

# Chapter 3 Test A

Determine whether the relation is a function. If the relation is a function, determine whether the function is *linear* or *nonlinear*.

1. 

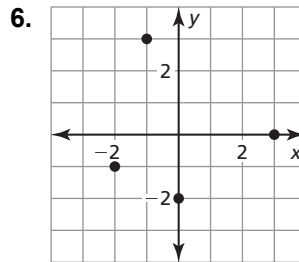
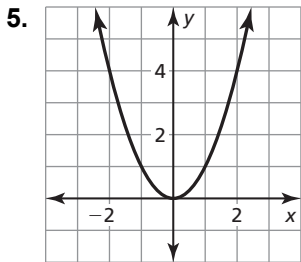
<b>x</b>	1	3	5	3
<b>y</b>	4	2	0	-2

2.  $y = 3$

3.  $2x - 5y = 10$

4.  $\frac{5}{x} + y = -7$

Find the domain and range of the function represented by the graph. Determine whether the domain is *discrete* or *continuous*.



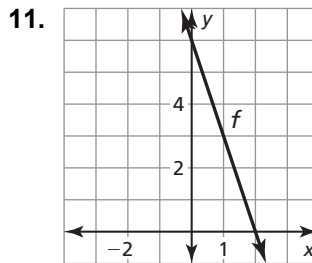
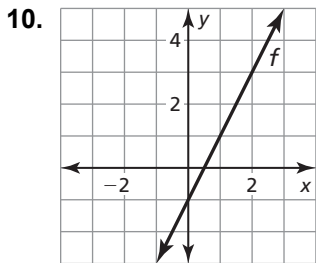
Evaluate the function when  $x = -1, 0,$  and  $4$ .

7.  $g(x) = 3x^2 + 1$

8.  $b(x) = -2x - 4$

9.  $h(x) = |-x + 5|$

Find the value of  $x$  so that  $f(x) = 3$ .



Find the  $x$ - and  $y$ -intercepts of the graph of the linear equation.

12.  $2x + 3y = 6$

13.  $-3x + 5y = -30$

14.  $\frac{1}{2}x + y = -8$

## Answers

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_

# Chapter 3 Test A (continued)

The points represented by the table lie on a line. Find the slope of the line.

15. 

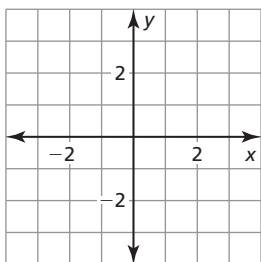
x	-5	-3	-1	1
y	7	4	1	-2

16. 

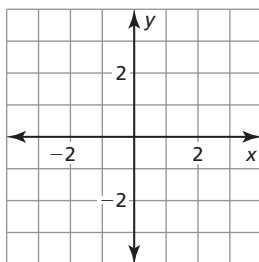
x	2	2	2	2
y	-6	3	-7	1

Graph the linear equation.

17.  $x - 3y = 6$



18.  $y = -\frac{2}{3}x + 1$



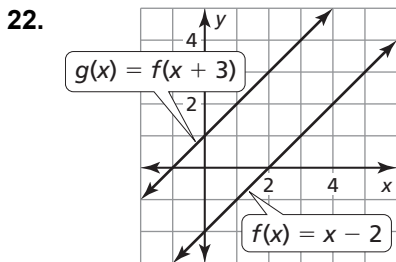
Identify the slope, y-intercept, and x-intercept of the graph of the linear equation.

19.  $5x + 3y = 15$

20.  $y = x - 3$

21.  $x = -4$

Use the graph of  $f$  and  $g$  to describe the transformation from the graph of  $f$  to the graph of  $g$ .



23.  $f(x) = -x + 5; g(x) = 2f(x)$

Write a function  $g$  in terms of  $f$  so that the statement is true.

24. The graph of  $g$  is a horizontal translation 4 units left of the graph of  $f$ .

25. The graph of  $g$  is a vertical translation 7 units down of the graph of  $f$ .

26. The graph of  $g$  is a horizontal stretch by a factor of  $\frac{4}{3}$  of the graph of  $f$ .

27. The graph of  $g$  is a vertical shrink by a factor of  $\frac{1}{5}$  of the graph of  $f$ .

Answers

15. \_\_\_\_\_

16. \_\_\_\_\_

17. See left.

18. See left.

19. \_\_\_\_\_

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20. \_\_\_\_\_

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21. \_\_\_\_\_

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22. \_\_\_\_\_

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23. \_\_\_\_\_

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24. \_\_\_\_\_

25. \_\_\_\_\_

26. \_\_\_\_\_

27. \_\_\_\_\_