

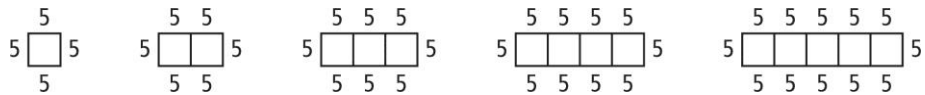
4-2 Reteaching

Patterns and Linear Functions

A relationship can be represented in a table, as ordered pairs, in a graph, in words, or in an equation.

Problem

Consider the relationship between the number of squares in the pattern and the perimeter of the figure. How can you represent this relationship in a table, as ordered pairs, in a graph, in words, and in an equation?



Table

For each number of squares determine the perimeter of the figure. Write the values in the table. Remember to focus on the perimeter of the figure, not the squares.

Number of squares	1	2	3	4	5
Perimeter	20	30	40	50	60

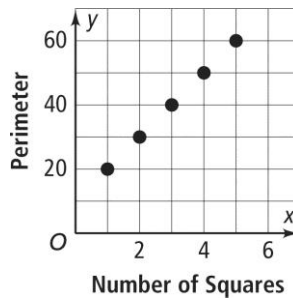
Ordered Pairs

Let x represent the number of squares and y represent the perimeter. Use the numbers in the table to write the ordered pairs.

$$(1, 20), (2, 30), (3, 40), (4, 50), (5, 60)$$

Graph

Use the ordered pairs to draw the graph.



Words

The pattern shows the perimeter is the number of squares times 10 plus 10.

Equation

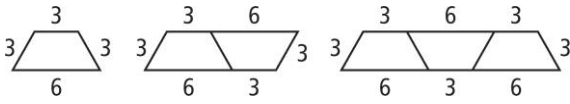
Write an equation for the words.

$$y = 10x + 10$$

Exercises

Consider each pattern.

1.

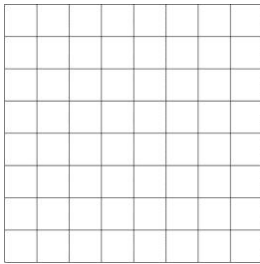


- a. Make a table to show the relationship between the number of trapezoids and the perimeter.

Number of Trapezoids			
Perimeter			

- b. Write the ordered pairs for the relationship.

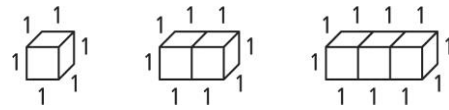
- c. Make a graph for the relationship.



- d. Use words to describe the relationship.

- e. Write an equation for the relationship.

2.

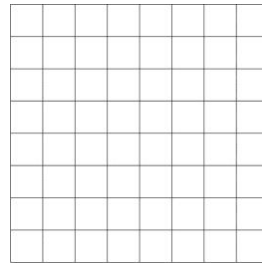


- a. Make a table to show the relationship between the number of cubes and the surface area.

Number of Cubes			
Surface Area			

- b. Write the ordered pairs for the relationship.

- c. Make a graph for the relationship.



- d. Use words to describe the relationship.

- e. Write an equation for the relationship.