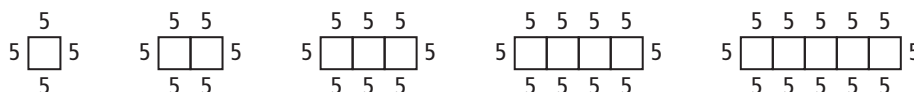# 4-2 **Reteaching**

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.

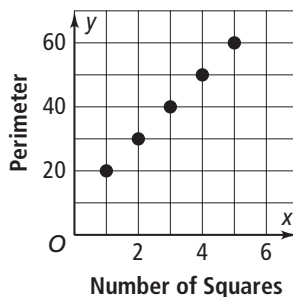| Number of squares	1	2	3	4	5
Perimeter	20	30	40	50	60

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.

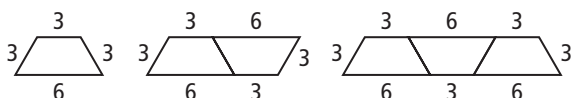**Equation**

Write an equation for the words. $y = 10x + 10$

4-2

Reteaching (continued)

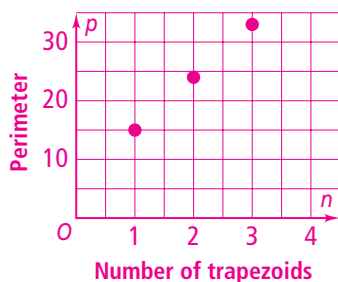Patterns and Linear Functions

Exercises

Consider each pattern.

1.

2.

a. Make a table to show the relationship between the number of trapezoids and the perimeter.
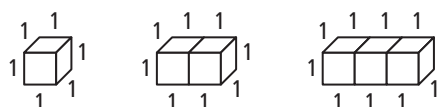
Number of trapezoids	1	2	3
Perimeter	15	24	33

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

Number of cubes	1	2	3
Surface area	6	10	14

b. Write the ordered pairs for the relationship. **(1, 15), (2, 24), (3, 33)**

b. Write the ordered pairs for the relationship. **(1, 6), (2, 10), (3, 14)**

c. Make a graph for the relationship.

Number of trapezoids

c. Make a graph for the relationship.

Number of cubes

d. Use words to describe the relationship.
The perimeter is 6 more than 9 times the number of trapezoids.
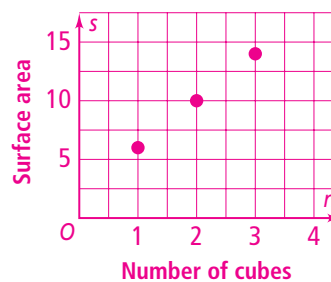
d. Use words to describe the relationship.
The surface area is 2 more than 4 times the number of cubes.

e. Write an equation for the relationship. $p = 9n + 6$

e. Write an equation for the relationship. $s = 4n + 2$