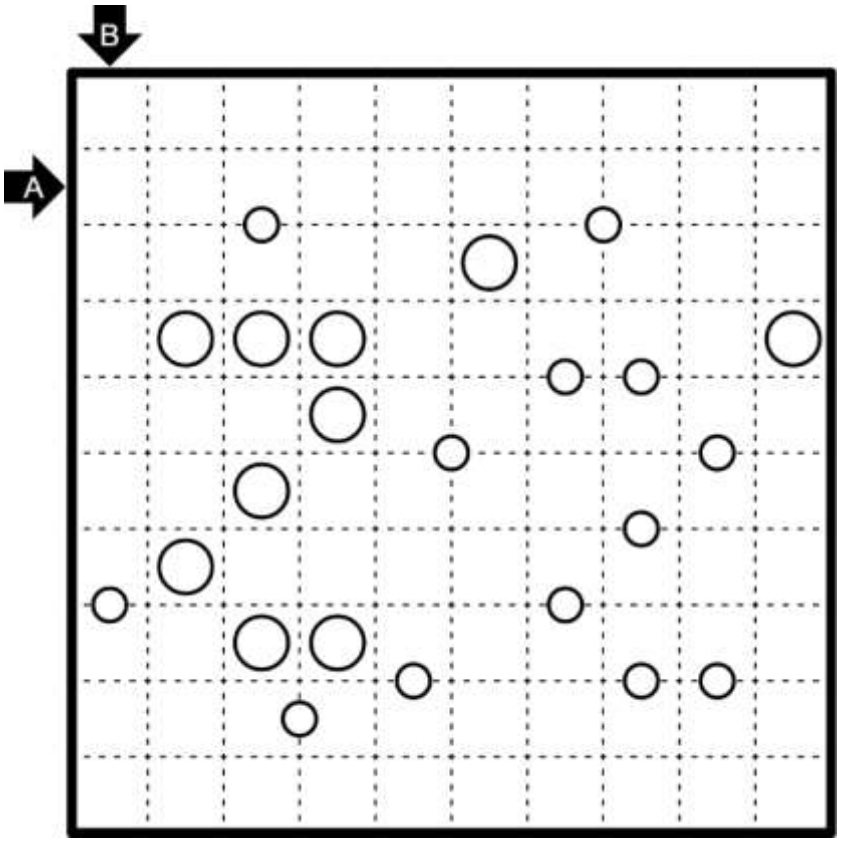
03 Spiral Galaxies

15 points

Divide the grid into 180 degree symmetrical regions along the gridlines, so that each cell is part of exactly one region. Each region must contain exactly one white circle, which represents the central symmetry point of the region. All circles are given.

Penpa: https://git.io/JUWJv

Answer Key: For the marked rows/columns, enter the number of consecutive cells in each region from left to right/top to bottom Enter only the unit's digit for double digit numbers**.**



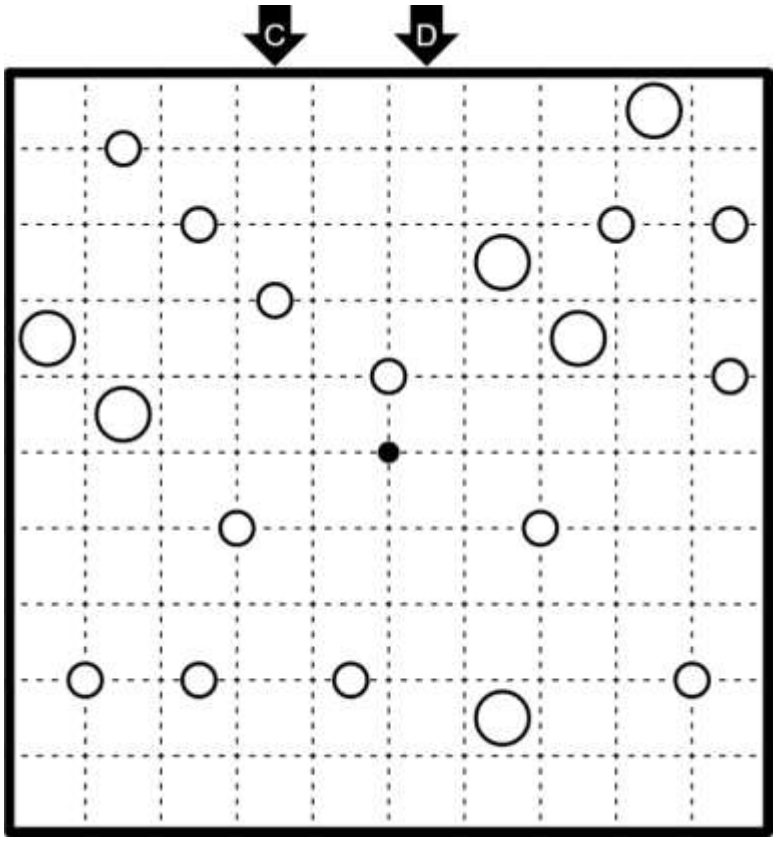
04 Spiral Galaxies Galaxy

50 points

Follow regular Spiral Galaxies rules as above.
However, some cells may not be part of any region. All the used cells must together form a single connected area that is 180^0 symmetrical with the black circle as the central point of symmetry for this area.

Penpa: https://git.io/JUWJP

Answer Key: For the marked rows/columns, enter the number of consecutive cells in each region (**a continuous group of unused cells is counted as a region here**) from left to right/top to bottom Enter only the unit's digit for double digit numbers**.**



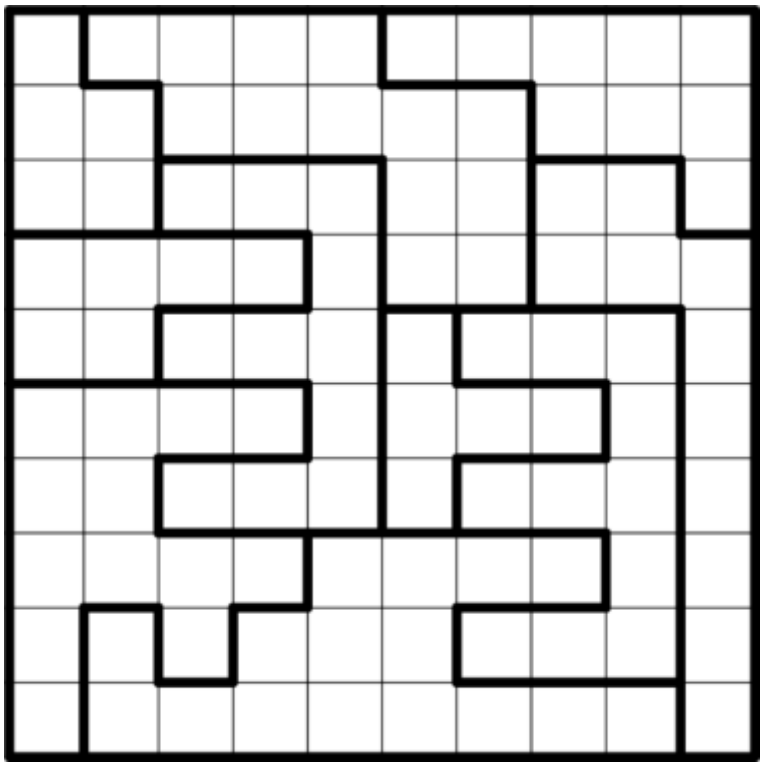
05 Star Battle

20 points

Place two stars in each row, column and boldly outlined region. Cells with stars cannot touch each other orthogonally or diagonally.

Penpa: https://git.io/JUWJQ

Answer Key: For each row from top to bottom, enter the column number of the leftmost star. **Enter Unit's digit for two digit column numbers.**



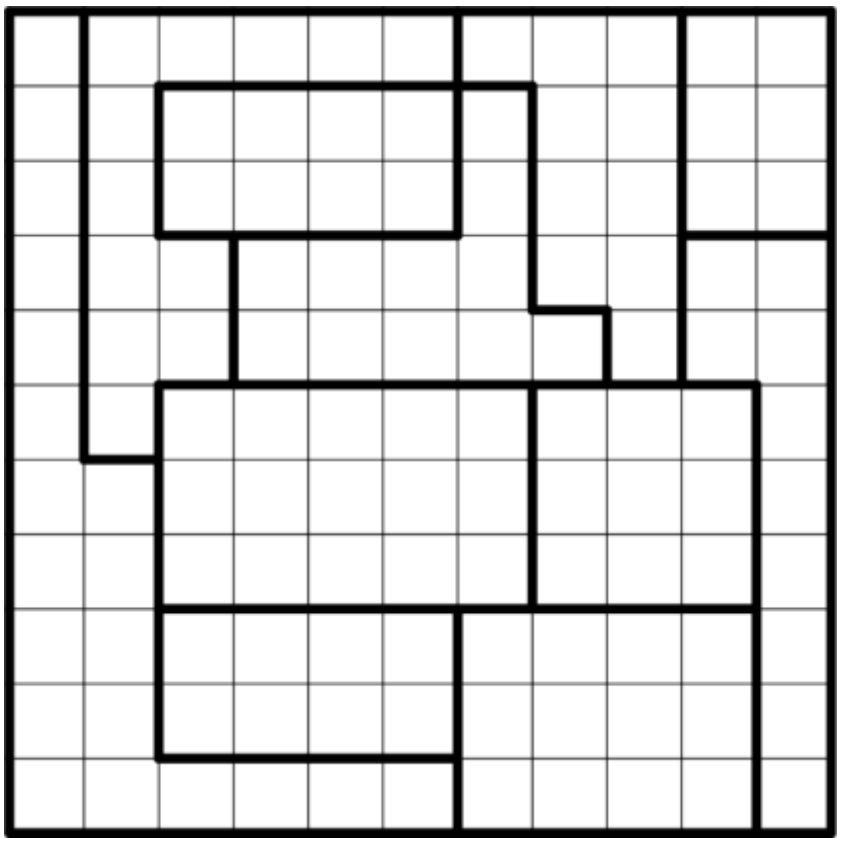
06 Star Battle Battles

80 points

In this puzzle, there are coloured stars. Place two white stars as per regular Star Battle rules above. Additionally, place one black star in each row, column and boldly outlined region. Stars of the same colour cannot touch each other orthogonally or diagonally. Stars of different colour may touch diagonally but not orthogonally. Some stars may be given.

Penpa: https://git.io/JUWJH

Answer Key: For each row from top to bottom, enter the column number of the black star. **Enter Unit's digit for two digit column numbers.**



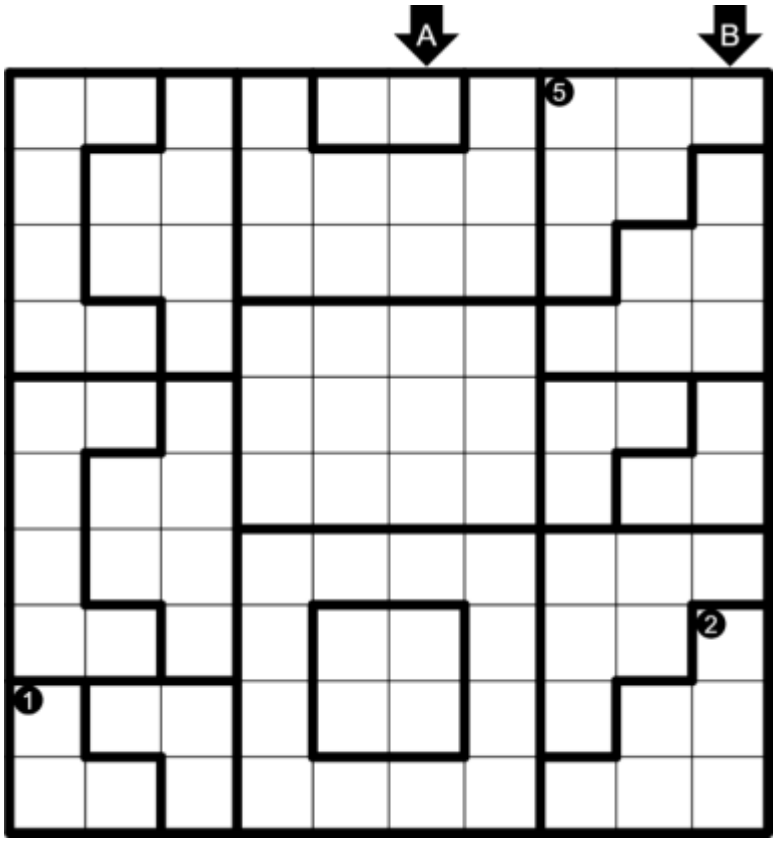
07 Stostone

125 points

Shade some cells. A contiguous block of shaded cells is a stone. Each stone is contained in exactly one region. Each region contains exactly one stone. Each number indicates the area of the stone in the region. Regions without numbers must have a stone covering an area of 1 or more cells. No two stones share a side. If the stones are dropped by gravity, they fill exactly the bottom half of the grid.

Penpa: https://git.io/JUWUs

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



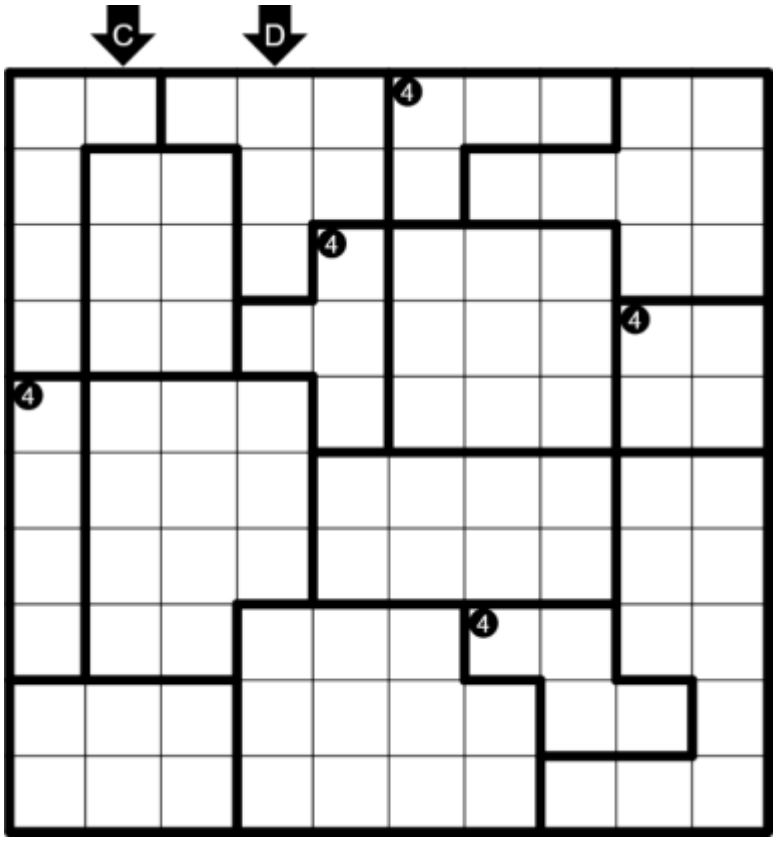
08 Stostone Stostone

35 points

Follow regular Stostone rules as above.
Additionally, separately, gravity also exists to the right, and even if the stones are all shifted to the right they fill exactly the right half of the grid.

Penpa: https://git.io/JUWTK

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



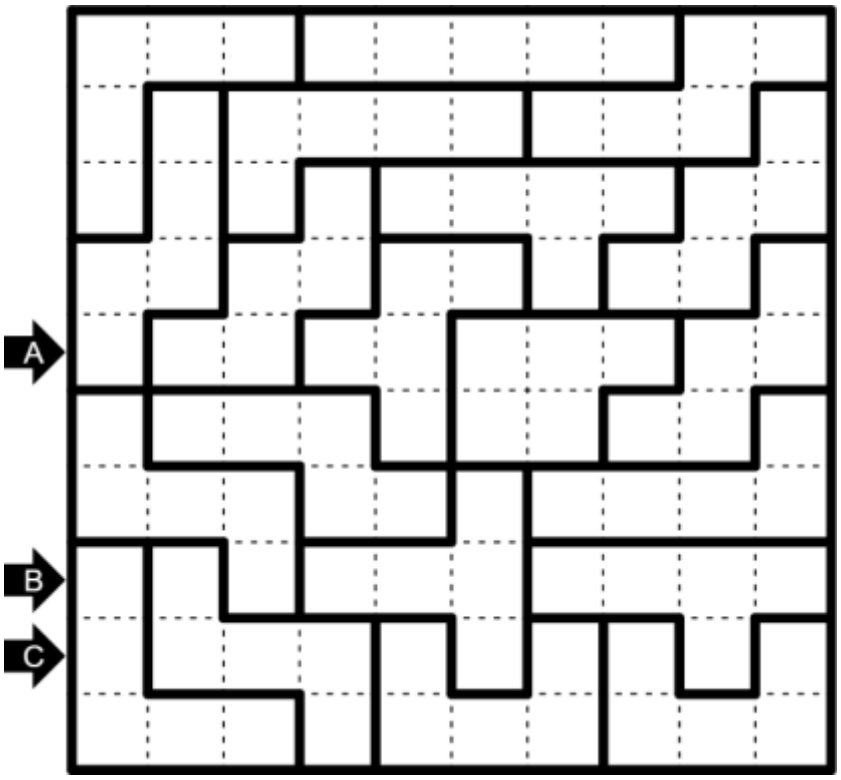
09 Double Back

60 points

Draw a single closed loop passing horizontally and vertically through the centres of all cells of the grid. The loop may not branch off, or intersect itself. The loop must enter and exit each boldly outlined region exactly twice.

Penpa: https://git.io/JUWTA

Answer Key: For the marked rows/columns enter the lengths of loop segments along the direction of the arrow.



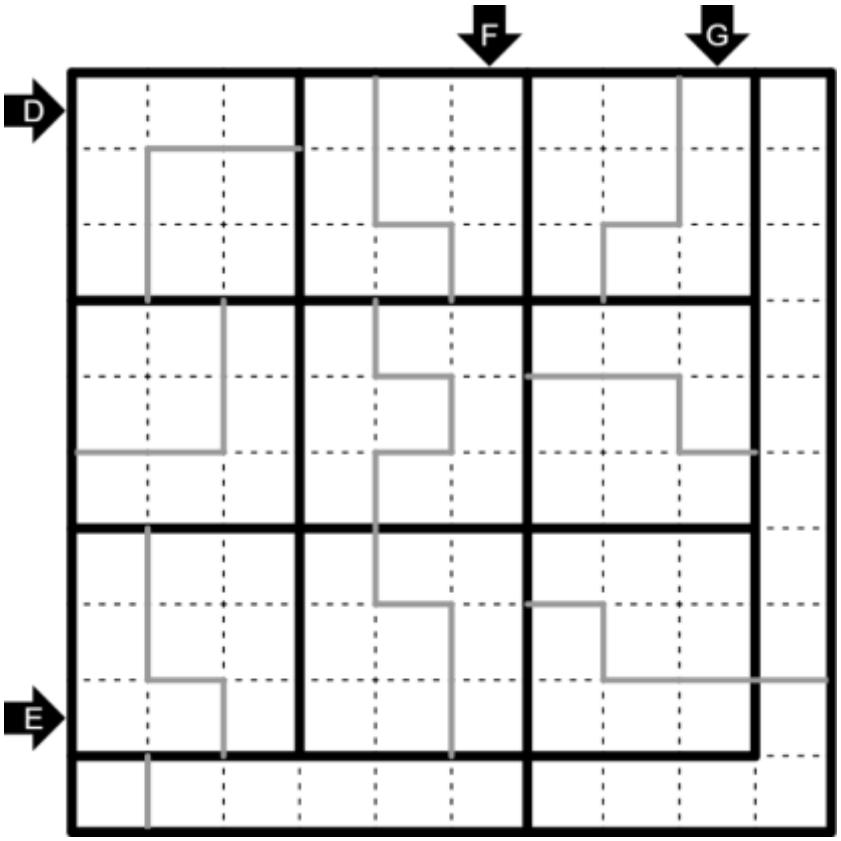
10 Double Double Back

55 points

Draw a single closed loop passing horizontally and vertically through the centres of cells. The loop may not branch off, or intersect itself. The loop does not have to visit all cells, but if it visits a region it must visit all cells of that region. The regions are paired by grey lines. The loop must enter and exit each pair of regions twice. This means, within a pair, it will either enter and exit each region exactly once or one of them twice and the other zero times. The grey lines are just to show the pairings and otherwise have no difference to other bold outlines.

Penpa: https://git.io/JUWkt

Answer Key: For the marked rows/columns enter the lengths of loop segments along the direction of the arrow.



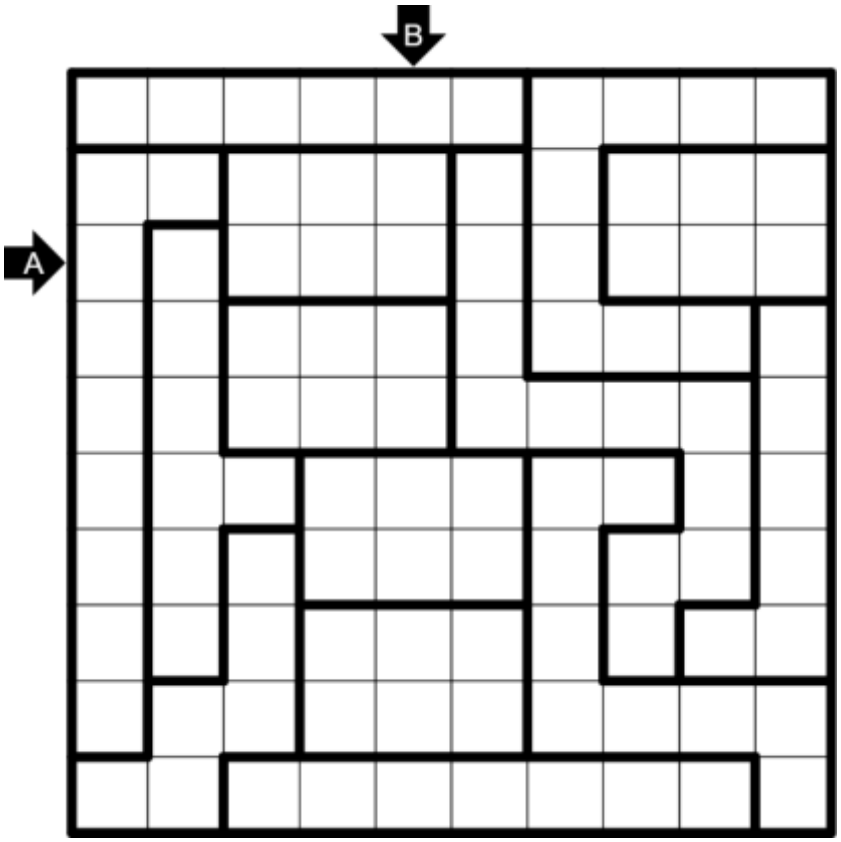
11 LITS

25 points

Shade exactly four connected cells in each outlined region, to form an L, I, T, or S tetromino, so that the following conditions are true: (1) All shaded cells are connected with each other; (2) No 2×2 group of cells can be entirely shaded black; (3) When two tetrominoes in adjacent regions share an edge, they must not be of the same type regardless of rotations or reflections.

Penpa: https://git.io/JUWk0

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



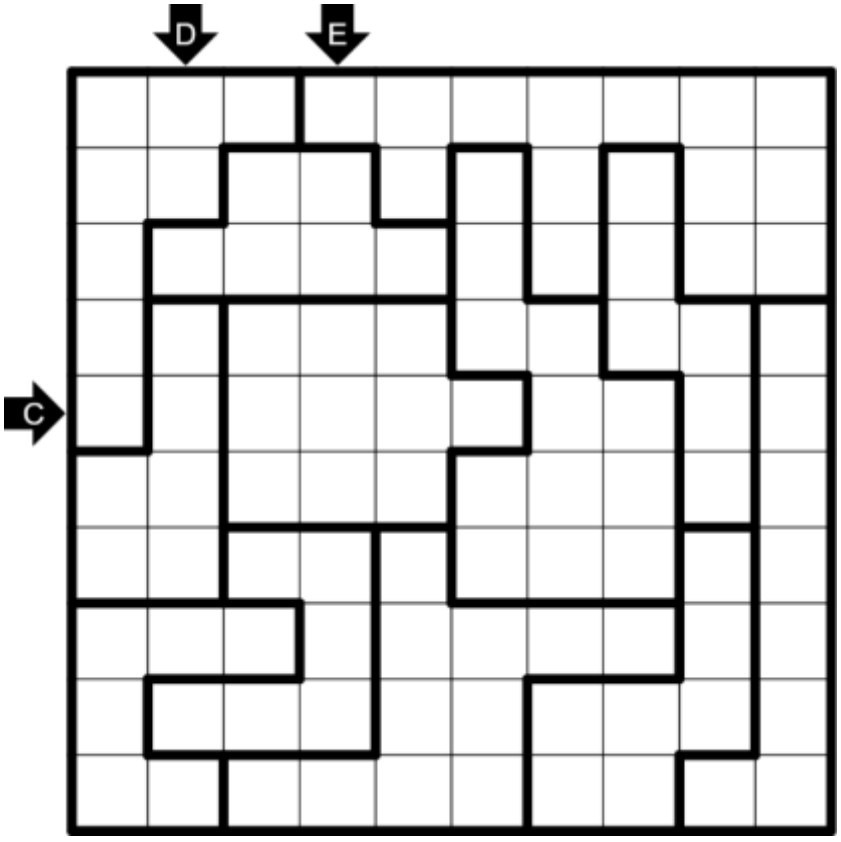
12 LITS LITS

40 points

Follow regular LITS rules as above. Additionally, the shaded cells must also be entirely divisible into tetrominoes that never exist completely in the same boldly outlined region. In this division, like the regular LITS wall, when two tetrominoes share an edge, they must not be of the same type regardless of rotations and reflections.

Penpa: https://git.io/JUWkX

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



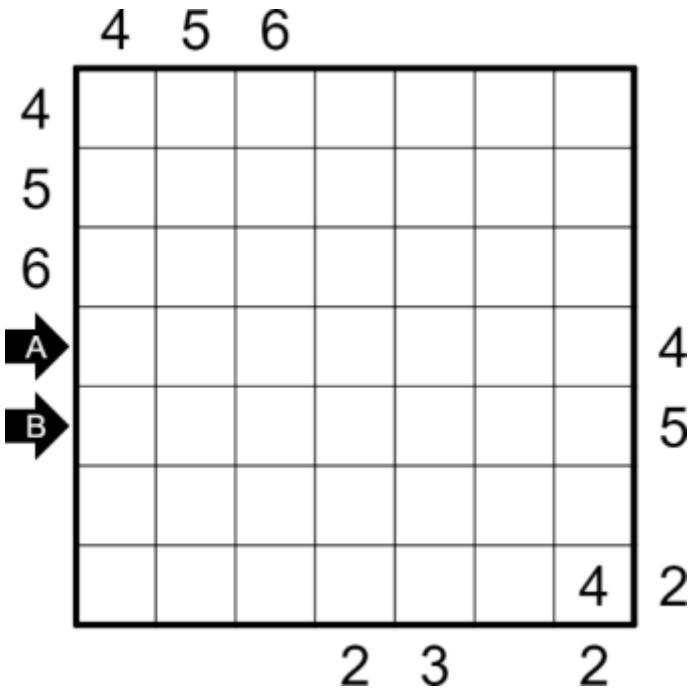
13 Skyscrapers

65 points

Fill in the grid with digits 1–N where N is the size of the grid. Each row and column contains each digit exactly once. Each number inside the grid represents the height of a building. The clues outside of the grid indicate how many buildings can be seen when looking from that direction. Taller buildings block the view of smaller buildings.

Penpa: https://git.io/JUWkd

Answer Key: For each marked row (or column), enter the contents of the row (or column) from left to right (or top to bottom).



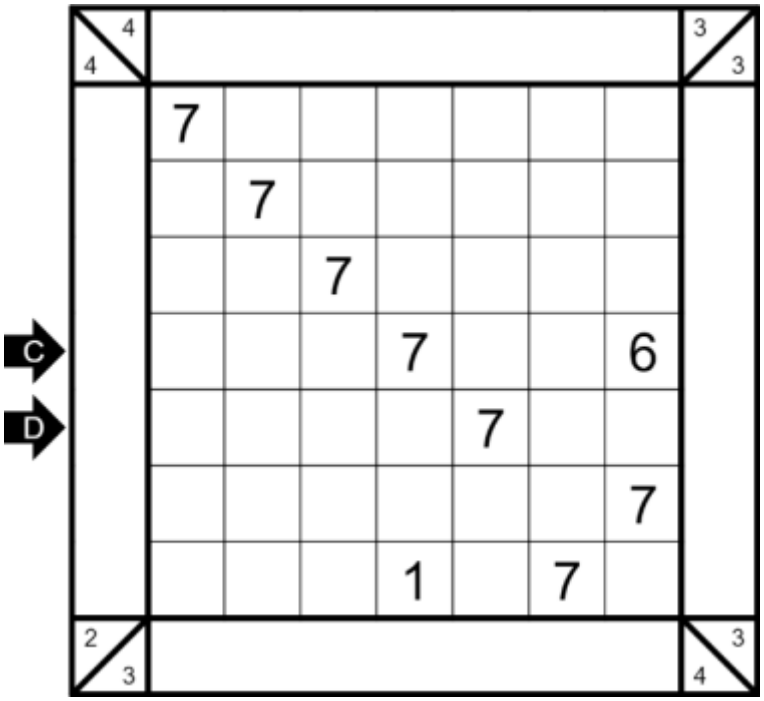
14 Skyscraper Skyscrapers

90 points

Apply regular Skyscraper rules as above. Additionally, the numbers beside diagonal lines indicate the number of skyscrapers seen considering skyscraper clues in a line in the corresponding direction. These outer lines may contain repeating digits, and digits hide smaller as well as same sized digits behind them.

Penpa: https://git.io/JUWIt

Answer Key: For each marked row (or column), enter the contents of the row (or column) from left to right (or top to bottom), **including the outer digits**.



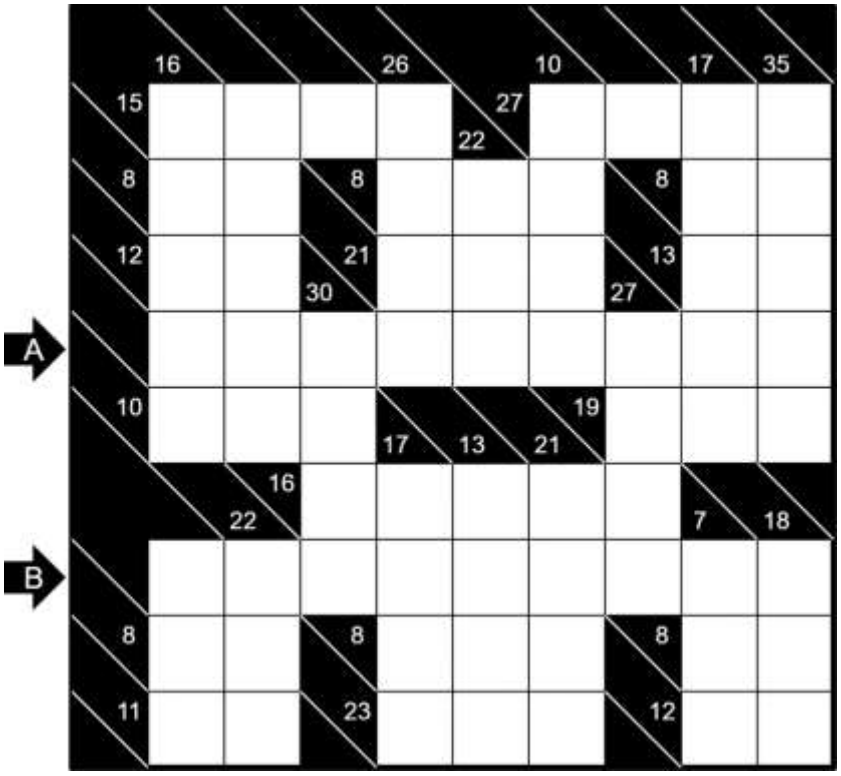
15 Kakuro

50 points

Enter a single digit from 1 to 9 into each white cell so that the sum of digits in each Across entry equals the value given to the left of the entry, and the sum of digits in each Down entry equals the value given above the entry. No digit may be repeated within a single entry (i.e., group of cells connected horizontally or vertically without any black cells between).

Penpa: https://git.io/JUWYG

Answer Key: For each marked row (or column), enter the contents of the row (or column) from left to right (or top to bottom), ignoring black cells.



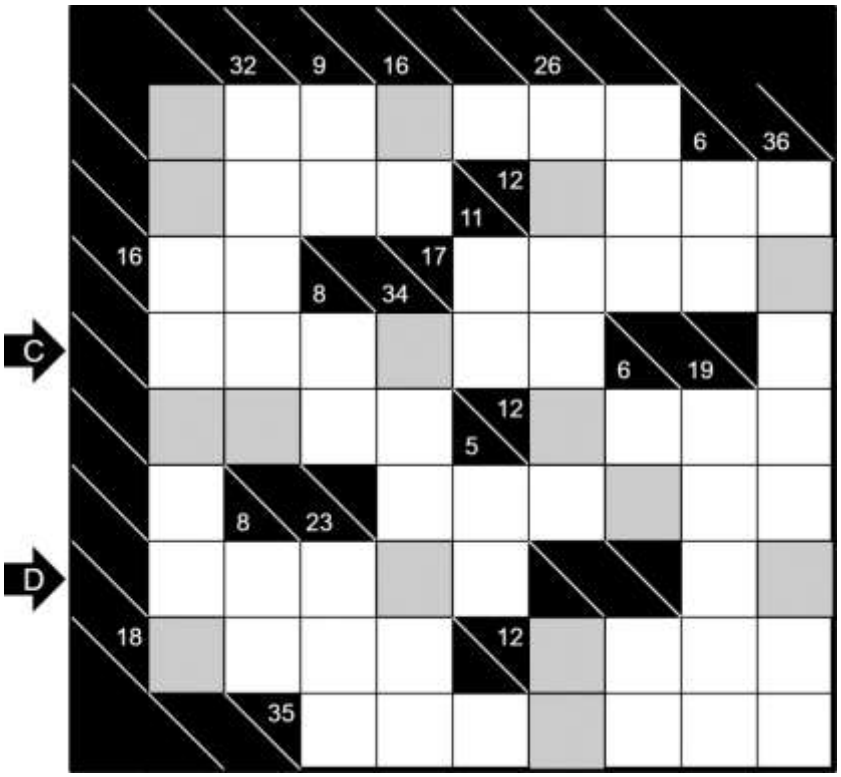
16 Kakuro Kakuro

80 points

Follow regular Kakuro rules as above. Additionally, some cells are shaded and the digits in these shaded cells double up as Kakuro clues for subsequent white cells, till the next grey cell, black cell or grid boundary. It is up to the solver to determine if the shaded cell digit is an across or a down clue **and it could be both**. Black cell sums consider shaded cells as white cells.

Penpa: https://git.io/JUWYz

Answer Key: For each marked row (or column), enter the contents of the row (or column) from left to right (or top to bottom), ignoring black cells.



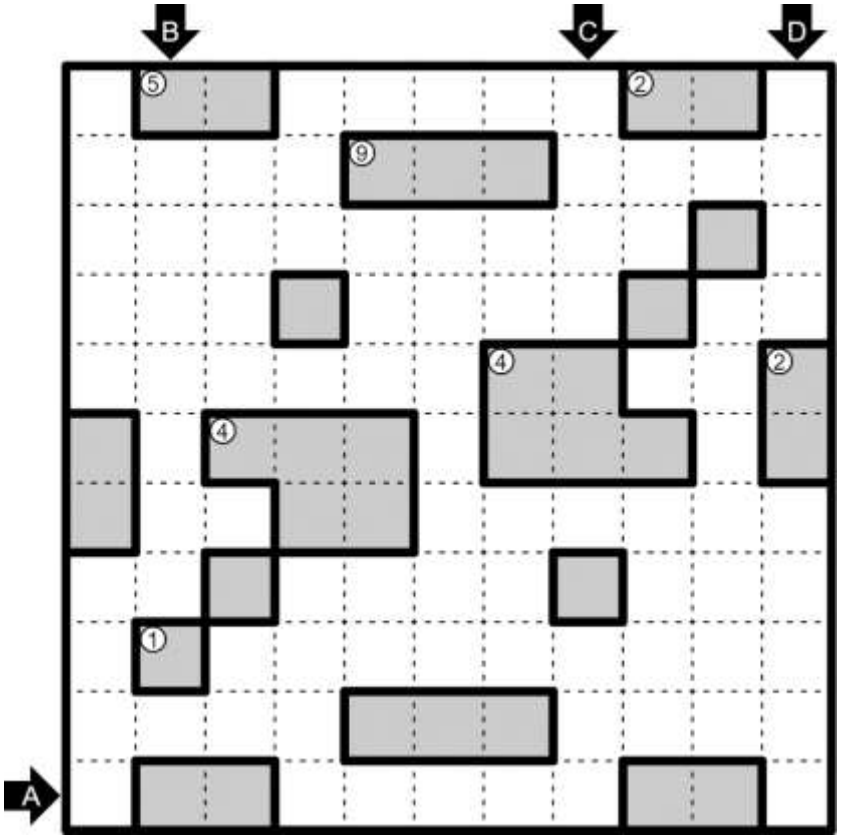
17 Ovotovata

30 points

Draw a single closed loop passing horizontally and vertically through the centers of cells that passes through every shaded region **at least once**. The loop may not branch off, or intersect itself. Whenever the loop exits a region with a white circle (in any direction) it must go straight till the Nth cell in that direction and then turn, where n is the number in the circle.

Penpa: https://git.io/JUWYD

Answer Key: For the marked rows/columns enter the lengths of loop segments along the direction of the arrow.



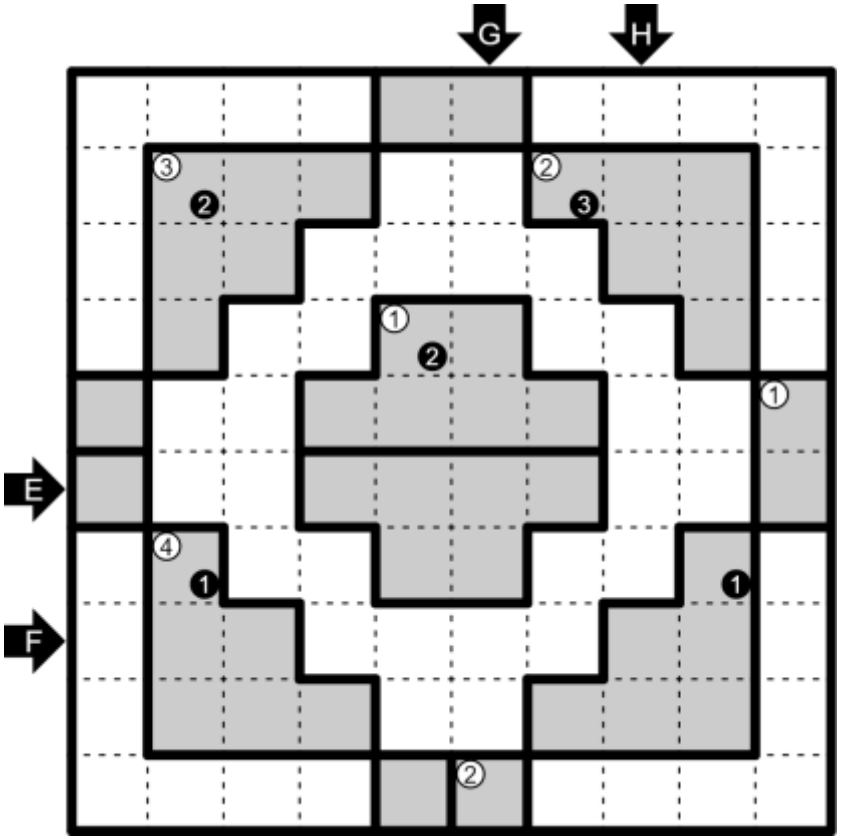
18 Ovotovatatavotovo

40 points

Apply regular Ovotovata rules as above. Additionally, whenever the loop enters a region with a black circle (in any direction) it must go straight till the Nth cell in that direction and then turn, where n is the number in the circle.

Penpa: https://git.io/JUWOf

Answer Key: For the marked rows/columns enter the lengths of loop segments along the direction of the arrow.



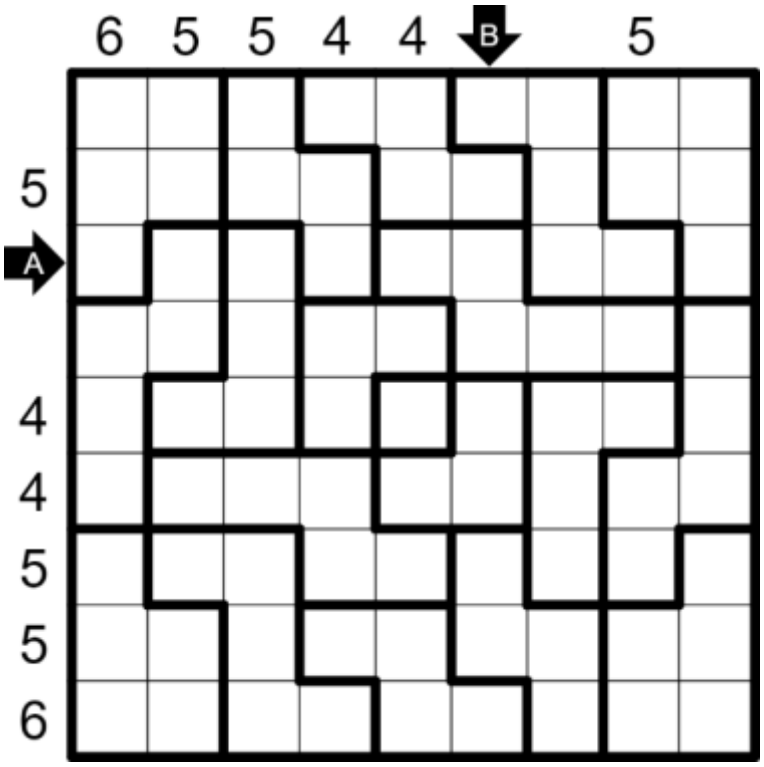
19 Crazy Pavement

30 points

Shade some cells in the grid so that for each boldly outlined region either all its cells are shaded or none at all. Numbers outside the grid indicate the number of shaded cells in that row/column.

Penpa: https://git.io/JUWOq

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



20 Crazy Crazy Pavement

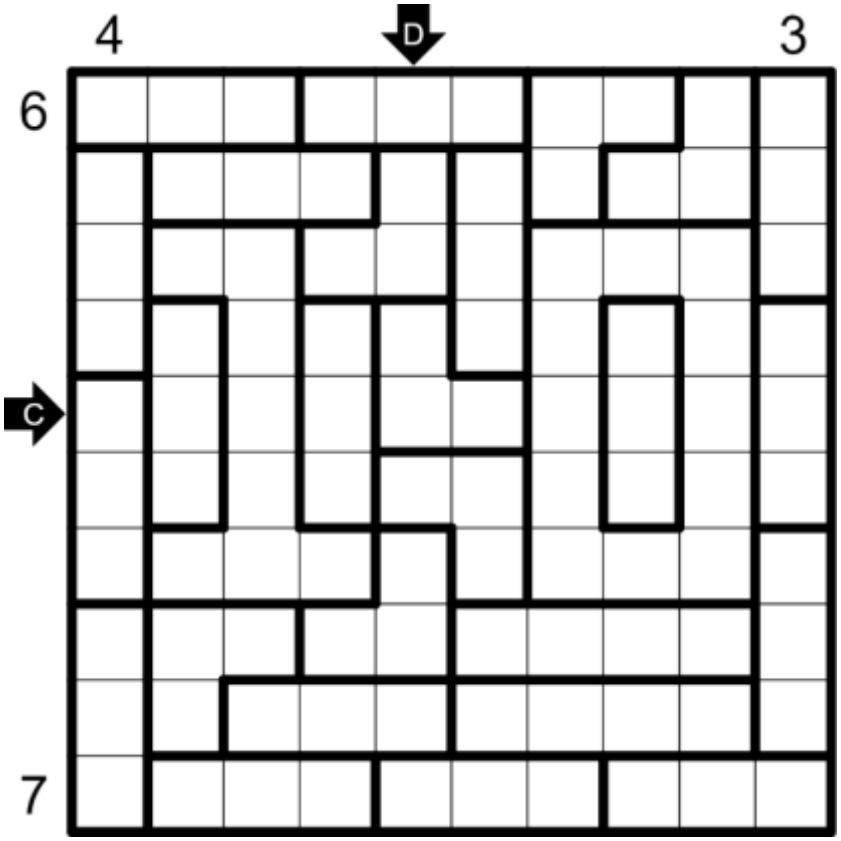
35 points

Shade some cells in the grid so that for each boldly outlined region either all its cells are shaded or none at all. Shaded cells must form a contiguous group and cannot fully cover a 2x2 area of cells.

Numbers outside the grid either all indicate the number of shaded cells in that row/column, or they all indicate the number of unshaded cells in that row/column. It is up to the solver to determine which. Once determined it is true for all numbers.

Penpa: https://git.io/JUWO8

Answer Key: For the marked rows/columns enter the lengths of contiguous shaded/unshaded cells.



All Penpa links:

1. Araf: https://git.io/JUWvh
2. Araf Araf: https://git.io/JUWf3
3. Spiral Galaxies: https://git.io/JUWJv
4. Spiral Galaxies Galaxy: https://git.io/JUWJP
5. Star Battle: https://git.io/JUWJQ
6. Star Battle Battles: https://git.io/JUWJH
7. Stostone: https://git.io/JUWUs
8. Stostone Stostone: https://git.io/JUWTK
9. Double Back: https://git.io/JUWTA
10. Double Double Back: https://git.io/JUWkt
11. LITS: https://git.io/JUWk0
12. LITS LITS: https://git.io/JUWkX
13. Skyscrapers: https://git.io/JUWkd
14. Skyscraper Skyscrapers: https://git.io/JUWIt
15. Kakuro: https://git.io/JUWYG
16. Kakuro Kakuro: https://git.io/JUWYz
17. Ovotovata: https://git.io/JUWYD
18. Ovotovatatavotovo: https://git.io/JUWOf
19. Crazy Pavement: https://git.io/JUWOq
20. Crazy Crazy Pavement: https://git.io/JUWO8