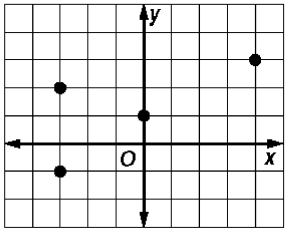
Name: _____ Date: _____ Period: _____

Chapter 3 Study Guide (Algebra 1) 8 Points

Short Answer

Use the graph.



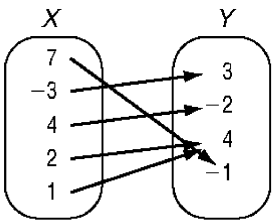
1. What is the domain of the relation?
2. What is the range of the relation?
3. Is the relation a function? How can you tell if it is a function or not?
4. Write the inverse of the relation.
5. Express the relation {(1, 4), (–2, 3), (–5, 0), (7, 4), (3, 2)} as a mapping.
6. Find the *x*-intercept and y-intercept of $x - 2y = 9$.

Determine whether each equation is a linear equation. If so, write the equation in standard form.

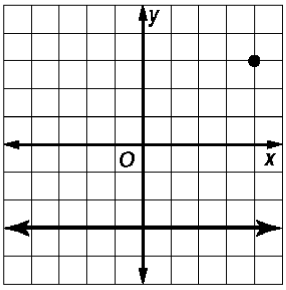
7. $xy = 6$
8. $2x + 3y + 7 = 3$
9. $\frac{1}{x} + \frac{1}{y} = \frac{2}{3}$
10. $4x = 2y$
11. Find the *x* and y intercept of $3x - y = 7$.
12. Find the *x and y* intercept of $4x - 5y = 15$.

Determine whether each relation is a function.

13.



14.



If $f(x) = x^2 + 3x - 2$, find each value.

15. $f(2)$
16. $f(-15)$

If $g(x) = x^2 - 2x + 4$, find each value.

17. $g(-5)$
18. $g(8)$
19. Find the next three terms of the arithmetic sequence 8, 15, 22, 29, …. .
20. Find the next three terms of the arithmetic sequence –25, –22, –19, –16, … .
21. Express the relation {(8, 7), (–2, 0), (1, 0), (4, –5), (–1, 3)} as a mapping, a table, and a graph. Then state the Domain and Range.