

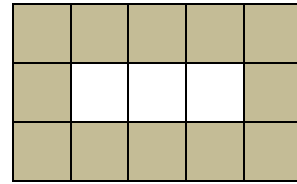
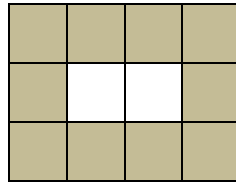
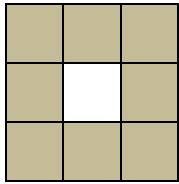
The distributive property can be represented in multiple ways, such as ...

Verbal model	Pictorial model	Symbolic model									
3 sets of $x + 2$ tiles	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>x</td><td>1</td><td>1</td></tr> <tr><td>x</td><td>1</td><td>1</td></tr> <tr><td>x</td><td>1</td><td>1</td></tr> </table>	x	1	1	x	1	1	x	1	1	$3(x + 2) = 3x + 6$
x	1	1									
x	1	1									
x	1	1									

1. You are given one representation of the distributive property. Complete the table by filling in the two missing portions of each row.

Verbal model	Pictorial model	Symbolic model												
4 sets of $m + 1$ tiles														
		$2(w + 3) = 2w + 6$												
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>y</td><td>y</td><td>1</td></tr> <tr><td>y</td><td>y</td><td>1</td></tr> <tr><td>y</td><td>y</td><td>1</td></tr> <tr><td>y</td><td>y</td><td>1</td></tr> </table>	y	y	1	y	y	1	y	y	1	y	y	1	
y	y	1												
y	y	1												
y	y	1												
y	y	1												
3 sets of $3w$ tiles														

2. A rectangular garden is being built. Square tiles will be placed around this garden. Three different options are shown below.



Let g represent the length of base of the garden, and b represent the number of border tiles. Explain why each of the following rules represent the number of border tiles.

Scenario	Symbolic representation	Why the rule works
A	$b = 2g + 6$	
B	$b = 3(g + 2) - g$	
C	$b = 2(g + 3)$	

D. How many border tiles will there be when the garden has a base of 10? Justify your answer.

E. Will there be a garden that will utilize 40 border tiles? Justify your answer.