PQRST 10 PUZZLE COMPETITION

PUZZLE 01 50 points

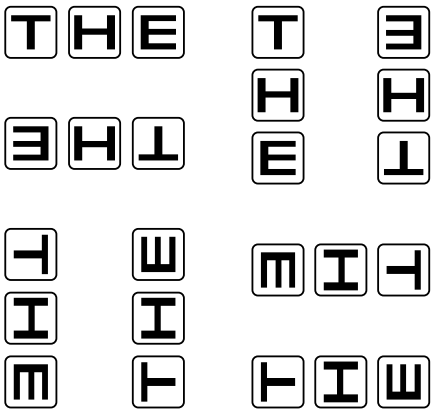
Jumpy Fox

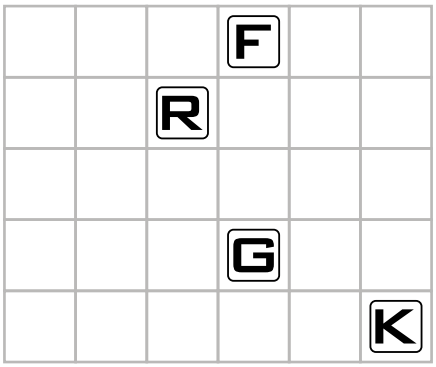
Locate letter cards into the cells of a 5x6 grid so that each word of the famous pangram can be read either across or down from any one of the four directions. Some letters are already located.

QUICK BROWN FOX JUMPS

OVER THE LAZY DOG

There are 8 possible ways to read a word:



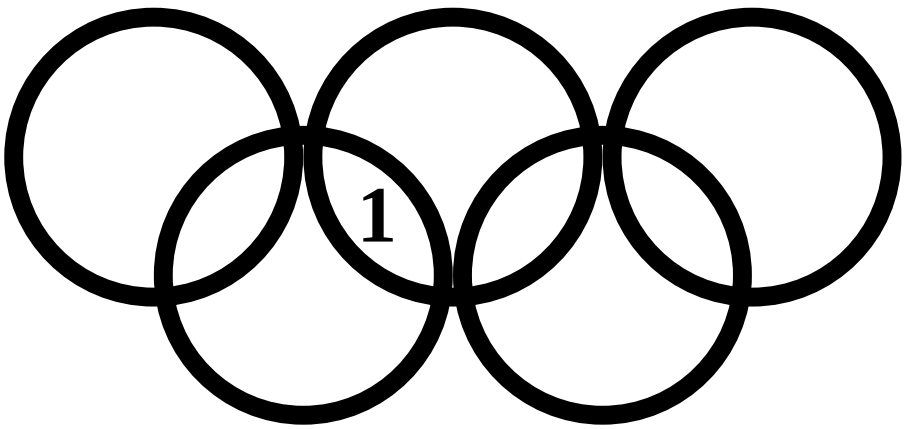


Answer key: Enter the letters on the fourth row from left to right; in the form of ABCDEF. Use points (“.”) for empty cells.

PUZZLE 02 35 points

Olympic Digits

Place digits 1 through 9 into each closed area so that the sum of the digits inside every circle is the same. 1 is already placed.



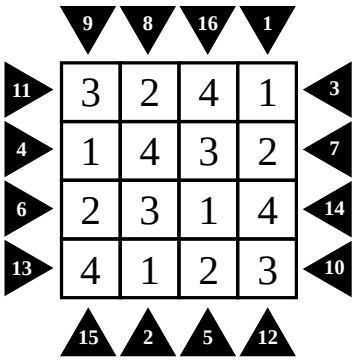
Answer key: Enter the three digits on the top row, followed by the four digits on the middle row, followed by the two digits on the bottom row in order; in the form of 123,4567,89.

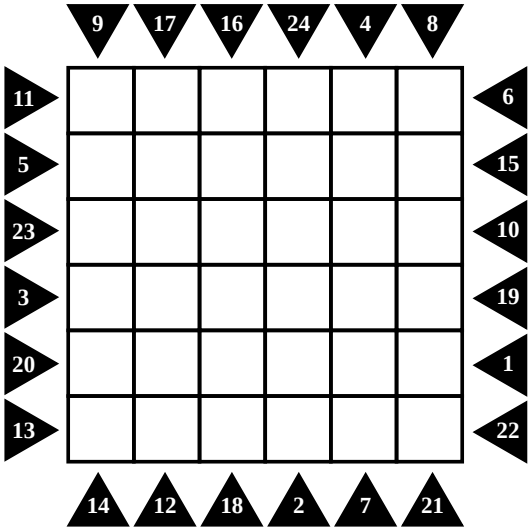
PUZZLE 03 80 points

Magic Order

Enter digits 1 through 6 into each row and each column once so that 24 different 6-digit numbers reading in four directions are in increasing order as indicated by the numbers around the grid. Arrow-1 points to the smallest number and arrow-24 points to the biggest number.

Example:





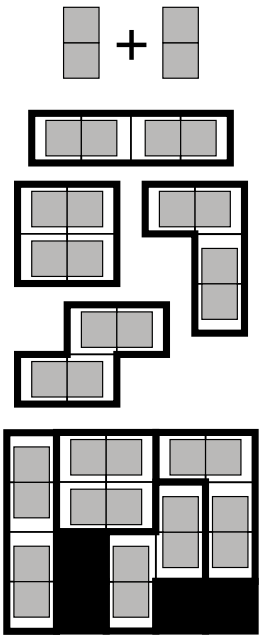
Answer key: Enter the numbers that arrows 4 and 16 are pointing to, in order. For the example, the answer key would be: 1432, 4312

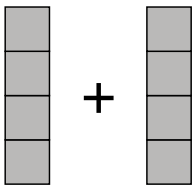
PUZZLE 04 (10 points penalty for a wrong answer) 75 points

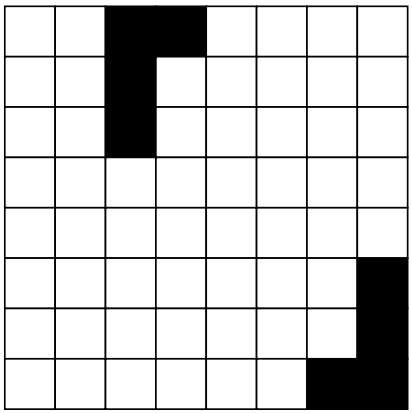
Two Is Enough

Find all octominoes (8-ominoes) that can be covered with two “I tetrominoes” (Straight 4-ominoes) and fit them into the grid below.

Example with dominoes:







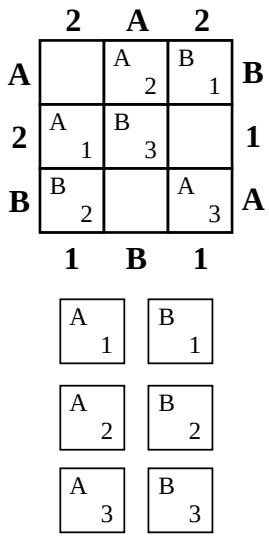
Answer key: Enter the contents of the fifth row from left to right, using the same number for the same octomino. Start with 1 and increase the number when you come across a new octomino. For the example, the answer key for the second row would be: 12234

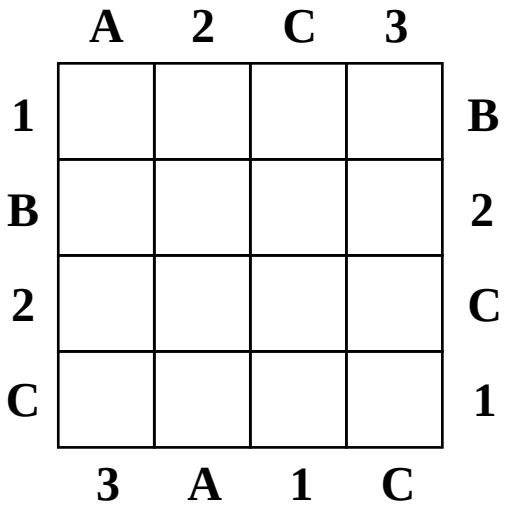
PUZZLE 05 70 points

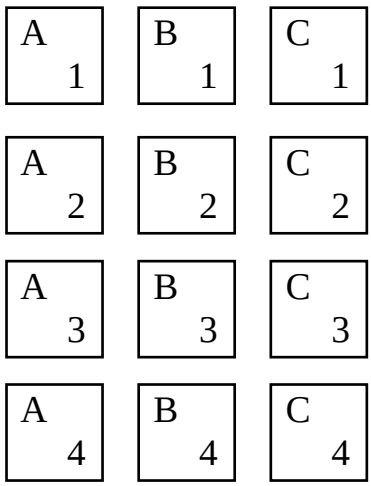
Easy as Skyscrapers

Locate all letter-number pairs into the grid so that no letter or digit is repeated in a row or a column. Numbers represent the height of the building there. Letters around the grid shows the first letter seen in that direction. Numbers around the grid shows the number of buildings seen from that direction.

Example:







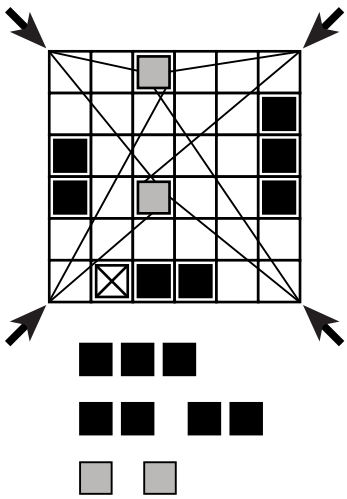
Answer key: Enter the letter-number pairs in the second row from left to right. Use X for blank squares. The answer key for the example would be: A1, B3, X

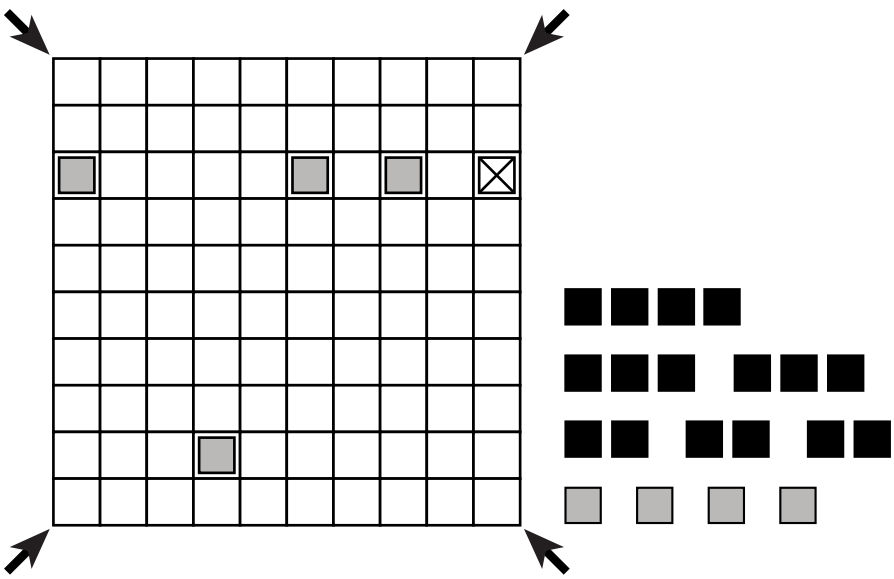
PUZZLE 06 (15 points penalty for a wrong answer) 110 points

Observer Battleships

There are four observers at the corners of the grid. They can see a ship if that ship is not blocked by any other ship. Submarines are under the sea, so they don't block the sight of an observer. Observers are able to see the already-located submarines (Grey squares) now. Find the positions of the 10-ship fleet in the diagram. Ships don't touch each other, not even diagonally.

Example:





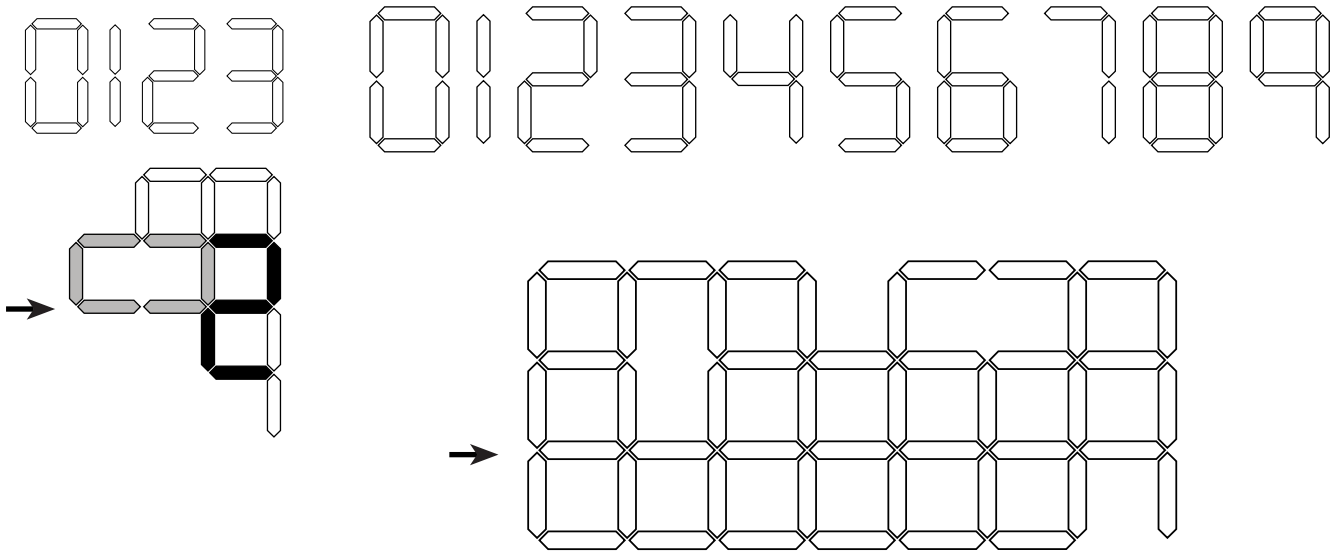
Answer key: Enter the contents of the fifth and sixth rows in order from left to right. Use 1 for the occupied cells, and 0 for the blank cells. The answer key for the example would be: 000000, 001100

PUZZLE 07 95 points

Digital Mess

All digits (0-9) have been used once to form a digital shape. Identify the location of each digit on this shape. Digits may be rotated, but can not be reflected.

Example:



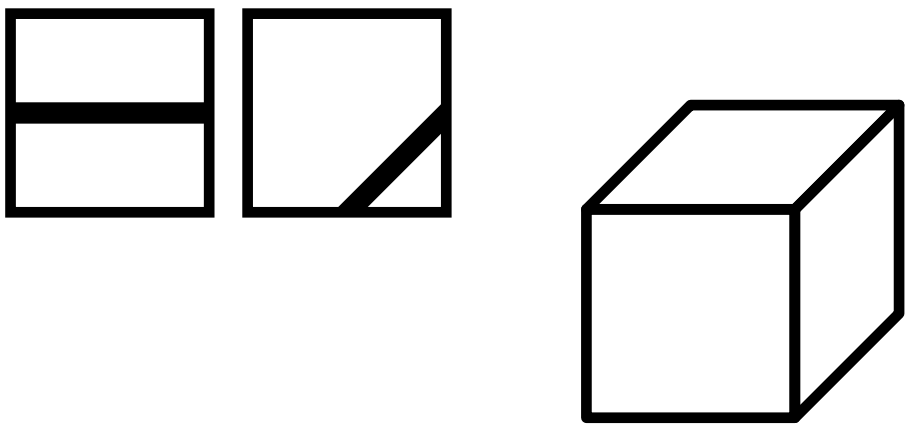
Answer key: Enter the contents of the third row of segments from left to right, using the digit representing each segment. The answer key for the example would be: 002

PUZZLE 08 (15 points penalty for a wrong answer) 85 points

Cubic Loop

How many different ways are there to cover a cube with two different tiles so that there appears one closed loop passing around all six faces of it? Cube's position is fixed, so two covers are different from each other if they have at least one face different, considering the position of the straight line on it.

Two tiles:



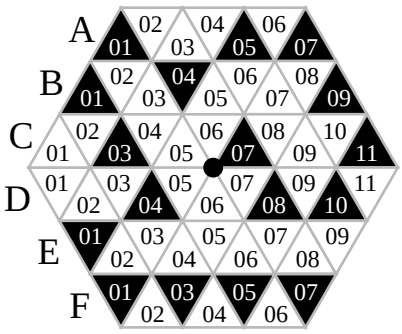
Answer key: Enter the number of ways.

PUZZLE 09 175, 100, 50 points

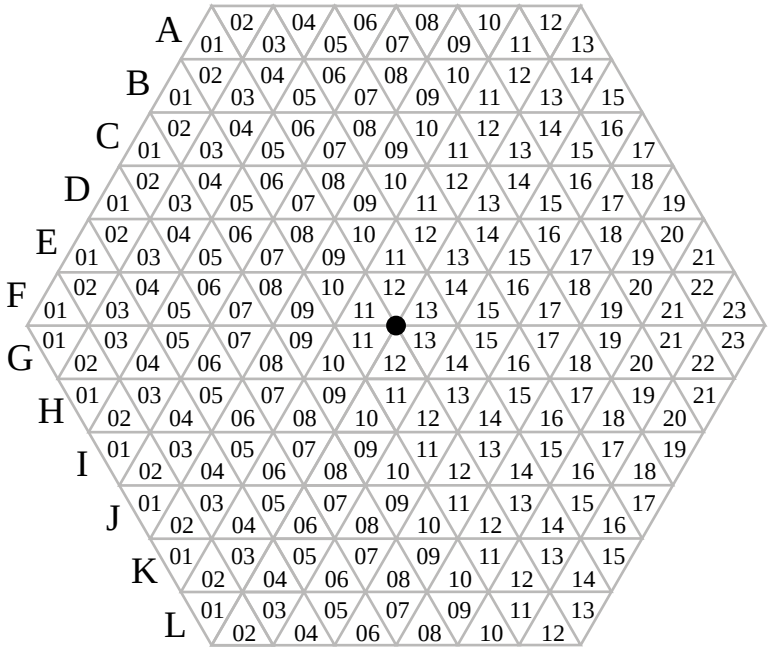
Tripath

Start at the middle of the grid, paint some triangles black and find the longest path of triangles. Every triangle in the path (except at the start and end) have two neighbours touching to its two different corners. Only the top three answers will get points.

Example:



Length: 17 triangles.



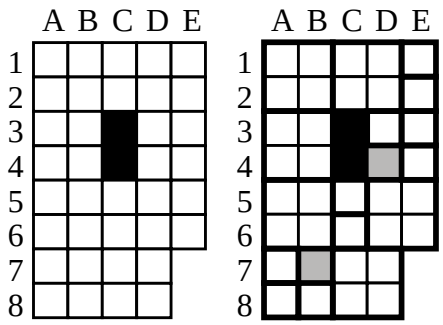
Answer key: Enter the length of your path first. Then for each row, enter the numbers that are painted, from left to right. The answer key for the example would be: 17: A010507, B010409, C030711, D040810, E01, F01030507

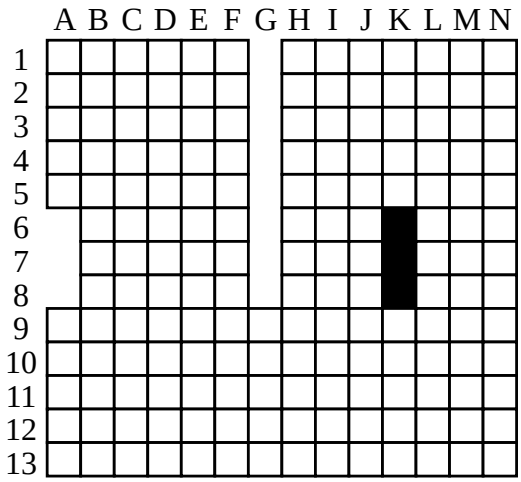
PUZZLE 10 200 - (30xU) points

Thriftless

Black out 5 squares of the grid and cover the remaining area with squares of various sizes. Your score is the minimum number of squares needed to cover this area. Maximize this score. Best answer will get 200 points. Other answers will get 30 points penalty for each value under the best answer (No negative points). 25 points bonus will be given to the competitors who give their score right.

Example with 2 squares:





Answer key: Enter your score first. Then enter the coordinates of the 5 squares. The answer key for the example would be: 16: D4, B7

Check the errata column on the main page in case of any mistakes or misinformation.
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