FILLOMINO-FILLIA

By Grant Fikes (mathgrant; http://mathgrant.blogspot.com)
and Palmer Mebane (MellowMelon; http://mellowmelon.wordpress.com)

The test authors are proud to present Fillomino-Fillia on Logic Masters India! You will be given 120 minutes to solve 18 Fillomino puzzles, including 4 classic puzzles and 2 each of 7 different variants. Each variant will have an easy puzzle followed by a harder one worth more, with the exception of the classic puzzles where there will be an easy, two mediums, and a harder one.

CREDITS

The test authors would like to thank:

- Deb Mohanty, for his superb work organizing these tests and making it easy for authors;
- Wei-Hwa Huang, Joseph DeVincentis, and Jason Zuffranieri, who agreed to test the puzzles beforehand and provided very helpful feedback;
- Virmir (http://www.crimsonflagcomic.com and http://www.virmir.com/), who provided illustrations for this test;
- David Chung, who created the DigitMono font, used in the score icons, and made it free for use;
- Last but not least, the Nikoli constructors who invented Fillomino in the first place.

Additionally, Grant Fikes would like to thank:

- Palmer Mebane, whose experience from Melon's Puzzle Zoo was pivotal to this test's creation and refinement, and for having connections to the wonderful test-solvers;
- Thomas Snyder, whose 20/10 Decathlon has taught me what qualities a well-written test ought to have;

And Palmer Mebane would like to thank:

- Grant Fikes, who graciously allowed me to contribute to what was really his brainchild;
- The many great puzzlers I have met at the 2010 WPC and at LMI, whether in person or not, from whom I have learned a great deal about solving and constructing;

ESSENTIAL INFORMATION

All puzzles are 10 by 10 square grids

Time Limit: 2 hours (120 minutes)

Time Bonus: 1 point per full minute saved if all puzzles solved correctly.

Points Table

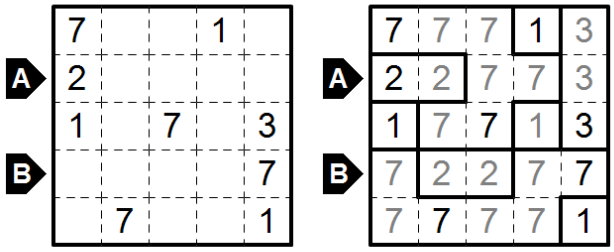
Classic	2	3
	4	6
Shape	2	6
Shikaku	2	7
Even-Odd	3	16
Cipher	4	9
Greater-Than	4	10
Sum	4	13
Star	5	20
Total	120	

Classic Fillomino

Divide the grid squares into polyominoes that satisfy the following rules.

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.

Answer Entry: Enter the units digits (last digit) of each square's number in the marked rows and columns, from left to right for rows and from top to bottom for columns. For instance, if a space had a 2 or a 12, you would enter a 2 for it.

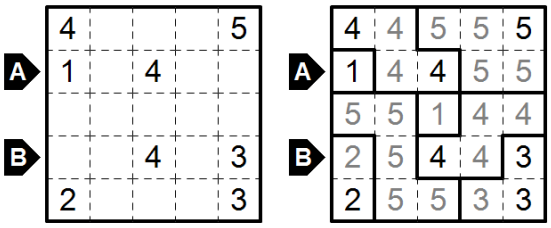


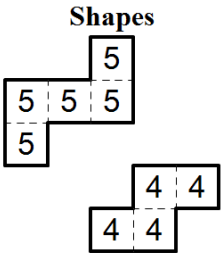
Answer: 22773, 72277

Points

Shape Fillomino

In addition to the usual rules, the shapes shown beside the puzzle must appear as polyominoes in the grid. Shapes may be rotated, but **not reflected**.



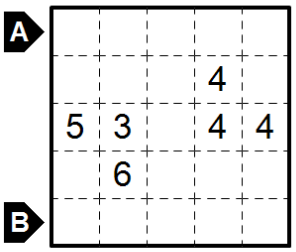


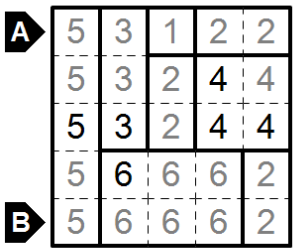
Answer: 14455, 25443

Points

Shikaku Fillomino

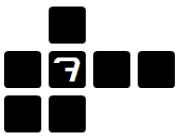
In addition to the usual rules, every polyomino must be shaped like a rectangle.





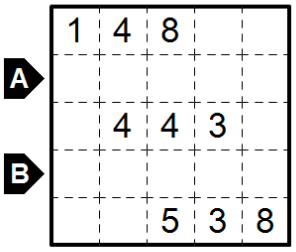
Answer: 53122, 56662

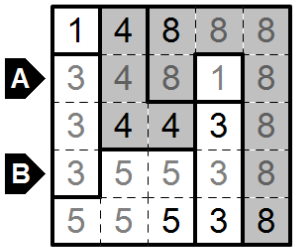
Points



Even-Odd Fillomino

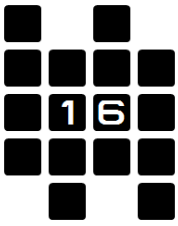
In addition to the usual rules, the odd numbers must form a single polyomino, and the even numbers must similarly form a single polyomino.





Answer: 34818, 35538

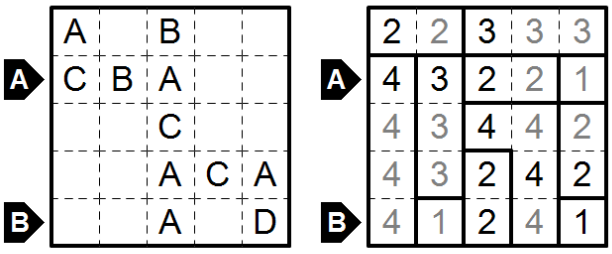
Points



Cipher Fillomino

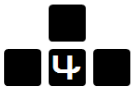
In addition to the usual rules, the given numbers have been replaced by letters. All instances of a particular letter represent the same number, but two different letters must represent different numbers.

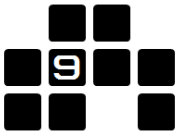
Answer Entry: Follow the usual mechanism. Answers providing either the letters or substituted units digits will be accepted.



Answer: 43221, 41241

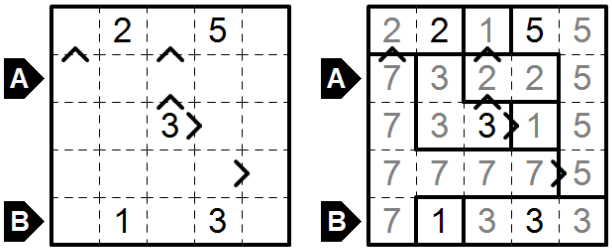
Points





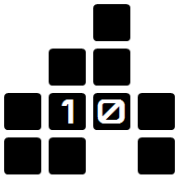
Greater-Than Fillomino

In addition to the usual rules, the grid will contain inequality signs. Each sign must point from a larger polyomino to a smaller one.



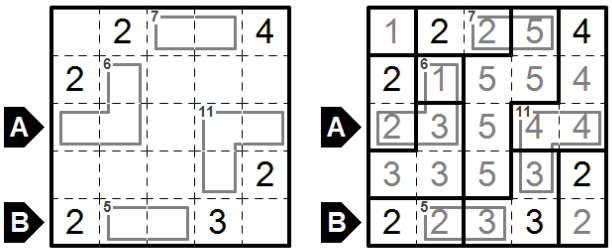
Answer: 73225, 71333

Points



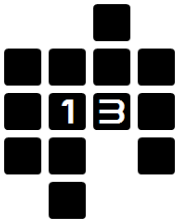
Sum Fillomino

In addition to the usual rules, the grid contains some cages. The number at the top left of each cage gives the sum of all numbers that appear inside of it. Numbers may be repeated in cages.



Answer: 23544, 22332

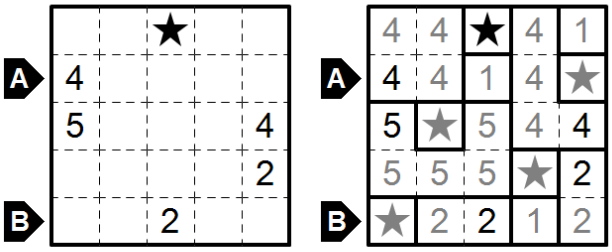
Points



Star Fillomino

In addition to the usual rules, not all of the cells will be contained in polyominoes; the remaining cells will contain stars. Every row and every column must contain two stars (one in the example), and no two stars may be in cells which share a corner or an edge.

Answer Entry: Follow the usual mechanism, but use S for a star.



Answer: 4414S, S2212

Points