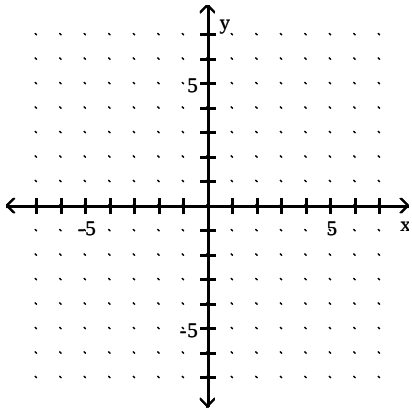


Name _____

Sketch the graph of the equation.

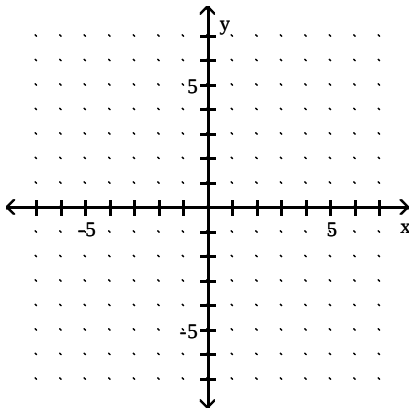
1) $x = -4$

1) _____



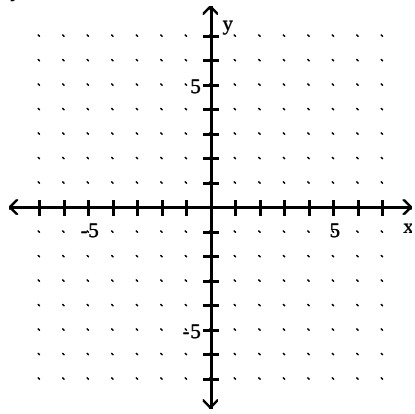
2) $y = -6x$

2) _____



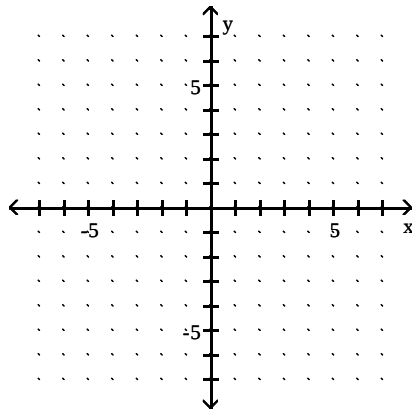
3) $y = 5x$

3) _____



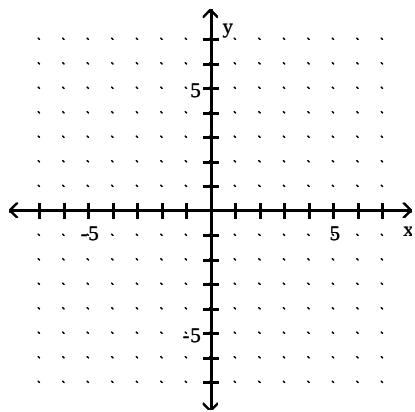
4) $y = -\frac{1}{5}x$

4) _____



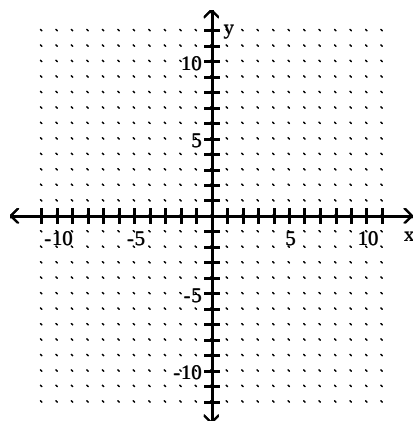
5) $y = \frac{1}{5}x$

5) _____



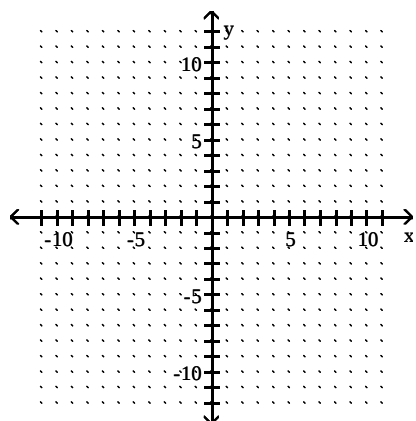
6) $y = \frac{5}{6}x - 6$

6) _____



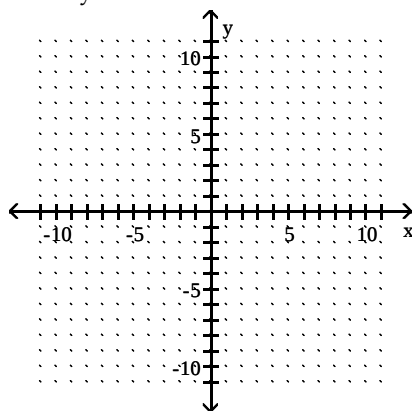
7) $y = \frac{1}{3}x - 3$

7) _____



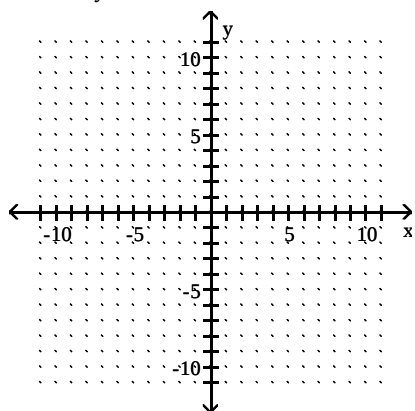
8) $-x = 4y - 2$

8) _____



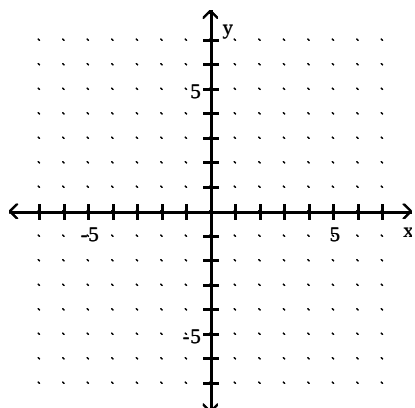
9) $-x = -4y + 9$

9) _____

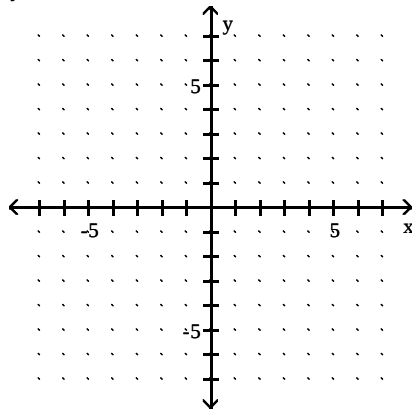


10) $x = -2$

10) _____

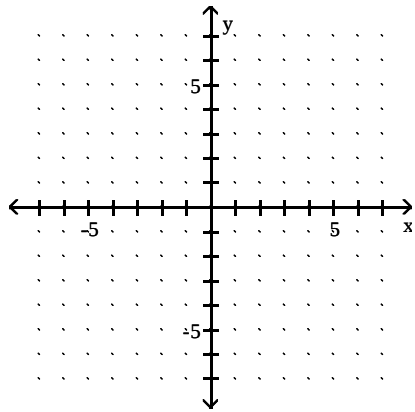


11) $y = -5$



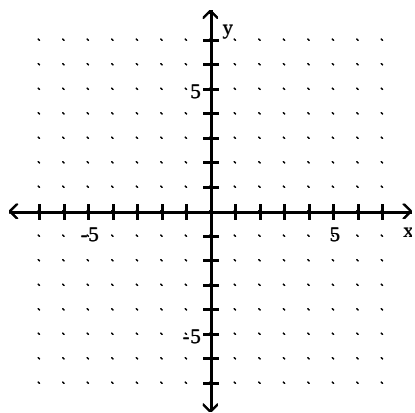
11) _____

12) $y = 2$



12) _____

13) $y = -4$

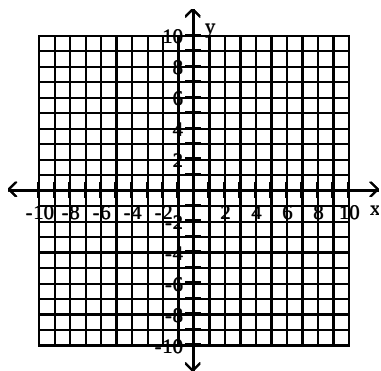


13) _____

Begin by graphing the standard quadratic function $f(x) = x^2$. Then use transformations of this graph to graph the given function.

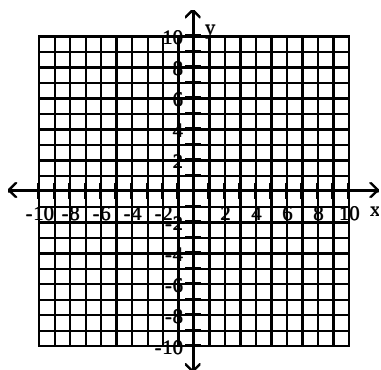
14) $g(x) = x^2 + 2$

14) _____



15) $g(x) = x^2 - 2$

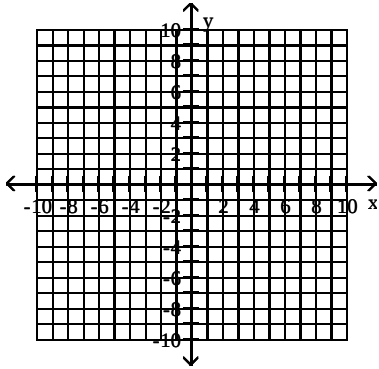
15) _____



Begin by graphing the standard square root function $f(x) = \sqrt{x}$. Then use transformations of this graph to graph the given function.

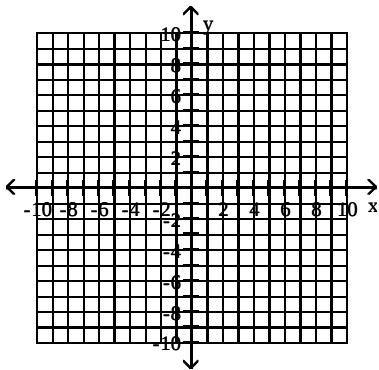
16) $g(x) = \sqrt{x} - 2$

16) _____



17) $g(x) = \sqrt{x} - 1$

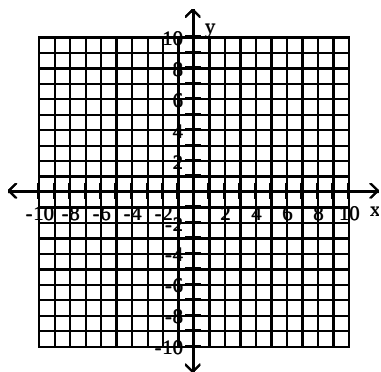
17) _____



Begin by graphing the standard absolute value function $f(x) = |x|$. Then use transformations of this graph to graph the given function.

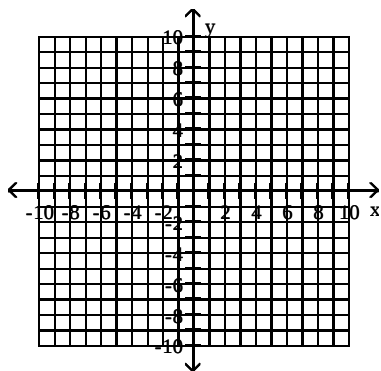
18) $g(x) = |x| - 3$

18) _____



19) $g(x) = |x| + 3$

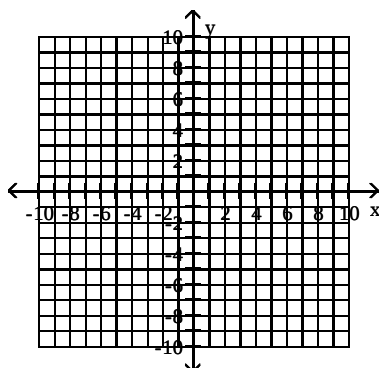
19) _____



Begin by graphing the standard function $f(x) = x^3$. Then use transformations of this graph to graph the given function.

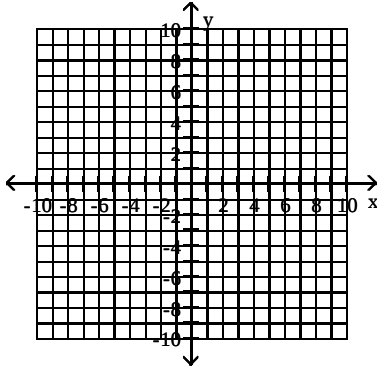
20) $g(x) = x^3 - 2$

20) _____



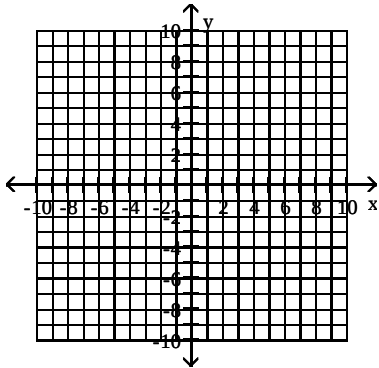
21) $g(x) = x^3 - 3$

21) _____



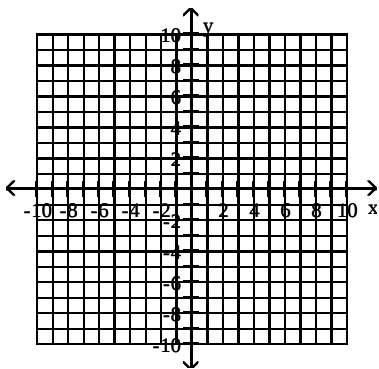
22) $g(x) = x^3 + 2$

22) _____



23) $g(x) = x^3 + 3$

23) _____



Decide whether the relation is a function.

24) $\{(1, 7), (2, 2), (5, 2), (7, -3), (11, -9)\}$

24) _____

25) $\{(1, 2), (2, -3), (6, -9), (9, -9), (10, 1)\}$

25) _____

26) $\{(-4, -3), (-3, -6), (1, -4), (1, -1)\}$

26) _____

27) $\{(-3, -8), (-1, 3), (1, 4), (1, 5)\}$

27) _____

28) $\{(-6, 9), (-3, 8), (3, -1), (3, 3)\}$

28) _____

29) $\{(-5, 8), (-2, 1), (3, 2), (3, 5)\}$

29) _____

30) $\{(-5, -1), (-3, 6), (2, 2), (5, -9)\}$

30) _____

31) $\{(-6, -2), (-3, -7), (2, -2), (8, 1)\}$

31) _____

32) $\{(-6, 7), (-3, -3), (4, -2), (8, -3)\}$

32) _____

33) $\{(-4, -9), (-3, -1), (2, 1), (6, 3)\}$

33) _____

Give the domain and range for the relation.

34) $\{(2, 4), (-7, -15), (10, -2), (5, 8), (1, 6)\}$ 34) _____

35) $\{(9, -6), (-3, -4), (1, -7), (1, 7)\}$ 35) _____

36) $\{(-8, 5), (-8, 4), (-2, -2), (6, -1), (8, 7)\}$ 36) _____

37) $\{(-7, 5), (6, 4), (2, 7), (2, -8)\}$ 37) _____

38) $\{(-2, 1), (2, 4), (-4, -7), (-9, 3)\}$ 38) _____

39) $\{(-6, -1), (3, -5), (-1, -6), (7, -7)\}$ 39) _____

40) $\{(11, 0), (-4, 0), (1, 0), (-3, 0)\}$ 40) _____

41) $\{(-4, 0), (-6, 0), (5, 0), (6, 0)\}$ 41) _____

Solve the problem.

42) Some values for a relation are given in the table. Is the relation a function?

42) _____

x	y
1	2
2	5
3	8
3	11
4	14

43) Some values for a relation are given in the table. Is the relation a function?

43) _____

x	y
1	2
2	7
3	7
4	1
5	9

44) Some values for a relation are given in the table. Is the relation a function?

44) _____

x	y
1	5
2	9
3	2
3	4
4	7

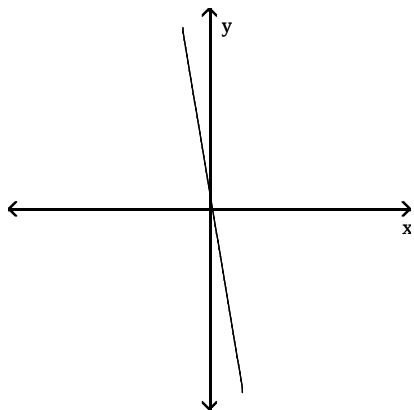
45) Some values for a relation are given in the table. Is the relation a function?

45) _____

x	y
5	3
6	4
7	6
8	6
9	15

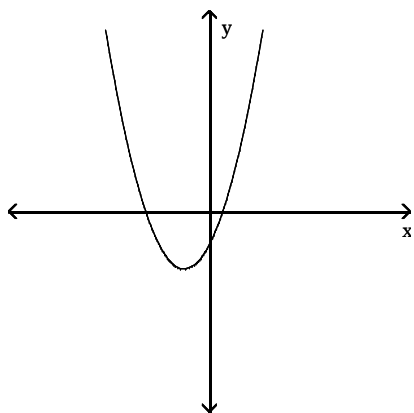
Use the vertical line test on the graph to determine if y is a function of x .

46)



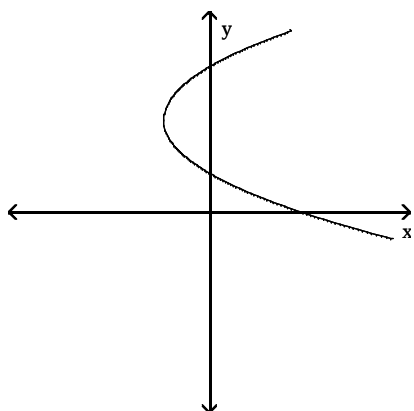
46) _____

47)



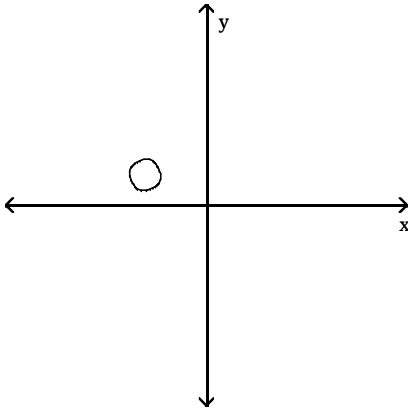
47) _____

48)



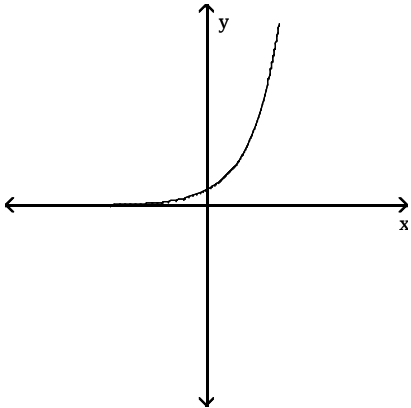
48) _____

49)



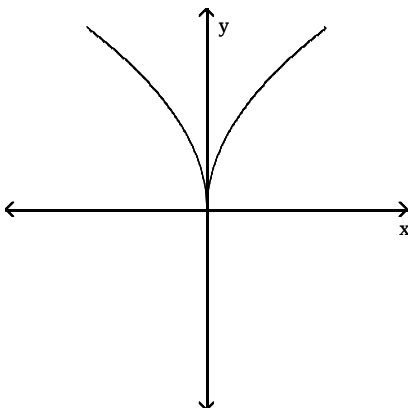
49) _____

50)



50) _____

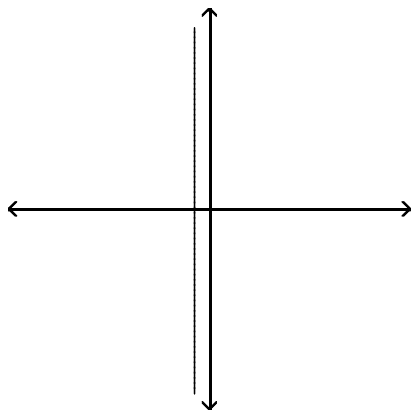
51)



51) _____

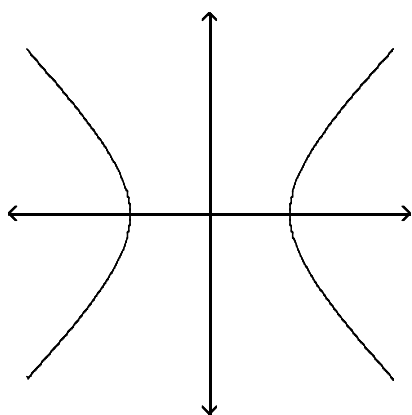
Determine whether the graph is the graph of a function.

52)



52) _____

53)

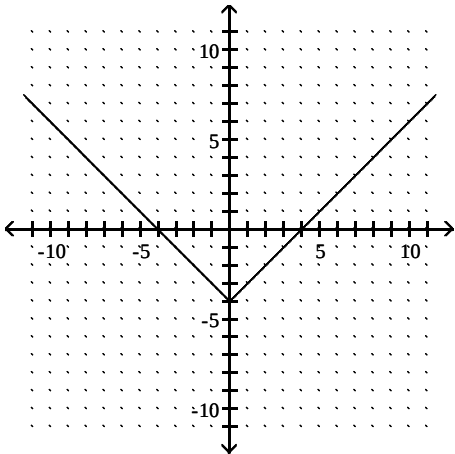


53) _____

Find the domain and the range of the relation.

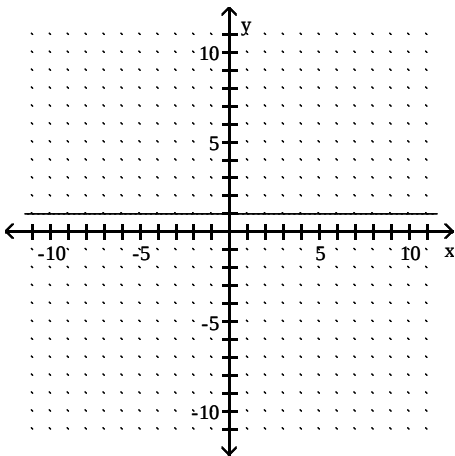
54)

54) _____

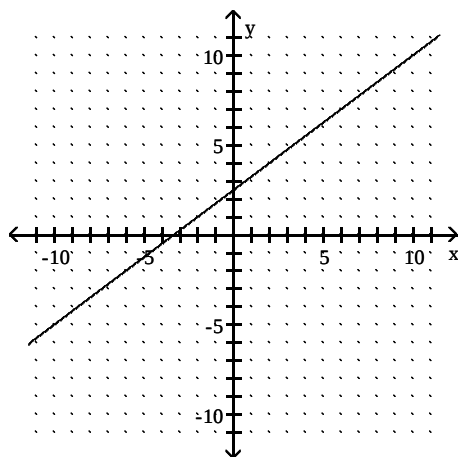


55)

55) _____

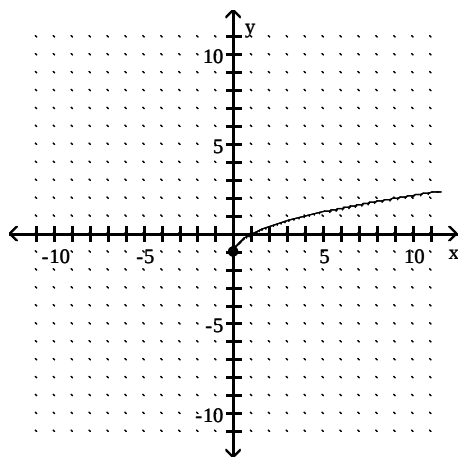


56)



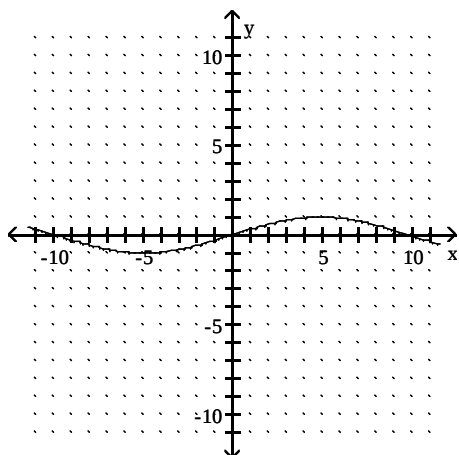
56) _____

57)



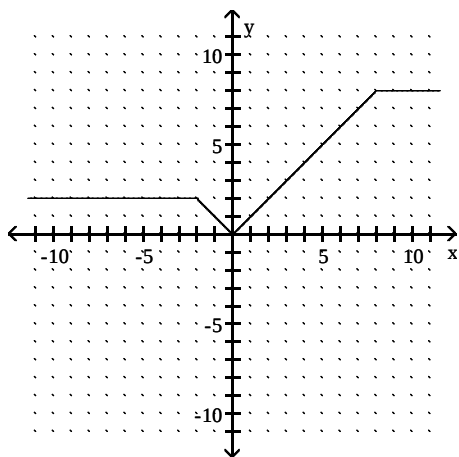
57) _____

58)



58) _____

59)



59) _____

Evaluate the function at the given value.

60) $f(x) = -4x + 8$; $f(0)$

60) _____

61) $f(x) = x^2 - 3x + 3$; $f(-2)$

61) _____

62) $h(x) = |x - 13|$; $h(17)$

62) _____

63) $h(x) = 10$; $h(-8)$

63) _____

64) $h(x) = 12$; $h(5)$

64) _____

65) $g(x) = -8x$; $g(6)$

65) _____

66) $f(x) = x^2 - 8x$; $f(2)$

66) _____

67) $f(x) = x^2 - 9x$; $f(8)$

67) _____

68) $f(t) = \sqrt{t + 133} + 2$; $f(11)$

68) _____

69) $f(r) = \frac{8r}{|8r|}$; $f(-11)$

69) _____

70) $f(r) = \frac{7r}{|7r|}$; $f(-8)$

70) _____

The table lists some input–output pairs for an exponential function f . Use the table to find the requested value.

71) Find $f(0)$.

71) _____

x	$f(x)$
0	2
1	6
2	18
3	54
4	162

72) Find $f(2)$.

72) _____

x	$f(x)$
0	3
1	9
2	27
3	81
4	243

73) Find $f(2)$.

73) _____

x	$f(x)$
0	1
1	2
2	5
3	14
4	41

74) Find x when $f(x) = 1$.

74) _____

x	$f(x)$
0	1
1	2
2	5
3	14
4	41

75) Find x when $f(x) = 3$.

75) _____

x	$f(x)$
0	3
1	9
2	27
3	81
4	243

76) Find x when $f(x) = 2$.

76) _____

x	$f(x)$
0	2
1	6
2	18
3	54
4	162

77) Find $f(3)$.

77) _____

x	$f(x)$
0	81
1	27
2	9
3	
4	1

78) Find $f(3)$.

78) _____

x	$f(x)$
0	1250
1	250
2	50
3	
4	2

Given functions f and g, perform the indicated operations.

79) $f(x) = 7x - 9$, $g(x) = 2x - 4$

Find $f - g$.

79) _____

80) $f(x) = 4x^2 - 7x$, $g(x) = x^2 - 5x - 14$

Find $\frac{f}{g}$.

80) _____

81) $f(x) = 9 - 6x$, $g(x) = -2x + 6$

Find $f + g$.

81) _____

82) $f(x) = \sqrt{4x + 2}$, $g(x) = \sqrt{25x - 16}$

Find fg .

82) _____

83) $f(x) = 7x - 1$, $g(x) = 9x - 4$

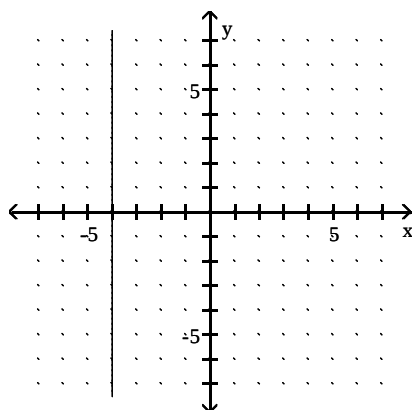
Find fg .

83) _____

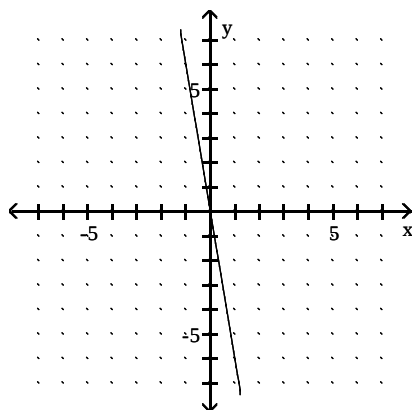
Answer Key

Testname: Q2PREP2.1TO2.4

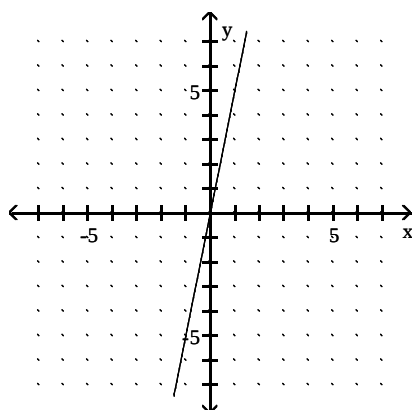
1)



2)



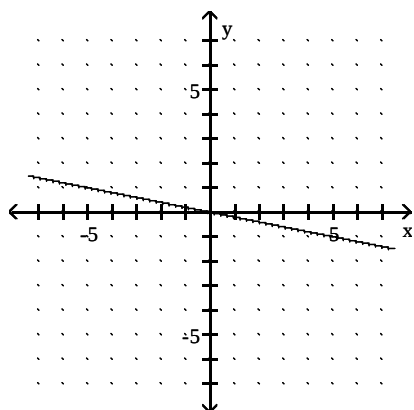
3)



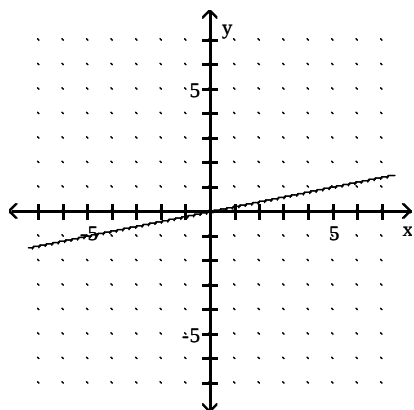
Answer Key

Testname: Q2PREP2.1TO2.4

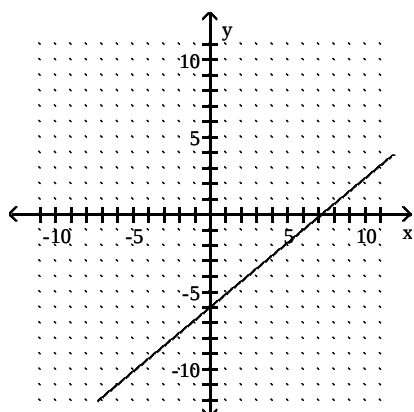
4)



5)



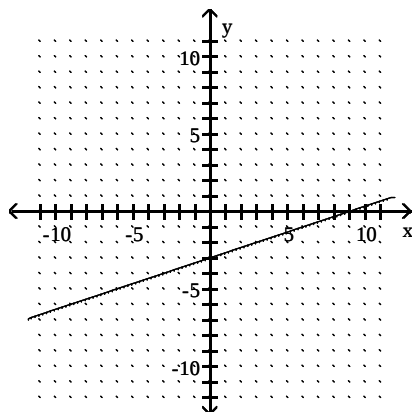
6)



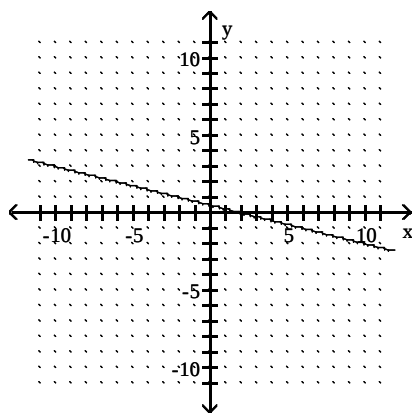
Answer Key

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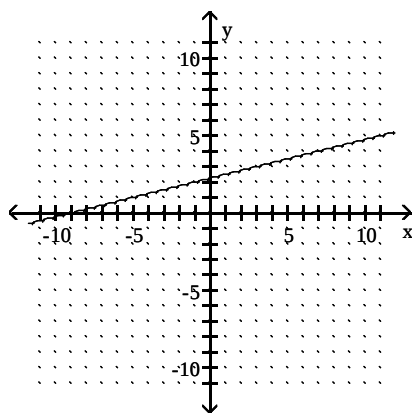
7)



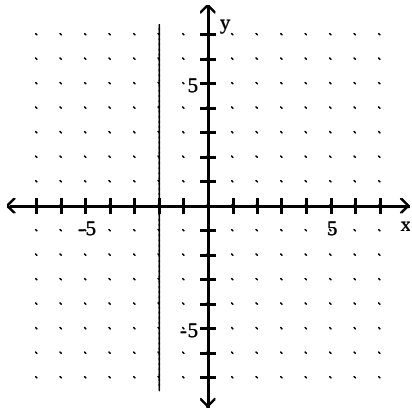
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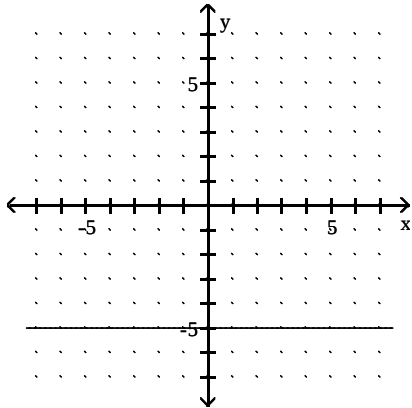
9)



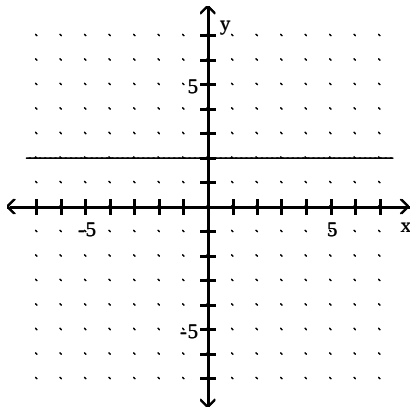
10)



11)



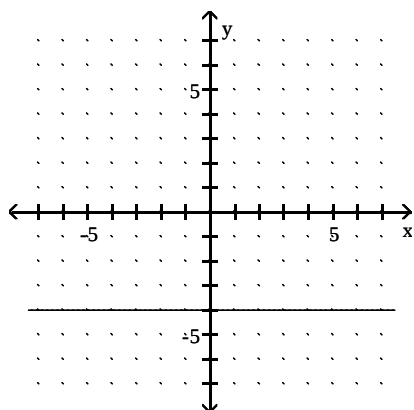
12)



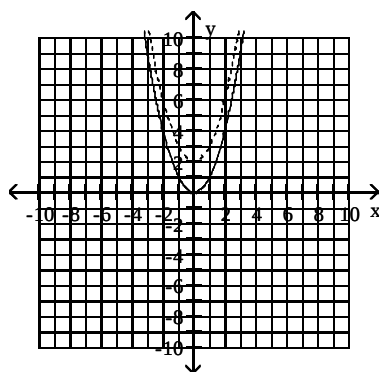
Answer Key

Testname: Q2PREP2.1TO2.4

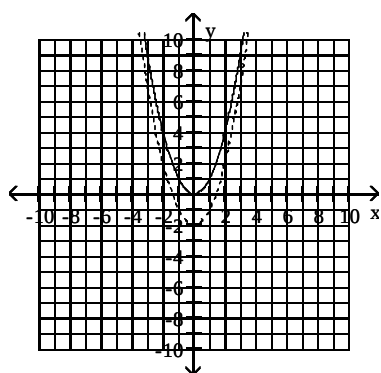
13)



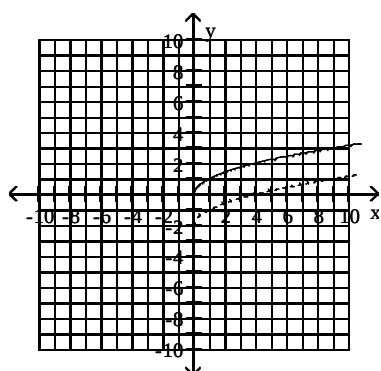
14)



15)



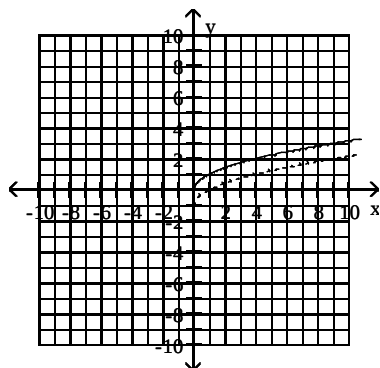
16)



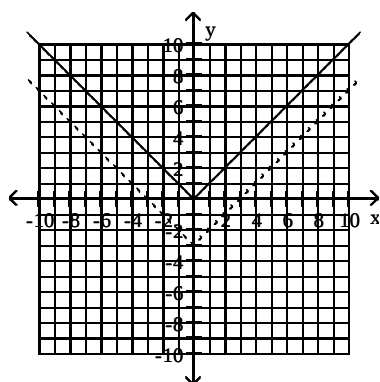
Answer Key

Testname: Q2PREP2.1TO2.4

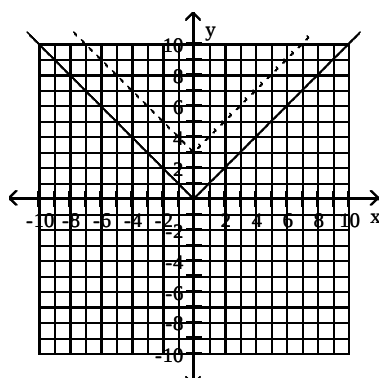
17)



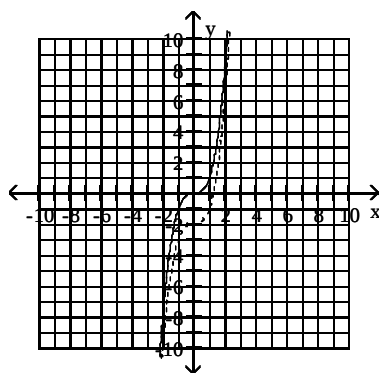
18)



19)



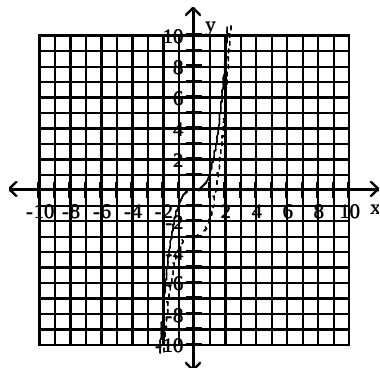
20)



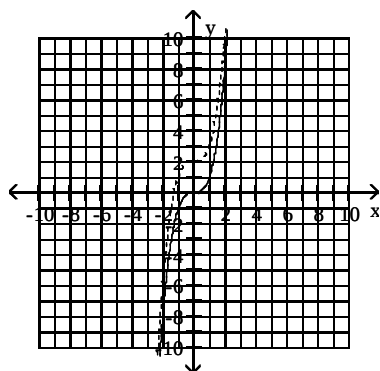
Answer Key

Testname: Q2PREP2.1TO2.4

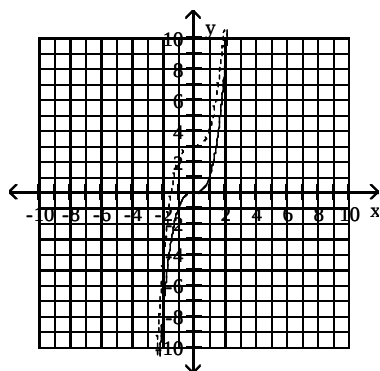
21)



22)



23)



24) Function

25) Function

26) Not a function

27) Not a function

28) Not a function

29) Not a function

30) Function

31) Function

32) Function

33) Function

34) Domain: {5, 10, 1, -7, 2}; range: {8, -2, 6, -15, 4}

35) Domain: {1, 9, -3}; range: {-7, -6, -4, 7}

36) Domain: {6, -2, 8, -8}; range: {-1, -2, 7, 4, 5}

37) Domain: {2, 6, -7}; range: {7, 4, 5, -8}

38) Domain: {-2, -4, -9, 2}; range: {1, -7, 3, 4}

Answer Key

Testname: Q2PREP2.1TO2.4

- 39) Domain: {7, -6, 3, -1}; range: {-7, -1, -5, -6}
- 40) Domain: {-4, 1, 11, -3}; range: {0}
- 41) Domain: {-6, 5, 6, -4}; range: {0}
- 42) No
- 43) Yes
- 44) No
- 45) Yes
- 46) Function
- 47) Function
- 48) Not a function
- 49) Not a function
- 50) Function
- 51) Function
- 52) not a function
- 53) not a function
- 54) domain: all real numbers; range: $y \geq -4$
- 55) domain: all real numbers; range: $y = 1$
- 56) domain: all real numbers; range: all real numbers
- 57) domain: $x \geq 0$; range: $y \geq -1$
- 58) domain: all real numbers; range: $-1 \leq y \leq 1$
- 59) domain: all real numbers; range: $0 \leq y \leq 8$
- 60) 8
- 61) 13
- 62) 4
- 63) 10
- 64) 12
- 65) -48
- 66) -12
- 67) -8
- 68) 14
- 69) -1
- 70) -1
- 71) 2
- 72) 27
- 73) 5
- 74) 0
- 75) 0
- 76) 0
- 77) 3
- 78) 10
- 79) $5x - 5$
- 80) $\frac{4x^2 - 7x}{x^2 - 5x - 14}$
- 81) $-8x + 15$
- 82) $(\sqrt{4x + 2})(\sqrt{25x - 16})$
- 83) $63x^2 - 37x + 4$