

# Activity 1 Assessment

## Exploring Patterns

### Exploring Patterns

Identifies increasing and decreasing patterns

Is this an increasing or decreasing pattern? What does this tell you about the graph of the pattern?

Term number	Term value
0	11
1	8
2	5
3	2

"When the term number increases, the term value decreases. So, I know this is a decreasing pattern. As you move right on a graph, the points fall to the right."

Identifies linear patterns

Term number	Term value
0	11
1	8
2	5
3	2

"Every time the term number increases by 1, the term value decreases by 3. So, the pattern has a constant rate. This means it is linear. I know the graph will be a series of points that lie along a line."

Determines rate of change and initial value of a linear pattern

What is the constant rate for the pattern  $y = -2x + 5$ ? What is its initial value?

"I'm not certain, so I'm going to make a table of values."

$x$	$-2x + 5$
0	5
1	3
2	1
3	-1

From my table, the constant rate is  $-2$  and the initial value is  $5$ . I see they match the coefficient of the variable and the constant term."

Predicts the effect of changing the coefficient of the variable or the constant in a pattern rule

How is the graph of  $y = x + 5$  the same as the graph of  $y = -2x + 5$ ? How is it different?

"Both graphs are lines that pass through  $(0, 5)$ . The graph of  $y = x + 5$  slopes up to the right and is less steep than the graph of  $y = -2x + 5$ , which slopes down to the right."

### Observations/Documentation