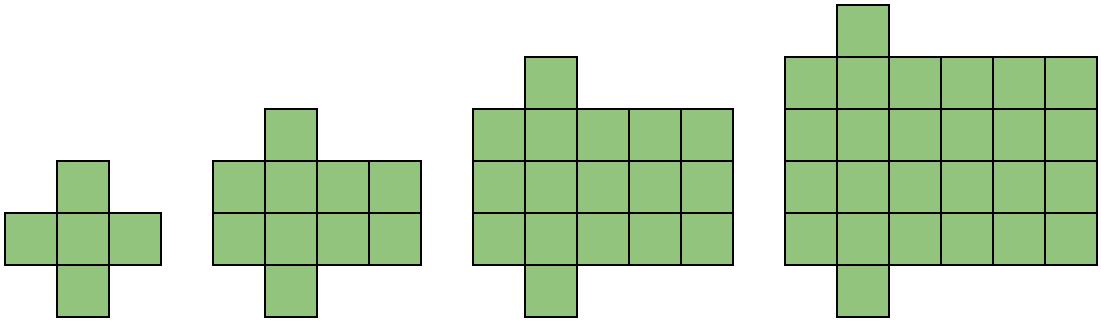
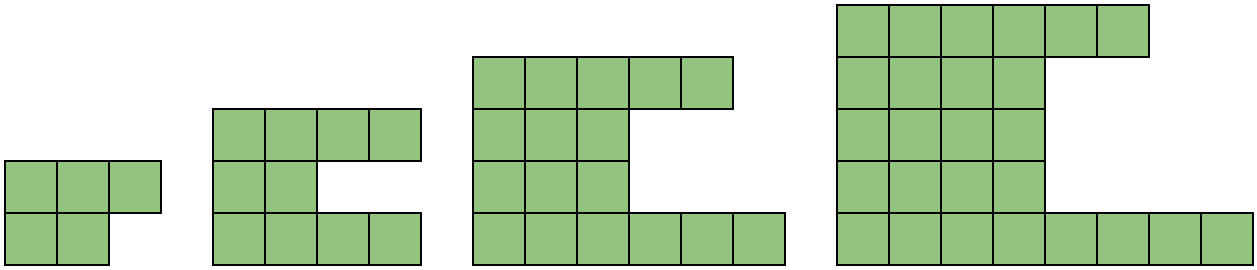


1 2 3 4



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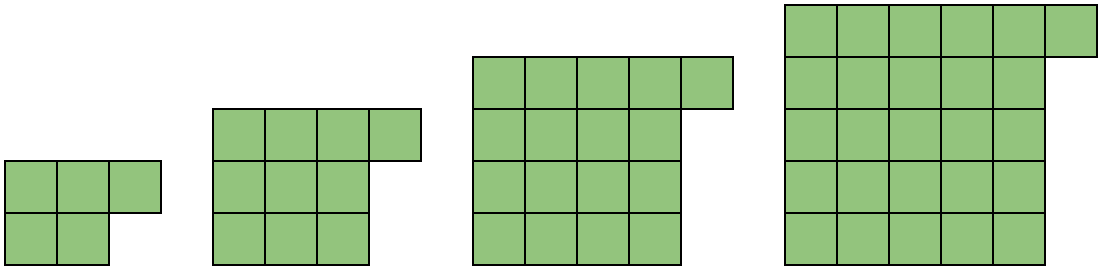

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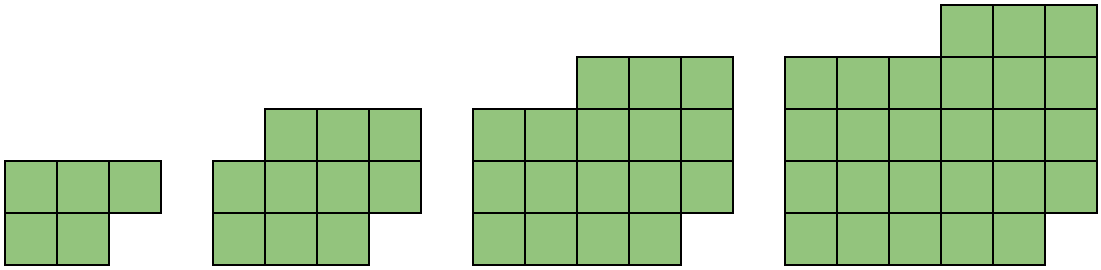

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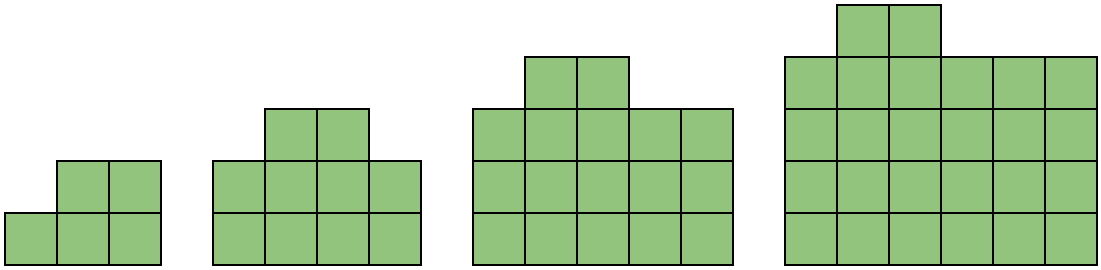
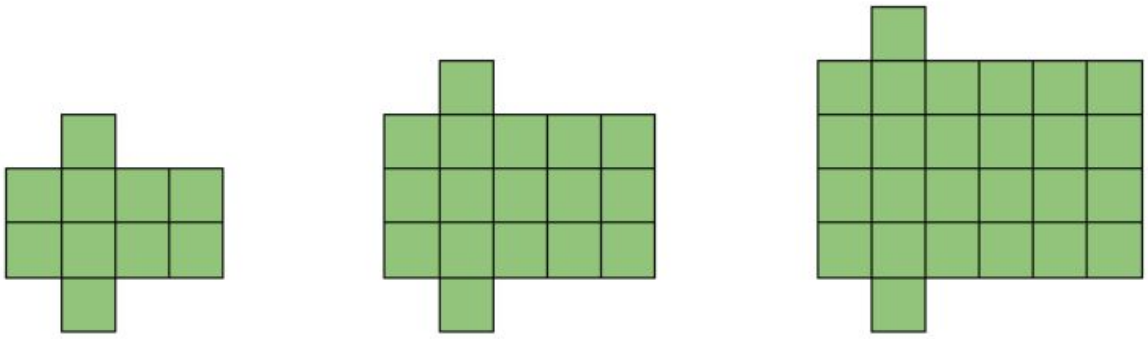


1 2 3 4

Visual Pattern #19



2 3 4

1. Sketch and label the fifth and sixth figure.
2. Sketch and label the first figure.
3. How many square tiles are needed to construct each of these figures?
4. Describe with a written explanation how you would sketch or construct the 100^{th} figure.
5. Using the picture directly, describe with words two different ways you could determine the number of tiles needed to make the n^{th} tile in the sequence.
6. If you did not already do so, write a rule or formula that matches each of the ways you described in #4. Define your variables explicitly.
7. Share your results with a partner. How do you justify your expression? How do you verify results?
8. Sketch figure 0.
9. Would the 10^{th} figure have an even number of squares or an odd number? Why? How do you know?
10. Would the n^{th} figure have an even number of squares or an odd number? Why?
11. Is the pattern growing proportionally? Why or why not? If not, could you create a pattern that grows proportionally from the picture where n=2?

*Thanks to Dr. Usha Kotelawala for the questions and Fawn Nguyen for visualpatterns.org!