

## ONE UP POLYOMINOES

<https://www.oneuppuzzle.com/>

Last update May 5, 2024

Which are the polyominoes that have ONE UP solution and how many are?

OEIS sequence for the moment are:

1) Quantity of ONE UP polyominoes

<https://oeis.org/A371476>

1,0,1,1,1,3, 10, 12, 23, 35, 169, 255, 817, 1883, 4702  
found by Pontus von Brömssen

2) Total number of solutions for each polyomino

1,0,1,2,1....

MONOMINO = 1

DOMINO = 0

TROMINOS = 1

	1
1	2

**TETROMINOS = 1**

1	2	2	1
2	1	1	2

**Solutions = 2**

**PENTOMINOES = 1**

**W = 1 SOLUTION**

	2	1
2	1	
1		

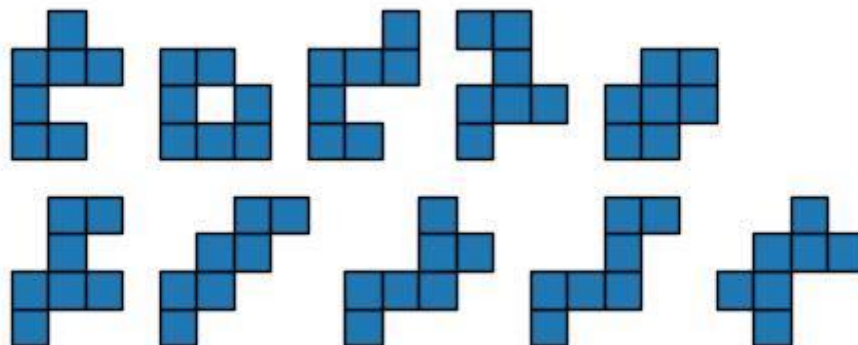
**HEXOMINOES = 3**

1		
2	1	
3	2	1

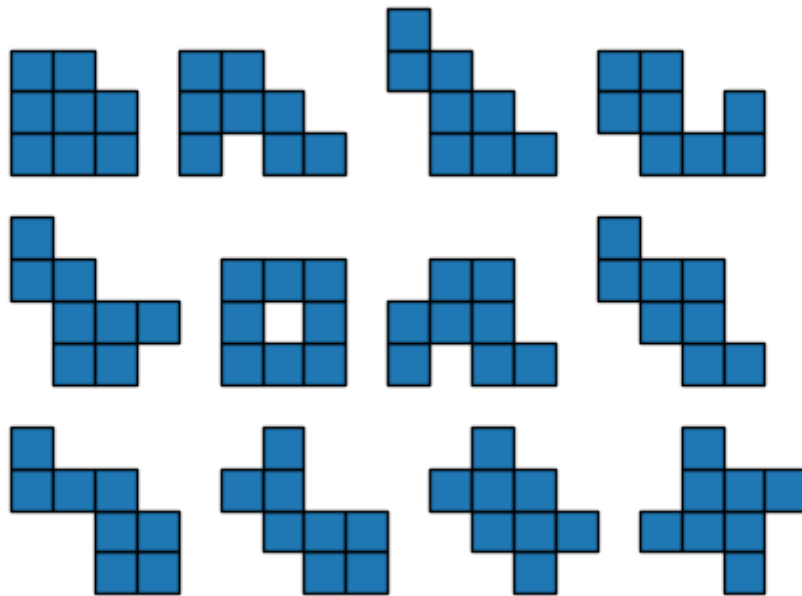
1	2	
2	3	1
	1	

2	1	
3	2	1
1		

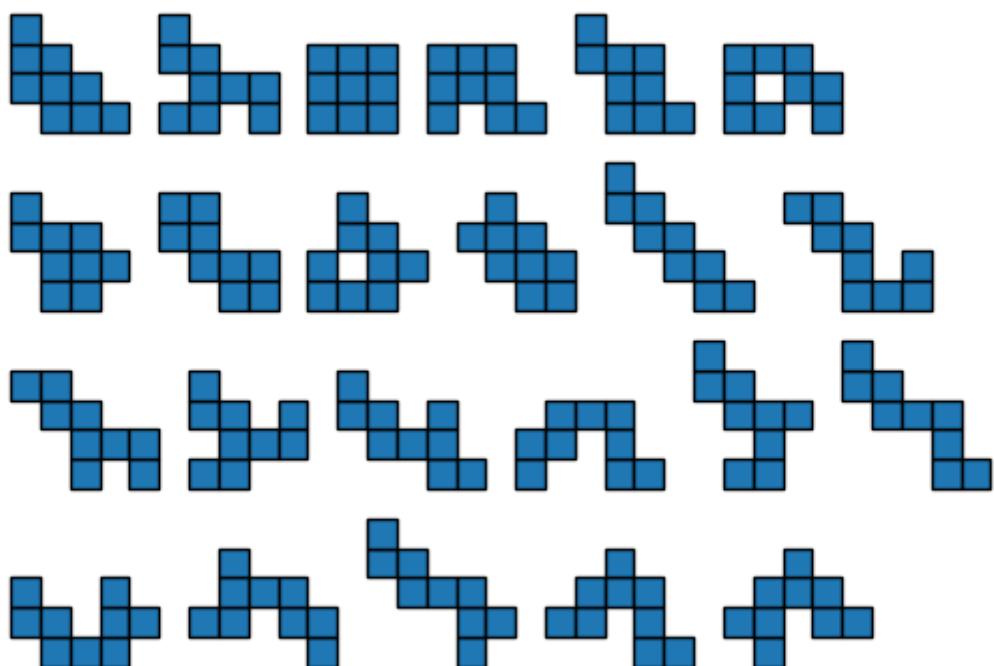
**HEPTOMINOES = 10 by Pontus von Brömssen**



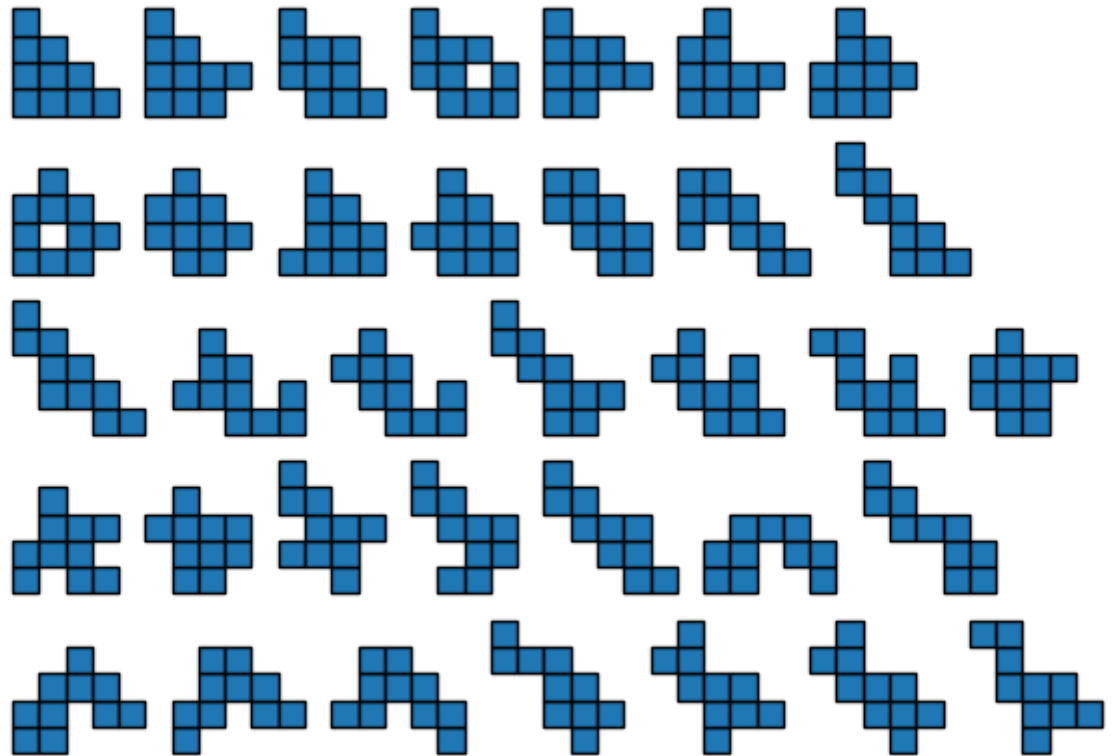
## OCTOMINOES = 12 by Pontus von Brömssen



## 9-OMINOES = 23



**10-OMINOES = 35**



**11-OMINOES = 169**

**12-OMINOES = 255**

**13-OMINOES = 817**

**14-OMINOES = 1.833**

**15-OMINOES = 4.702**

**P = POLYOMINO**

**Q = QUANTITY**

**OU = ONE UP SOLUTIONS**

<b>P</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>Q</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>12</b>	<b>35</b>	<b>108</b>	<b>369</b>
<b>OU</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>10</b>	<b>12</b>
<b>QOU</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>			

<b>P</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>Q</b>	<b>1.285</b>	<b>4.655</b>	<b>17.073</b>	<b>63.600</b>	<b>238.591</b>	<b>901.971</b>	<b>3.426.576</b>	
<b>OU</b>	<b>23</b>	<b>35</b>	<b>169</b>	<b>255</b>	<b>817</b>	<b>1833</b>	<b>4702</b>	
<b>QOU</b>								

1, 1, 1, 2, 5, 12, 35, 108, 369, 1285, 4655, 17073, 63600, 238591,  
901971, 3426576, 13079255, 50107909, 192622052, 742624232, 2870671950,  
11123060678, 43191857688, 168047007728, 654999700403, 2557227044764,  
9999088822075, 39153010938487,

## ONE UP N x N solutions

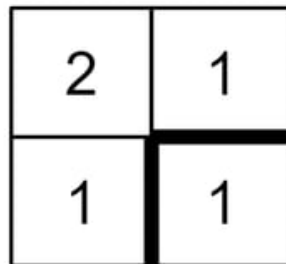
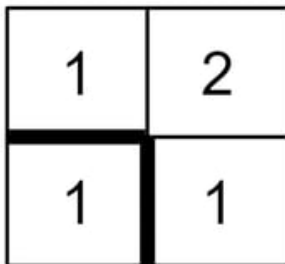
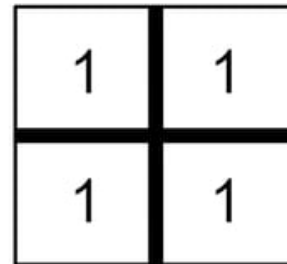
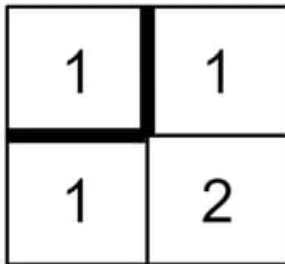
Dmitry Kamenetsky asked:

How many ways are there to place walls on an empty 3x3 grid to get a One Up puzzle with a unique solution?

<https://puzzling.stackexchange.com/questions/126600/number-of-3x3-one-up-puzzles>

**2x2 = 5**

There are 5 ways to place walls on an empty 2x2 grid, such that they produce a One Up puzzle with a unique solution:



**3x3 = ?**

**4x4 = ?**

