

Lesson 1: Patterns that Grow

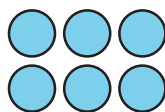
- Let's describe patterns and think about what might come next.

Warm-up: Notice and Wonder: Sets of Circles

What do you notice? What do you wonder?

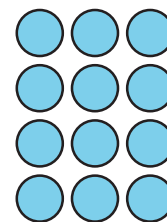


step 1



step 2

step 3



step 4

1.1: Bottle Cap Patterns

Han is arranging his bottle caps in a pattern. Here are the first two steps.



1. a. What might be the rule that Han has in mind? How do you think the pattern might continue?

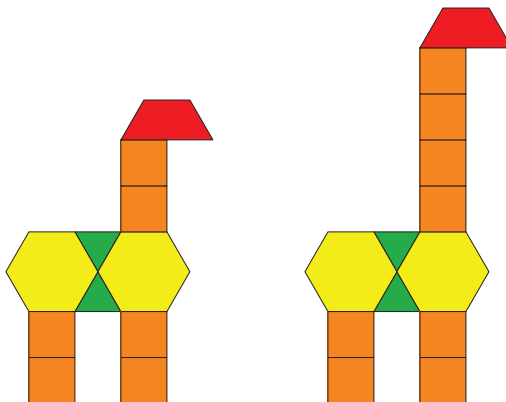
b. Describe or draw the next 2 steps.

2. Is there another possible rule?

3. For each rule that you found, write the numbers that represent the number of caps in step 1 through step 6.

1.2: Taller and Taller

Jada used pattern blocks to make giraffes. Here are the first two steps. She continued to add 2 square blocks for each step that followed.

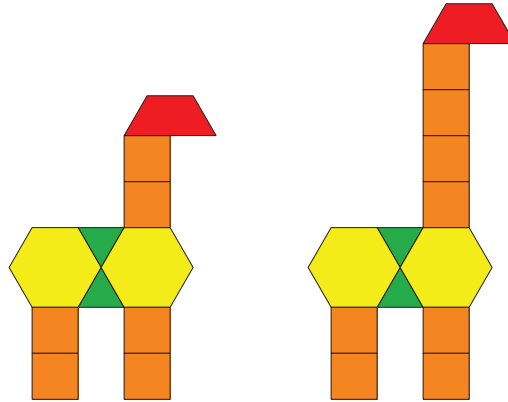


Partner A:

1. List the number of square blocks in each of the first five steps. Write two observations about the numbers.

2. Without drawing the giraffe, predict how many square blocks the tenth step will have. Explain or show your reasoning.

3. Will a step ever have 25 square blocks? Explain or show your reasoning.



Partner B:

1. List the total number of blocks in each of the first five steps. Write two observations about the numbers.

2. Predict how many total blocks the tenth step will have. Explain or show your reasoning.

3. Will a step ever have a total of 25 blocks? Explain or show your reasoning.