By Serkan Yürekli

Best of LMI

Best of LMI Puzzle Tests

LMI monthly puzzle tests started in July'2010 with classic puzzles as Evergreens series. It was soon going to change with many authors coming up with innovative puzzle types in each test. In this test, we rewind and revisit some such memorable puzzles.

This test has 20 puzzles; maximum 2 puzzles selected from each test starting from "*Broken Pieces*" till "*Fillomino Fillia*". Selecting just 2 puzzles was obviously not easy; also representing wide varieties of puzzles was one of the goals.

The remaining puzzle sets will be represented in next years "Best of LMI Puzzle Tests" which will again be authored by one of LMI's test authors.

The 20 puzzles are to be solved in 150 minutes.
Bonus points will be given as 8 points per minute saved if all 20 puzzles are submitted correctly.

All represented tests except 1 and 2 include "Pair Bonus". This means bonus points will be awarded, in the case that both puzzles of that test are solved correctly.

Broken pieces	Broken Tapa	89	
Nikoli selection	Suraromu	14	
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Broken Tapa   89 points

Fit the pieces, without rotating or reflecting, in the grid and solve the Tapa puzzle.

Paint some cells black to create a continuous wall. Number(s) in a square indicate the length of black cell blocks on its neighbouring cells. If there is more than one number in a cell, there must be at least one white cell between the black cell blocks. No 2X2 square can have all black cells. There is no wall segment on cells containing numbers.
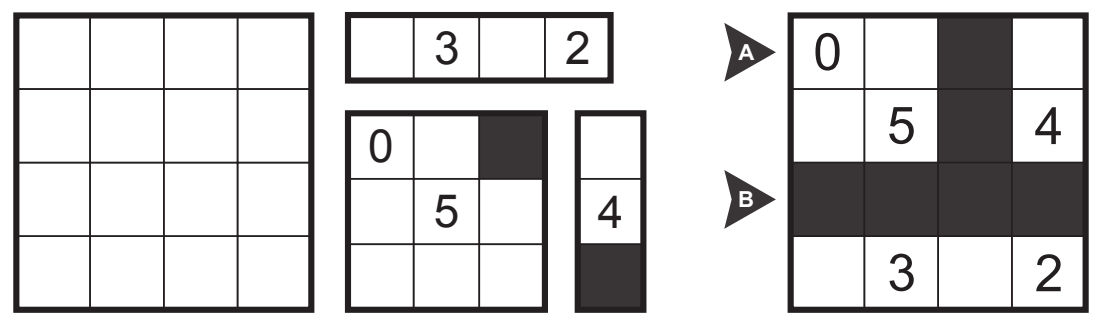

Answer Key: For each marked row, enter the number of cells in the longest continuous horizontal group belonging to the Tapa in that row, starting from the top and continuing to the bottom.

For the example, answer key is : 14

Suraromu   14 points

Draw a single closed loop, starting and ending at the numbered circle. The loop travels horizontally or vertically passing through center of white squares. The dotted lines are known as gates. The loop must pass through exactly one square in each gate. The number inside the circle indicates the number of gates. The number inside the black square represents the order in which the loop passes through the gate which touches that black square.
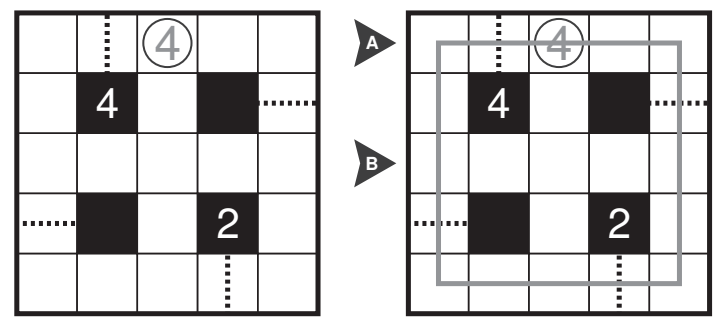
Answer Key: Enter how many times the loop makes a 90° turn in each of the marked rows.

For the example, answer key is :2,0

Number Skeleton Extra

147 points

Enter all the numbers listed to the left of the puzzle into the grid criss-cross style, either reading left-to-right or top-to-bottom. Each number has an extra digit that must be removed before the number can be entered into the grid.

1234
1357
1999
9887

Answer Key: Enter the digits in marked rows / columns

For the example, answer key is:123, 987

Wacky City

19 points

Place the digits 1 to N into each N by N grid so that no digit repeats in any row/column. Digits indicate the height of a building on that cell, and the clue numbers are the number of buildings that can be "seen" (not blocked by a taller building) when viewed from the corresponding direction.
Cells are not uniform size and some cells extend into several rows/columns.

*Answer Key: Enter the digits in the marked rows/columns.*

For the example, answer key is:1324,4321

FLIP

Create a loop through each grid such that every cell contains part of the loop and every other 90 degree turn takes place in a cell with a dark circle. The loop must turn at every dark circle. The grids are missing some circles from the outlined rectangles.
The circles must be found and placed where needed. When complete, the circles in the rectangles will mirror one another.
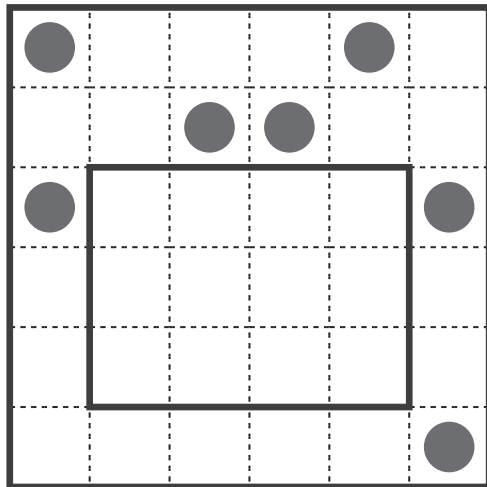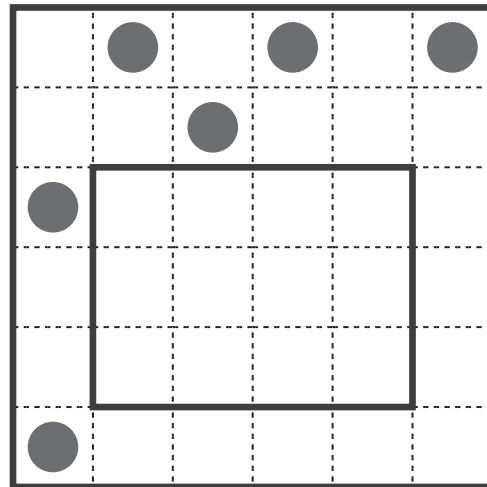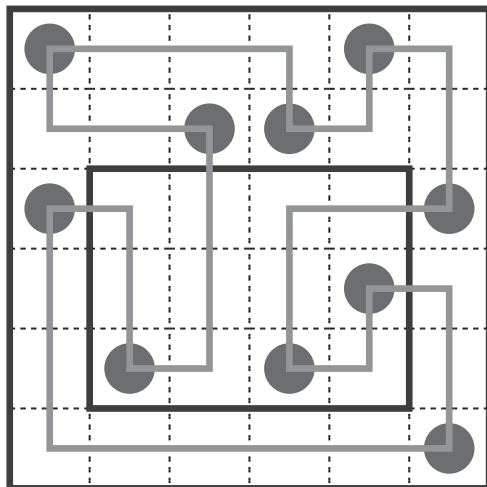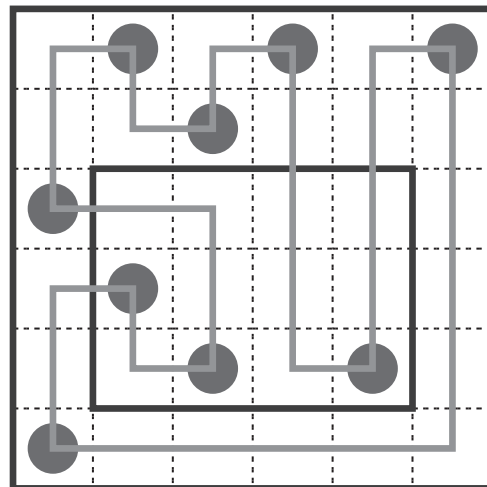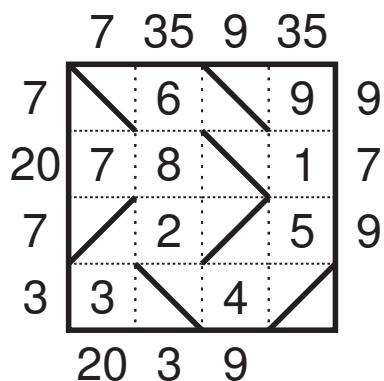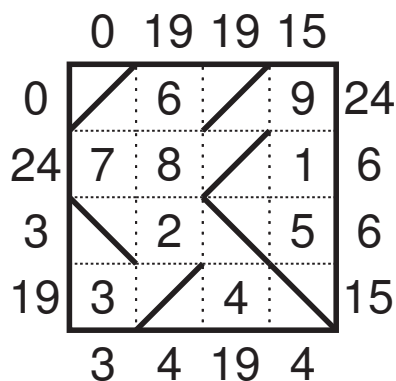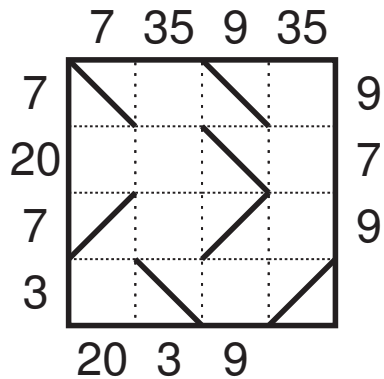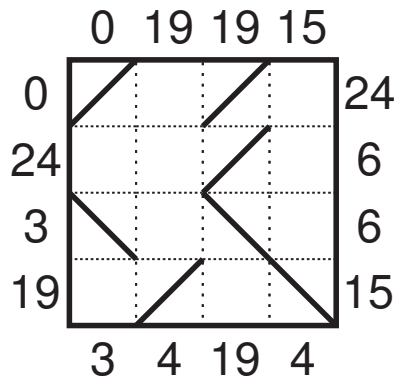

Answer Key: List the location of the placed circles using the row and column names indicated and ordered alphabetically.

For the example, answer key is :A3C3D2

Flip Mirror sums

30 points

Fill both copies of the grid with one of each number to make the given sums. The mirrors are flipped in the grids, but the numbers must be in the same locations.
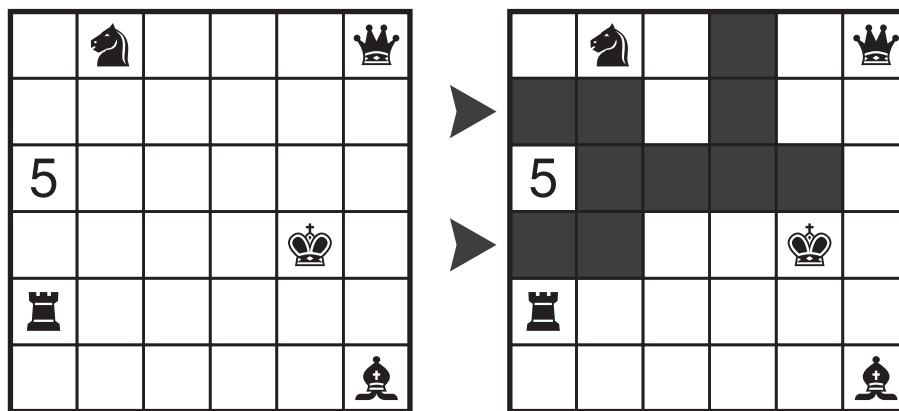

Answer Key : List the numbers in order from left to right, starting at the top row and moving to the bottom row.

For the example, answer key is : 697812534

Tapa Chess

42 points

Apply Tapa rules (See puzzle 1). There is no wall segment on chess pieces. Each chess piece attacks same number of painted cells.

Answer Key: For each marked row, enter the number of cells in the longest continuous horizontal group belonging to the Tapa in that row, starting from the top and continuing to the bottom.

For the example, answer key is :22

Penta Chess

101 points

Place all 12 different pentominoes into the grid. Pentominoes cannot touch each other, even diagonally and they may be rotated and/or mirrored. Each chess piece attacks some pentominoes. The total number of attacked different pentominoes (not cells) for each chess piece is shown next to the grid. Pentominoes cannot be placed to the cells with the chess pieces and in the cells marked with "X".
A pentomino could not cover the another one for queen's, rook's or bishop's movement.

♚ =0
♛ =3
♜ =2
♝ =3
♞ =2

Answer Key : Write the order of pentominoes in the marked rows/columns, from left to right or top to bottom.

For the example, answer key is :TI,NI

Gapped Kakuro

84 points

Enter a single digit from 1 to 9 into some of the cells so that the sum of digits in each Across and Down answer equals the value given to the left or above, respectively. No digit may repeat within a single answer. Some cells may remain empty, and empty cells cannot be adjacent.

*Answer Key: Enter the digits in marked rows/columns. Enter E for Empty cells*
For the example, answer key is :61E324, 89E2EE3

Crisscross Crash *61 points*

Enter 32 of the 34 given words in the crisscross diagram reading Across or Down, one letter in each cell. When two or more entries share a row or column, each must overlap the next by exactly one letter.

EP
RO
MASS
PAST
SKI N
SPAM
CRAI G
KASPER
SANAT
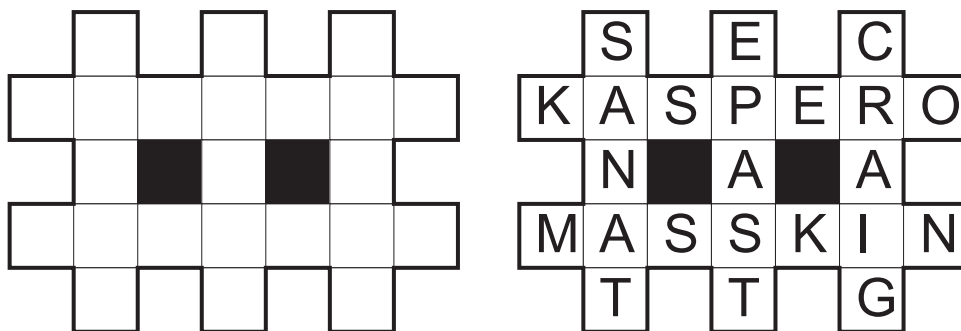
Answer Key: Enter the unused words in alphabetical order.

For the example, answer key is : SPAM

Yajilin / Akari *38 points*

Place lightbulbs in some cells. Each lightbulb illuminates every square in the four compass directions, similar to a rook in chess, up to the edge of the grid or a black cell. All grid squares must be illuminated, but no two lightbulbs can illuminate each other. Then draw a single closed loop of horizontal and vertical segments passing through every square that is not black and does not contain a lightbulb. Some black cells may contain a number and arrow. For these cells, the number tells how many cells in the direction of the arrow are lightbulbs.
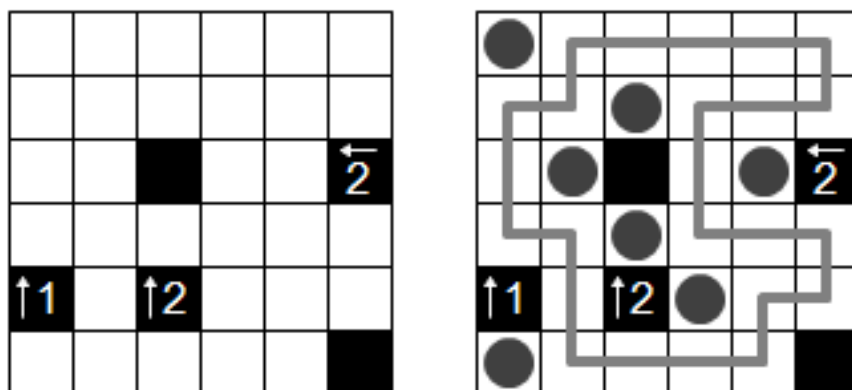
*Answer Key: Enter the number of lightbulbs in each column from left to right.*

For the example, answer key is :212110

Liar Slitherlink

Draw a single closed loop of horizontal and vertical segments passing through adjacent dots that does not intersect itself. A number tells how many of the four adjacent edges of the square are part of the loop. Ignore the letters for the purposes of solving. Exactly one number in each row and column is false. It is part of solving to determine the liar clues.
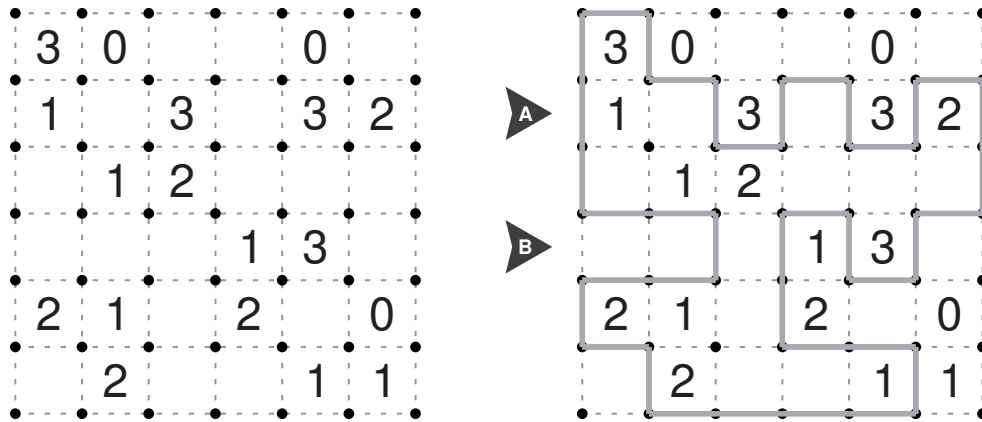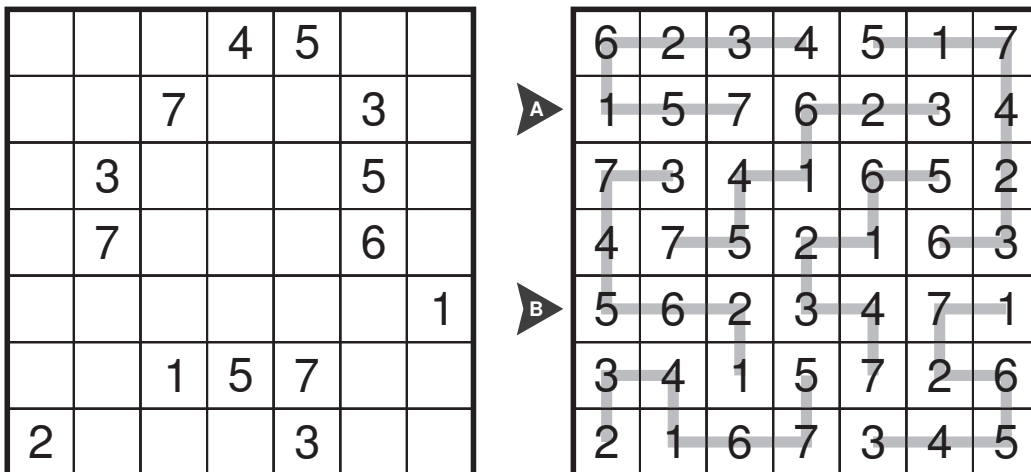

Answer Key: For the marked rows/columns, write the lengths of separate cell blocks that are inside the loop.

For the example, answer key is :211,11

Worm Sudoku

Place the digits 1-N once in each row and column. Also draw N worms of size N in the grid. Worms consist of a path or horizontally and vertically adjacent cells from head to tail. All cells are used. Worms can touch themselves. The heads and tails are indicated by the given digits. Each worm contains the digits 1-N exactly once.
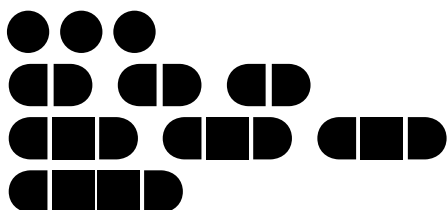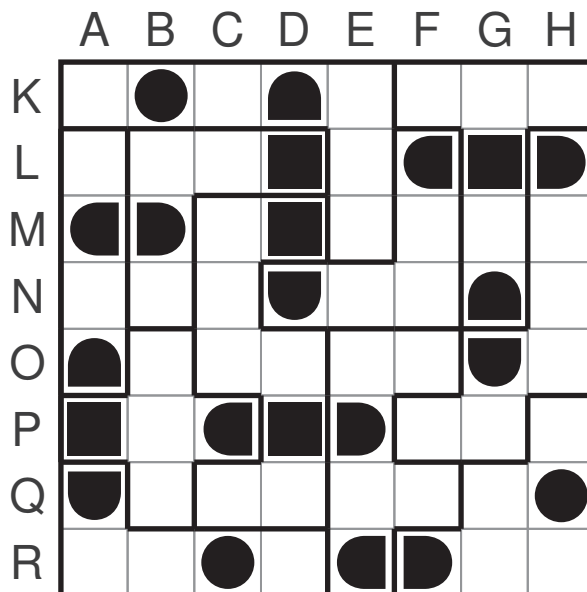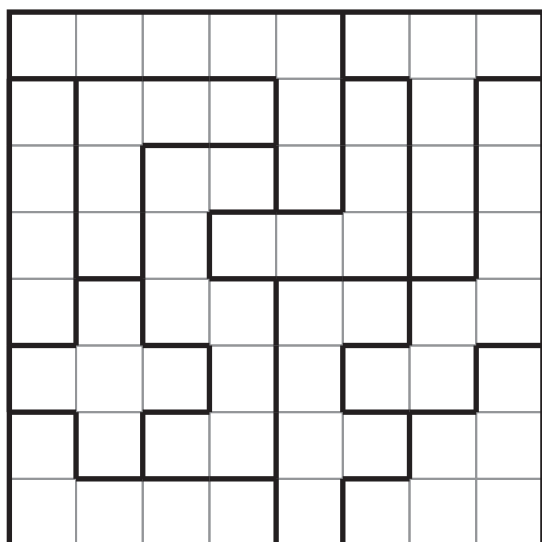

Answer Key :Enter the digits in the marked rows / columns

For the example, answer key is :1576234,5623471

Sea Battle

Place the given fleet in the grid so that in every row, column and boldly marked area exactly 2 ships appear. Ships don't touch each other, not even diagonally. Ships may cross over bold lines.
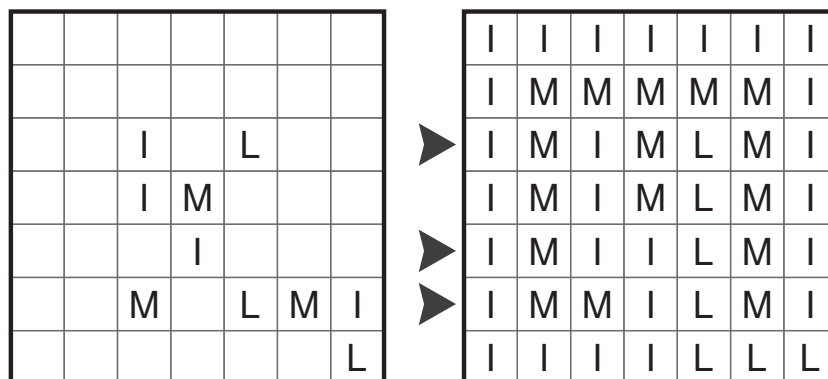

Answer Key: Enter the rows and/or columns where the size 2 and 3 ships lie.

For the example, answer key is : GMR, ALP

L & M & I

Fill all cells with either L or M or I. All cells with L's must be connected to each other horizontally or vertically. Similar rule for M's and I's. No 2x2 region can contain all same letters.

Answer Key: Enter the number of 'M's in each of the marked rows, starting from top to bottom.

For the example, answer key is :323

Toroidal Rectangles

35 points

Divide the grid into rectangles so that each rectangle contains exactly one number, and so that each number represents the number of cells of its corresponding rectangle. Some of the rectangles may wrap-around the borders.

Answer Key: Alphabetically for each letter, enter the digit for the corresponding rectangle.

For the example, answer key is :66246

4X4 Diamonds

100 points

Locate an equal amount of diamonds in each grid. Among the four grids, each coordinate must contain exactly one diamond. Clues indicate how many (vertical, horizontal and diagonal) neighbouring cells contain a diamond. Cells with clues are empty.

Partial points available in this puzzle. Any one solved grid 25 points, any two grids 60 points.

Answer Key: For each grid, except bottom right, starting with the top row, enter the number of diamonds in each row.

For the example, answer key is : 0112, 2110, 1102

Clone Battle

Place three (two for the example) stars in every row, column and outlined region. Cells with stars are allowed to touch. Grids have identical solutions.

Answer Key: For each row, enter the column number of the first star in the row. Then for each row, enter the column number of the last star in the row.

For the example, answer key is : 14312,25534

Even-Odd Fillomino

Apply Fillomino rules. Divide the grid squares into polyominoes so that
      1. Every number in the grid must be contained in a polyomino containing that quantity of squares.
      2. No two polyominoes containing the same quantity of squares may share an edge.
      3. A polyomino may contain one, more than one, or none of the numbers originally given.

Additionally, the odd numbers must form a single polyomino, and the even numbers must similarly form a single polyomino.

Answer Key: Enter the unit digits of each cell in the marked rows and columns, from left to right for rows and from top to bottom for columns.

For the example, answer key is :34818,35538

FILLOMINO FILLIA

Apply Fillomino rules. (See previous puzzle)

Additionally, Each ">" sign must point from a larger polyomino to a smaller one.

	2		5	
∧		∧		
		∧		
		3 >		
			>	
	1		3	

A ▶

2	2	1	5	5
7	3	2	2	5
7	3	3 > 1		5
7	7	7	7 > 5	
7	1	3	3	3

B ▶

Answer Key: Enter the unit digits of each cell in the marked rows and columns, from left to right for rows and from top to bottom for columns.
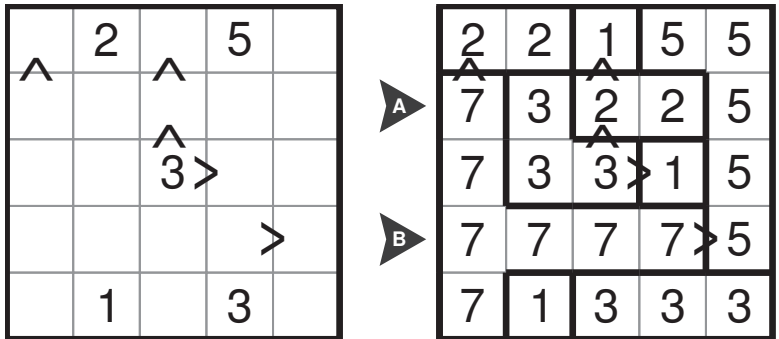
For the example, answer key is :73225,77775