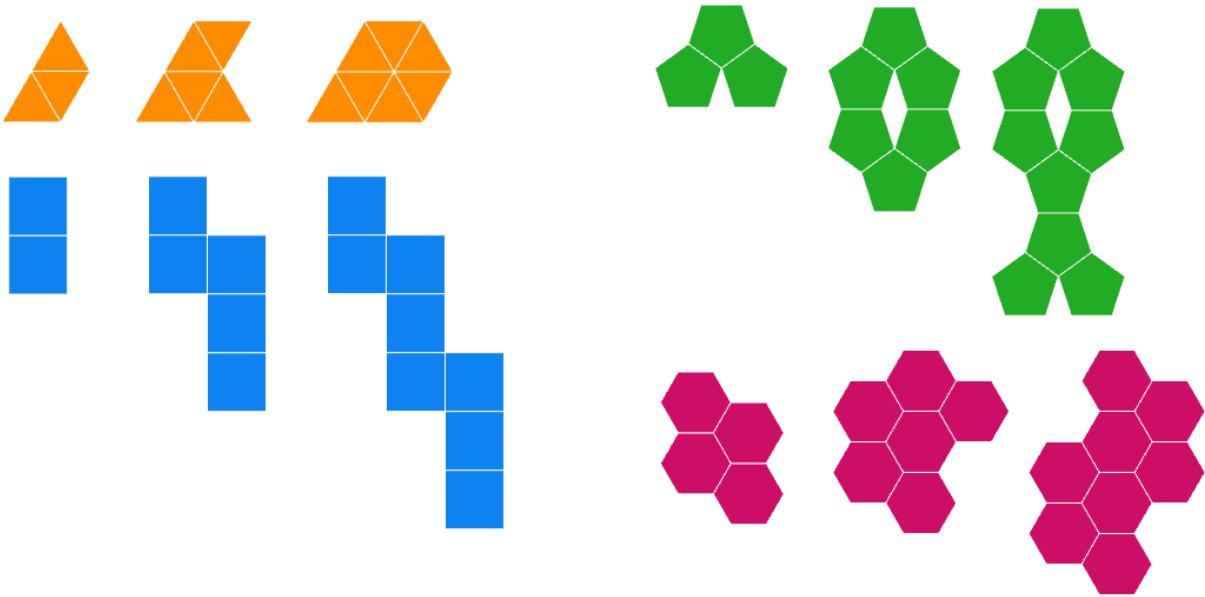


Algebra and Visual Patterns

When we first see variables, they’re standing in for an unknown number. “I had 8 trapezoid blocks and now I have 17. How many did I get?” We can write as $8 + x = 17$.

Patterns invite us to think about variables that represent changing values. On step 1 there were 4 blocks, on step 2 there were 8 blocks, on step 3 there were 12. The step number is changing, and the number of blocks is changing - but they’re related somehow. We can say something like $B = 4x$, where B is how many blocks and x is the step number.

Which pattern goes with which equation?



$B=2x+1$	$B=3x$	$B=2x+3$
$B=3x-1$	$B=4x$	$B=2x+2$

Draw a pattern for one of the unused equations.



Draw the next step:

How would you describe the pattern so that someone could draw it? What stays the same? What's changing? Where do the new parts go? Does it look like something?

Make a table for this pattern. Share how you figured out steps 10 and 43.

step	1	2	3	4	5	10	43
blocks							

What's an equation for this pattern? Can you connect the equation to the visual? Test your equation for steps 10 and 43.