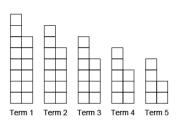
Activity 1 Assessment Investigating Geometric Patterns

Generalizing and Representing Patterns

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



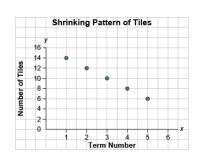
"This is a decreasing pattern. The pattern rule is: Start with 14 red tiles and take away 2 tiles each time."

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, ...

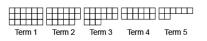
"Pattern rule: Start at 18 and take away 1. Increase the number taken away by 1 each time."

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	0	1
2	00	4
3	000	9
4	0000 0000 0000	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	0	1
2	00	4
3	000	9
4	0000 0000 0000	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