forfmarks 3 puzzle book

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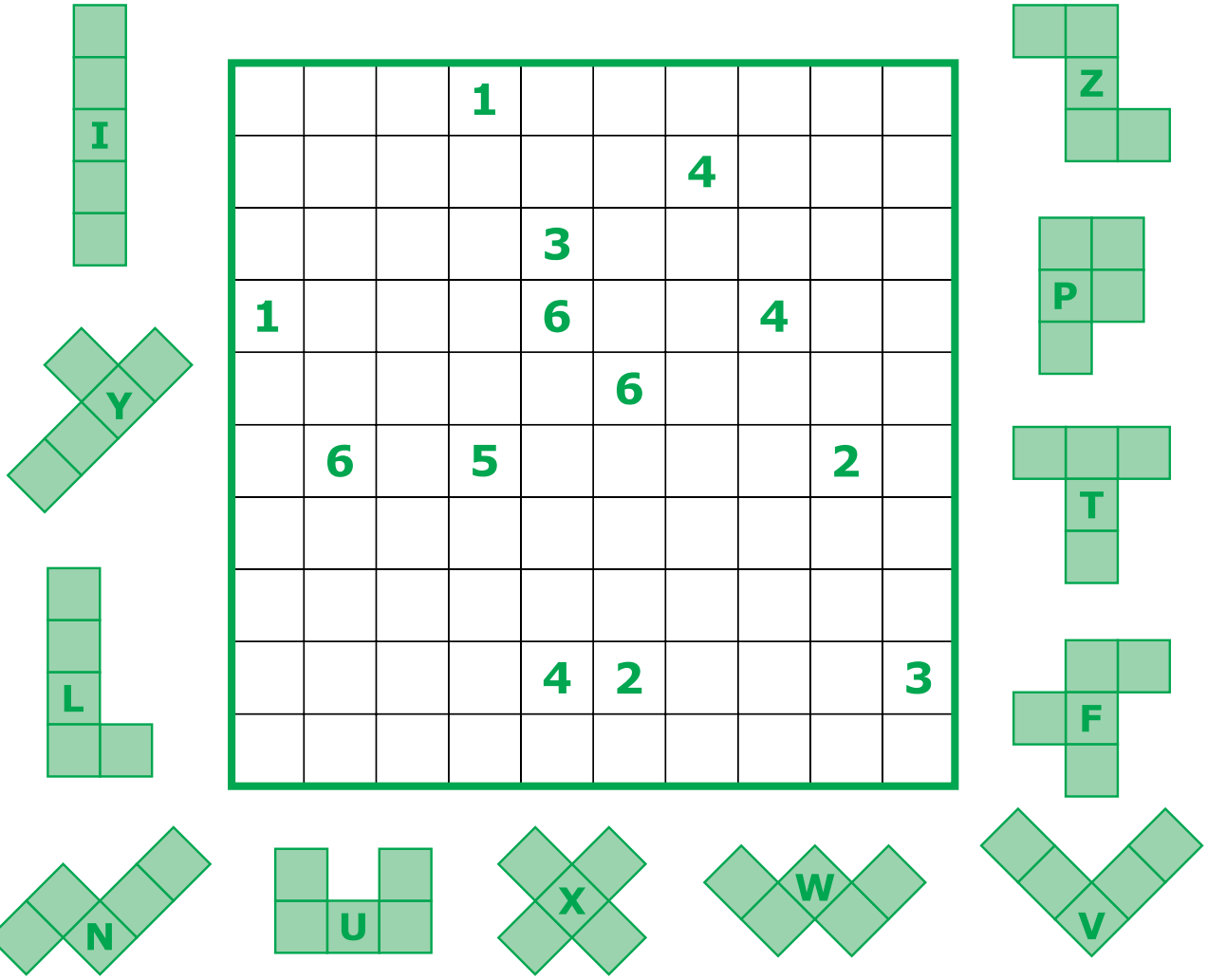
Cave vs. Pentagroups

To solve the whole problem you should solve two separate puzzles. First you must solve the Cave puzzle

Select a connected set of squares - the cave - so that it contains all the numbers inside and each number reveals the number of cells that are visible from the given number's cell (which is NOT included). The cave cannot have an island inside it.

The solution of the first puzzle is not unique. But you have to find one which will make the further solving process possible. You must get four separate areas, left outside the cave, which are mentioned in the next puzzle - Pentagroups.

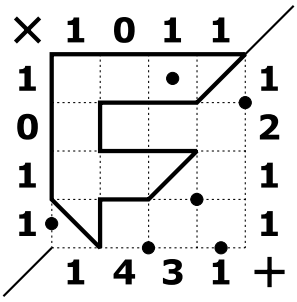
Divide the full set of pentaminoes into four groups, each containing 3 elements, so that elements of each group could be placed only in corresponding area. Pentaminoes can be rotated and/or reflected.

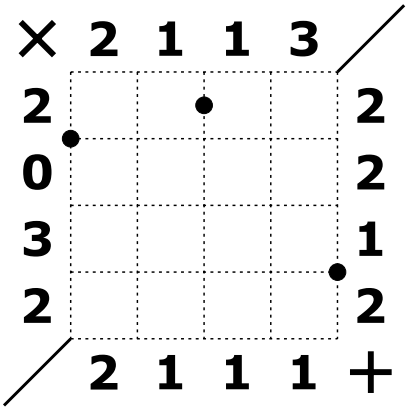


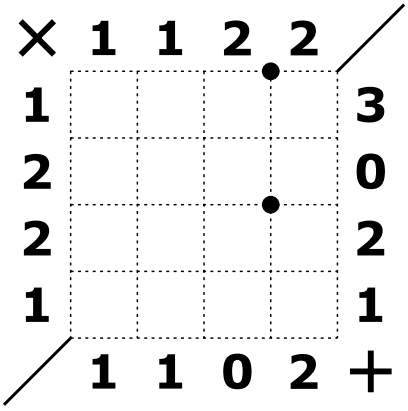
IT'S A CONTEST PUZZLE! *Answer key: write down the content of pentagroups in any order.*

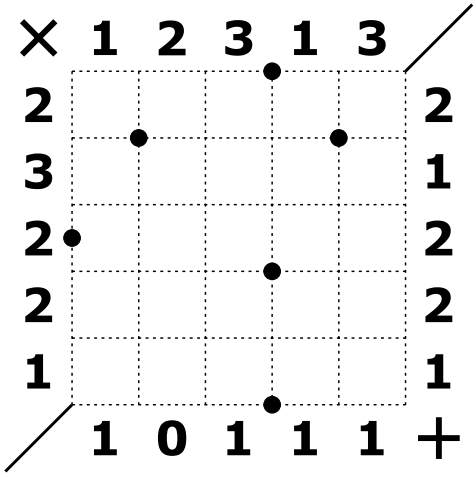
Brokeback Loop

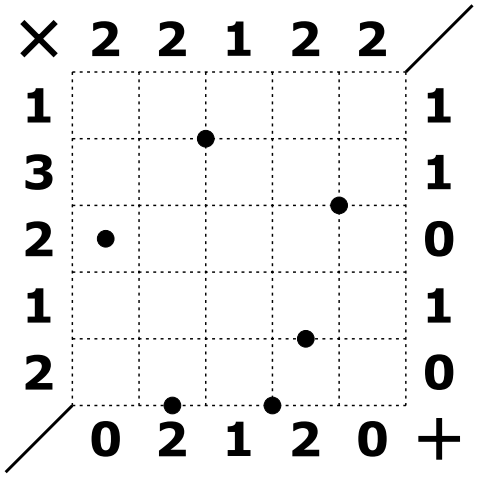
Draw in the grid a single closed loop. Lines can go horizontally, vertically or diagonally.
Digits on top and at left of the grid show the number of diagonal lines passing through the corresponding rows and columns.
Digits at right/at bottom show the number of vertical/horizontal lines passing through the corresponding rows/columns.
Loop cannot pass through the black dots.





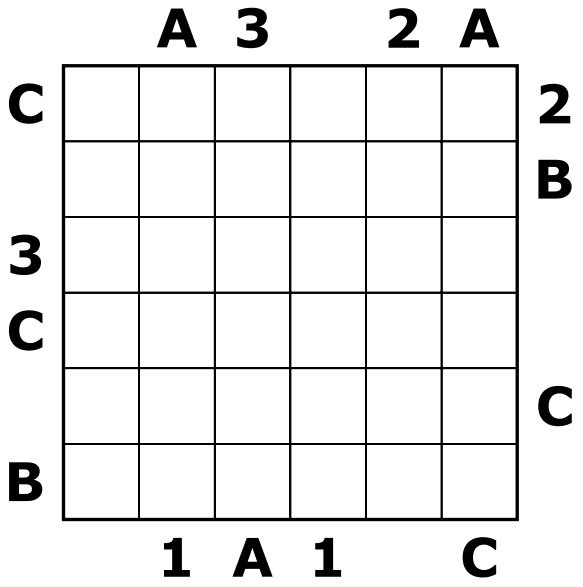


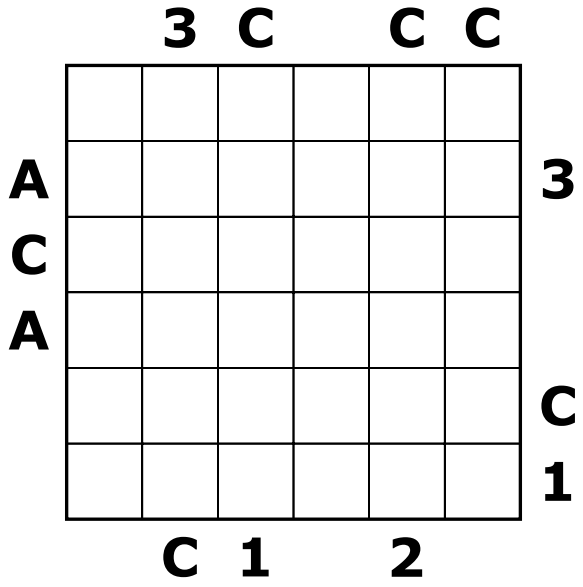




Easy as skyscrapers

Fill the grid with numbers from 1 to 3 (representing the heights of buildings) and letters A, B, C, so that each row and column contains exactly one instance of all these symbols. Digits outside the grid show the number of buildings visible from their positions (shorter buildings are hidden behind the taller ones). Letter outside the grid appear first in corresponding directions.

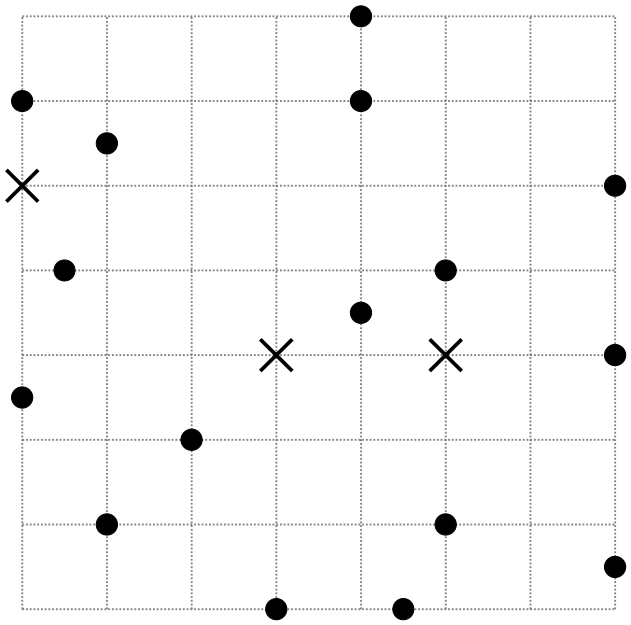


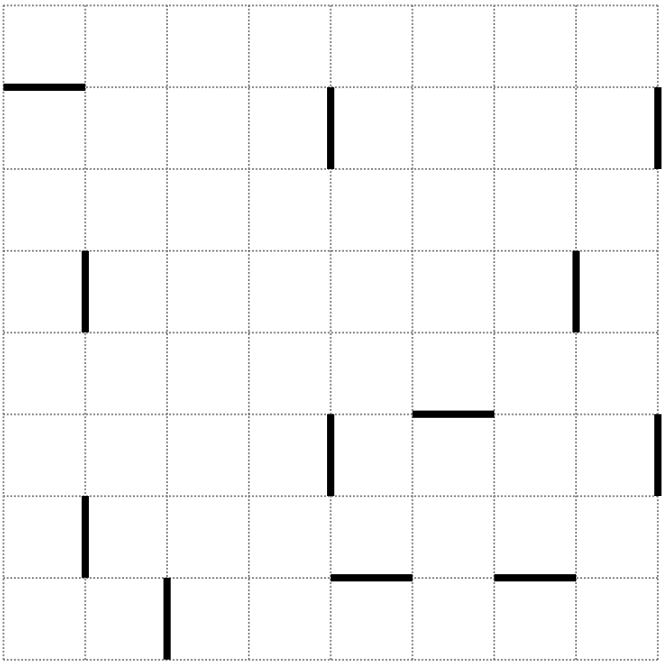


IT'S A CONTEST PUZZLES!
Answer key: describe the content of the main diagonals, going from top left to bottom right corner.

Breaking the loop

Draw a single closed loop going through all the grid nodes. Then break this loop into 16 pieces. In each row and column of the nodes must be exactly two breaking points (some are shown in table as "X"s). Middle points of all 16 pieces are shown as dots.



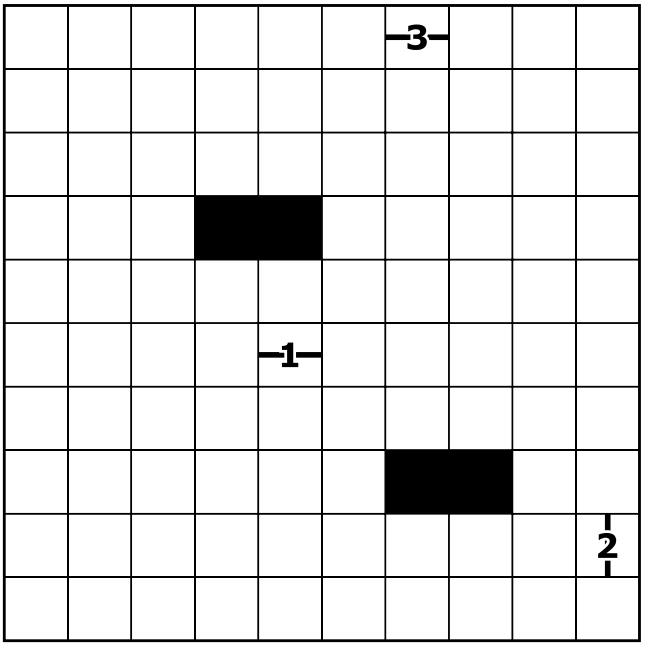


L-oop

Using only L-shaped figures (1x2) and lines already placed in grid build the single closed loop, not crossing or touching itself. Figures cannot overlap each other or lines already placed.

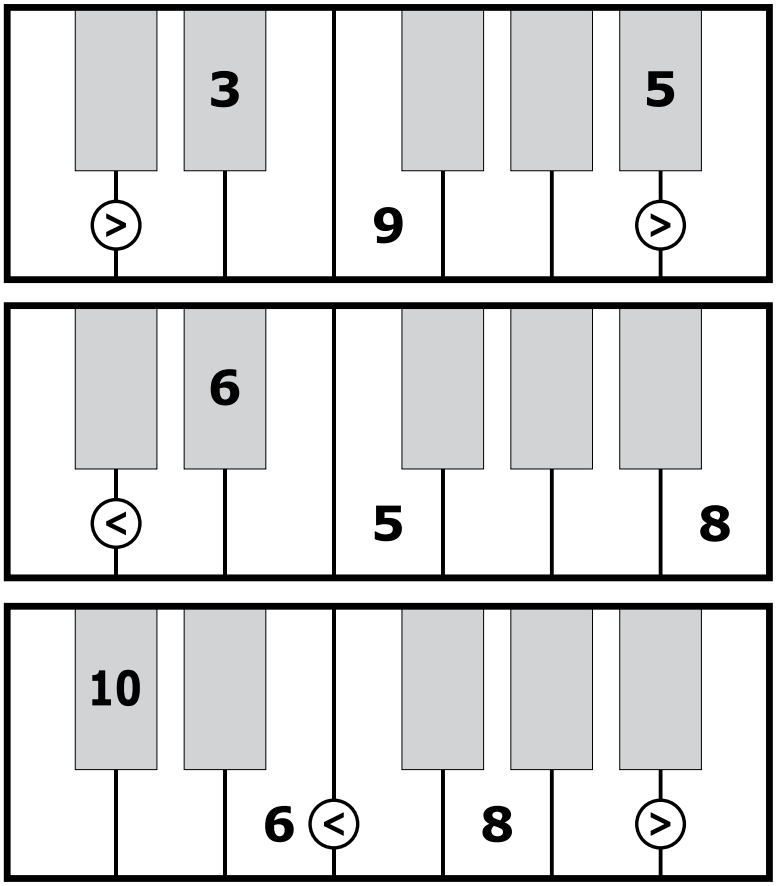
Triple loop

Draw in grid three closed loops which between them visit every white square exactly once. Lines can only go horizontally or vertically, connecting the middle points of cells. Starting in the cell with a number, all loops must have the same sequence of turns. The lines between the turns can be of any size.



Octave

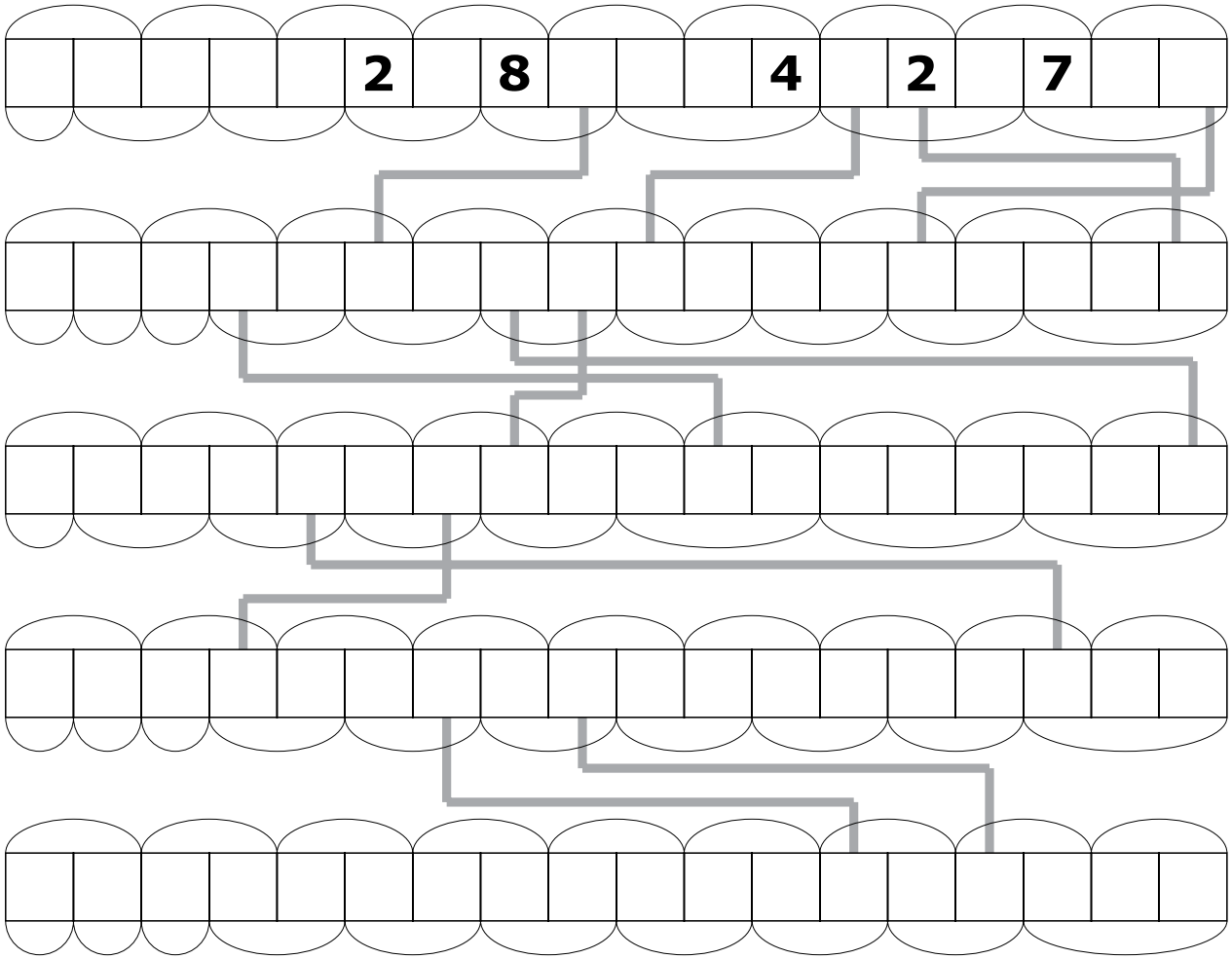
Fill the keys of octave with numbers from 1 to 12, using each once, so that the numbers in black keys are equal to the sum OR the difference of the numbers in touching white keys. Comparison signs must be true.



Total rising

Using each of digits from 1 to 9 exactly twice create such sequence, that being divided to numbers by any of two shown ways, it gives continuous rising sequence. Same digits cannot be in the neighbouring cells.

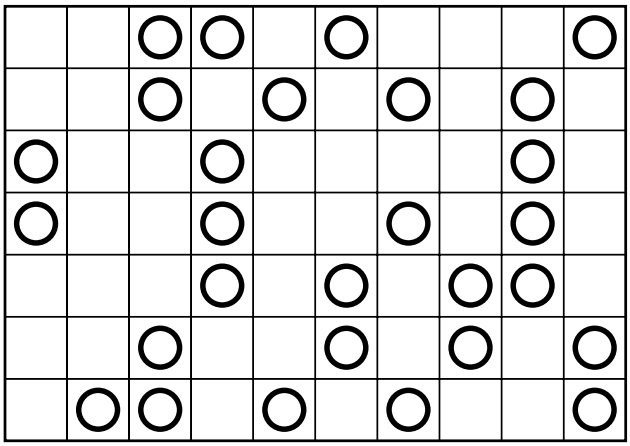
For each next puzzle place the digits from the corresponding cells of solved puzzles following the lines.

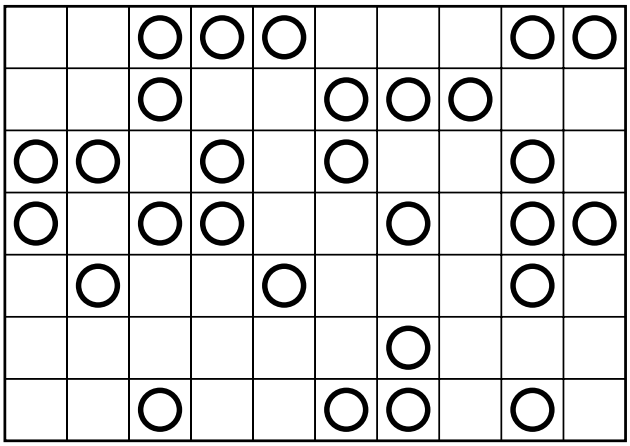


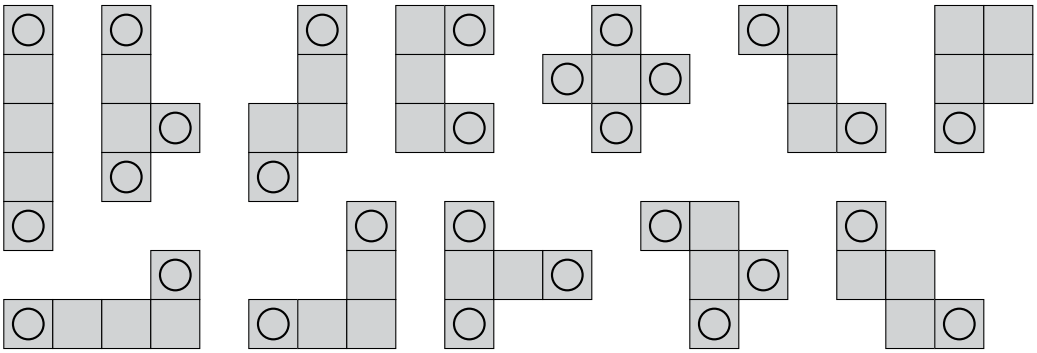
IT'S A CONTEST PUZZLES! *Answer key: write down last 3 digits of each line.*

Dead end cells

Place in the grid complete pentamino set without overlapping. Elements can be rotated and/or mirrored. All circles must be covered by the pentamino's dead end cells. Some cells will be left empty.

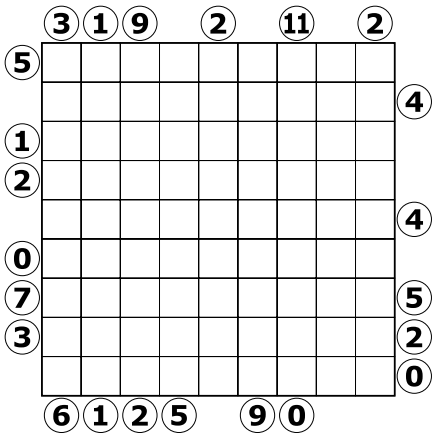


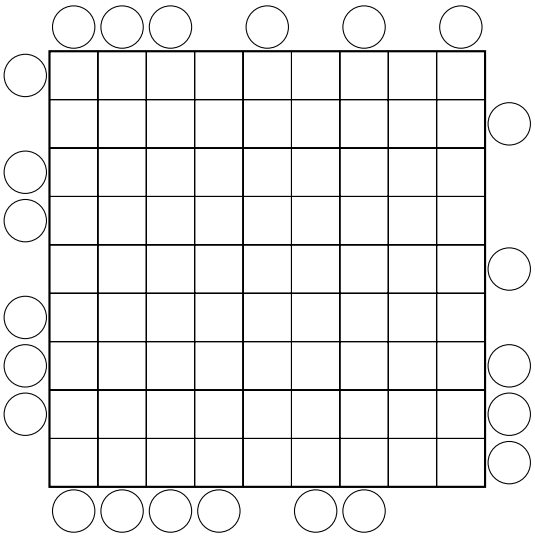


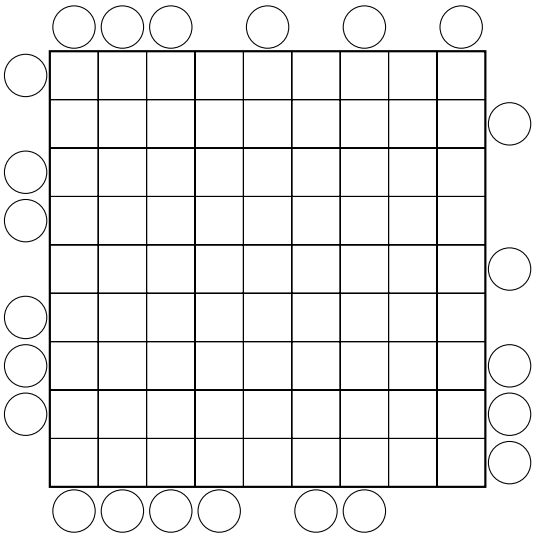


Pentomino in half

A complete set of pentominoes divided into two groups of six elements each was placed into two 9x9 grids with no elements touching or overlapping each other. Pentominoes can be rotated and mirrored. Find the position of the pentominoes if each number outside the grid shows the sum of the horizontal or vertical distances from grid border to nearest element for both grids.







Giant tents

Each tree in the grid has a tent in an edge-adjacent cell attached to it. Tents do not touch each other, not even diagonally. Numbers outside the grid show the quantity of tents in corresponding rows and columns.