

# FILLOMINO-FILLIA 2



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After the success of last year's Fillomino-Fillia test, the same coauthor team is proud to give you a sequel with even more Fillomino variations on Logic Masters India. You will have 120 minutes to solve 18 puzzles, including 4 classic puzzles, 1 puzzle each of two popular variations from last year's test, and 2 each of 6 variants introduced this year.

## CREDITS

The test authors would like to thank:

- Deb Mohanty and LMI, who continue to provide an excellent way to connect authors and contestants;
- Wei-Hwa Huang and Thomas Snyder, who tested the puzzles beforehand and provided very helpful feedback;
- Virmir (<http://www.virmir.com/>), who provided art for last year's test that is also being used this year;
- David Chung, who created the DigitMono font, used in the score icons, and made it free for use;
- nikoli, who invented Fillomino.

## INSTANT GRADING

This test will use an instant grading mechanism. After obtaining an answer for a puzzle, you can submit it and immediately see if you are correct.

If you are incorrect, you will get another chance to submit. There is no limit to the number of submissions. However, for every incorrect answer submission, your final score will decrease by **2%**. More mathematically, your final score will be multiplied by  $(100 - 2 \cdot \text{Penalties})\%$ .

We do not expect to manually give credit for any wrong answers. Please check your work and typing.

## ESSENTIAL INFORMATION

All puzzles are 10 by 10 square grids

Time Limit: 2 hours (120 minutes)

Time Bonus: If all 18 puzzles are finished in X minutes, your final score will be multiplied by  $120/X$ .

### Points Table

Classic	2	3
	6	6
FF1: Cipher	3	
FF1: Sum		8
Snake	2	7
No-rectangles	3	6
Walls	4	8
Nonconsecutive	4	14
Liar	5	16
Skyscrapers	5	18
<b>Total</b>		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.

7			1	○
2			○	
1		7		3
	○			7
○	7			1



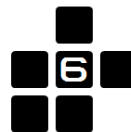
7	7	7	1	○3
2	2	7	○7	3
1	7	7	1	3
7	○2	2	7	7
○7	7	7	7	1



**Answer: 7273**

*Answer Entry: Enter the units digits (last digit) of the number in each circled cell starting with the leftmost column and going right.*

Points



# Best of FF1: 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. Answers mixing letters and numbers will be marked wrong.*

A		B	○	
C	B	A		○
		C		
○		A	C	A
	○	A		D



2	2	3	○3	3
4	3	2	2	○1
4	3	4	4	2
○4	3	2	4	2
4	○1	2	4	1



**Answer: 4131/CDBD**

Points





# Best of FF1: 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.

	2			4
2	6		○	○
			11	
○	○			2
2	5			3

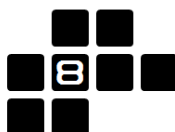


1	2	2	5	4
2	1	5	5	4
2	3	5	4	4
3	3	5	3	2
2	2	3	3	2



Answer: 3354

Points



# Snake Fillomino



A snake with a head and tail and unknown length must be drawn in the grid so that it contains all shaded cells. The snake does not touch itself, even at a point. The remaining spaces must be divided into polyominoes satisfying the usual Fillomino rules. The snake may touch polyominoes of the same size as itself.

Answer Entry: Follow the usual mechanism, but use X for a snake segment.

	○	2		○
1	■			
		2		
○			■	8
○		1	○	

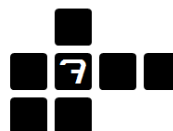


■	○	2	2	8
1	■	8	8	8
4	■	2	2	8
4	■	■	■	8
4	4	1	8	8



Answer: 4X88

Points

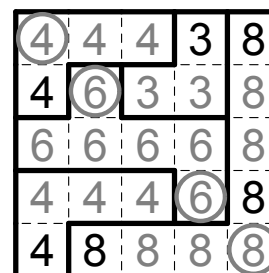
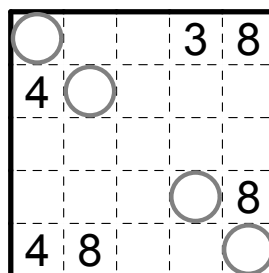




# No-rectangles Fillomino

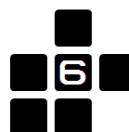


In addition to the usual rules, none of the polyominoes can form a rectangle.



Answer: 4668

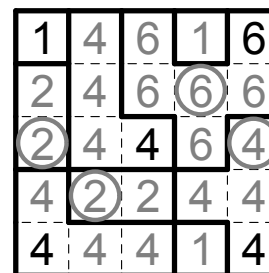
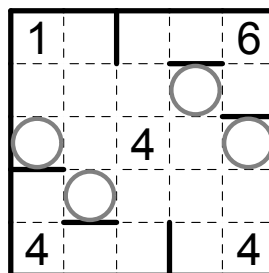
Points



# Walls Fillomino

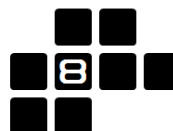


In addition to the usual rules, a pair of cells with a thick border between them must contain different numbers.



Answer: 2264

Points





# Nonconsecutive Fillomino



In addition to the usual rules, two orthogonally adjacent cells may not contain consecutive numbers.

		5		2
	4		○	
○		3		○
	○		5	
7		7		

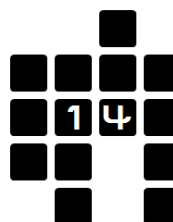


4	1	5	5	2
4	4	1	5	2
4	1	3	5	7
1	3	3	5	7
7	7	7	7	7



Answer: 4357

Points



# Liar Fillomino



In addition to the usual rules, exactly one given number in each row and column is false.

	4	3	2	2
	4		3	○
	○	5		○
○	5		2	
4	4	4	5	

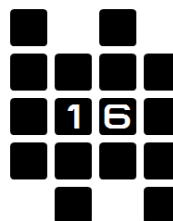
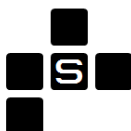


4	4	3	2	2
4	4	3	3	5
2	2	5	1	5
4	5	2	2	5
4	4	4	5	5



Answer: 4215

Points

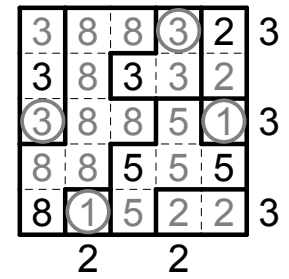
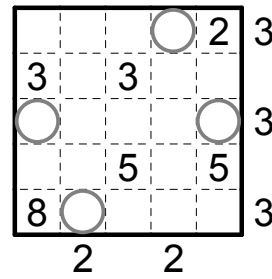




# Skyscrapers Fillomino



In addition to the usual rules, the numbers in the grid should be treated as building heights. Numbers on the outside of the grid tell how many buildings are visible when looking from that direction. A building obscures all buildings behind it whose height is equal to or smaller than itself.



**Answer: 3131**

Points

