NAME _____ DATE _____ PERIOD _____

4-6 Study Guide and Intervention

Functions

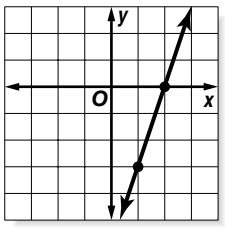
Identify Functions Relations in which each element of the domain is paired with exactly one element of the range are called **functions**.

Example 1 **Determine whether the relation {(6, −3), (4, 1), (7, −2), (−3, 1)} is a function. Explain.**

Since each element of the domain is paired with exactly one element of the range, this relation is a function.

Example 2 **Determine whether $3x - y = 6$ is a function.**

Since the equation is in the form $Ax + By = C$, the graph of the equation will be a line, as shown at the right.

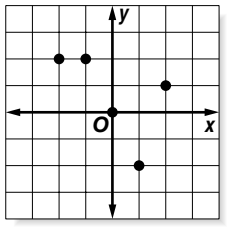


If you draw a vertical line through each value of x, the vertical line passes through just one point of the graph. Thus, the line represents a function.

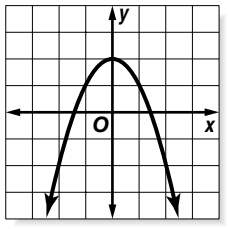
Exercises

Determine whether each relation is a function.

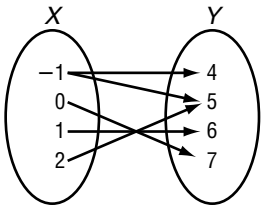
1.



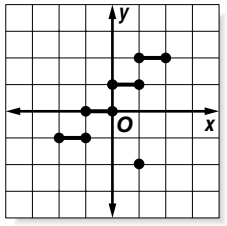
2.



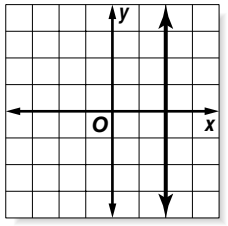
3.



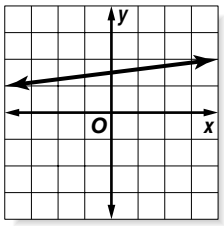
4.



5.



6.



7. {(4, 2), (2, 3), (6, 1)}

8. {(−3, −3), (−3, 4), (−2, 4)}

9. {(−1, 0), (1, 0)}

10. $-2x + 4y = 0$

11. $x^2 + y^2 = 8$

12. $x = -4$