

# Lesson 6 Reteach

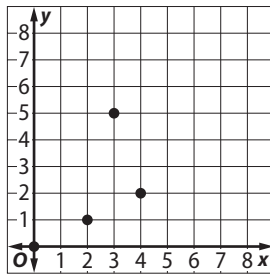
## Ordered Pairs and Relations

In mathematics, a **coordinate system** or **coordinate plane** is used to locate points. The horizontal number line is called the **x-axis** and the vertical number line is called the **y-axis**. The point where the two axes intersect is the **origin** (0, 0). An **ordered pair** of numbers is used to locate points in the coordinate plane. The point (4, 3) has an **x-coordinate** of 4 and a **y-coordinate** of 3.

A **relation** is a set of ordered pairs, such as  $\{(0, 3), (1, 2), (3, 6), (7, 4)\}$ . A relation can also be shown in a table or a graph. The set of x-coordinates is the **domain** of the relation, while the set of y-coordinates is the **range** of the relation.

**Example** Express the relation  $\{(0, 0), (2, 1), (4, 2), (3, 5)\}$  as a table and as a graph. Then determine the domain and range.

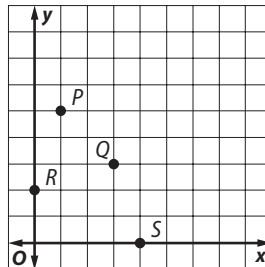
x	y
0	0
2	1
4	2
3	5



The domain is  $\{0, 2, 4, 3\}$ , and the range is  $\{0, 1, 2, 5\}$ .

### Exercises

Refer to the coordinate plane shown at the right. Write the ordered pair that names each point.



- P
- Q
- R
- S

Express the relation as a table and as a graph. Determine the domain and range.

5.  $\{(4, 6), (0, 3), (1, 4)\}$

x	y

