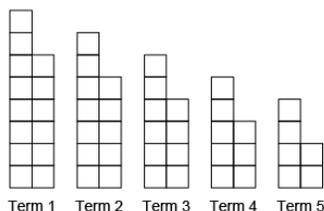


# Activity 1 Assessment

## Investigating Geometric Patterns

### Generalizing and Representing Patterns

Identifies how a pattern repeats, increases, or decreases and describes pattern rule.



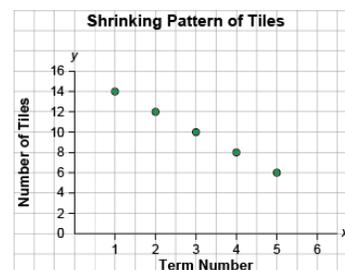
“This is a decreasing pattern. The pattern rule is: Start with 14 red tiles and take away 2 tiles each time.”

Represents patterns using tables or charts and describes the pattern rule.

Term Number	Number of Tiles
1	14
2	12
3	10
4	8
5	6

“The table shows the number of tiles decreases by 2 each time.”

Represents patterns using graphs and describes the pattern rule.



“By looking at the graph, I see that the number of tiles starts at 14 and decreases by 2 with each term.”

Represents patterns symbolically and writes the pattern rule.

18, 17, 15, 12, 8, ...

“Pattern rule: Start at 18 and take away 1. Increase the number taken away by 1 each time.”

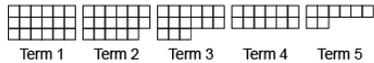
### Observations/Documentation

# Activity 1 Assessment

## Investigating Geometric Patterns

### Generalizing and Representing Patterns (cont'd)

Extends patterns using repeated addition/subtraction, multiplication, and division.



18, 17, 15, 12, 8, ...

“The next term would have  $8 - 5 = 3$  squares. It would be the last term because I cannot take 6 away from 3. Decreasing patterns end but repeating and increasing patterns don't.”

Creates patterns and explains the pattern rule.

Term Number	Picture	Number of Counters
1		1
2		4
3		9
4		16

“I created an increasing pattern with the pattern rule: Start at 1. Multiply the term number by itself.”

Uses patterns to solve problems.

Term Number	Picture	Number of Counters
1		1
2		4
3		9
4		16

How many counters are in Term 8?

“64 counters; I used the rule and multiplied the term number by itself:  
 $8 \times 8 = 64.$ ”

Fluently identifies, creates, and extends various patterns to solve real-life problems.

Number of Bracelets	Number of Plain Beads	Number of Patterned Beads
1	4	12
2	8	24
3	12	36
...	...	...
8	32	96

Naomi beaded bracelets using 4 plain and 12 patterned beads.

“Plain beads: Multiply the number of bracelets by 4:  $4n$   
Patterned beads: Multiply the number of bracelets by 8:  $8b.$ ”

### Observations/Documentation