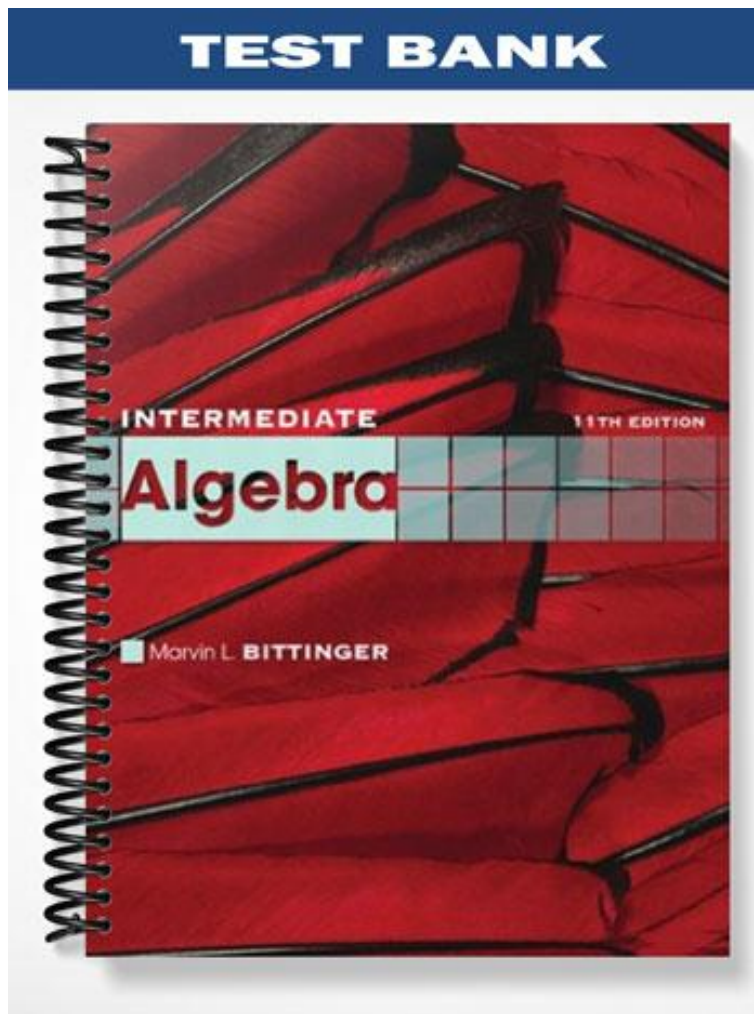


TEST BANK



INTERMEDIATE

11TH EDITION

Algebra

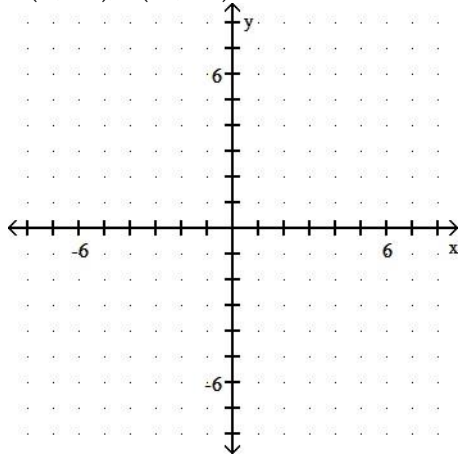
Marvin L. BITTINGER

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

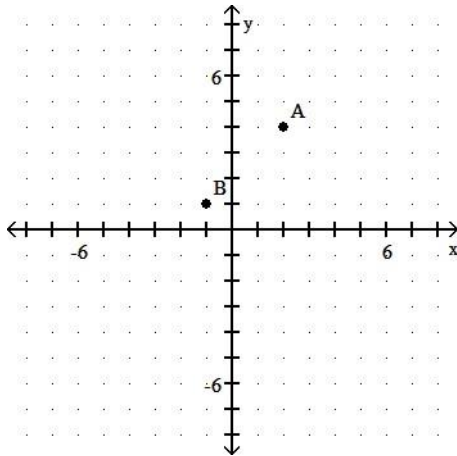
Plot the ordered pairs on the rectangular coordinate system provided.

1) $A(2, 4), B(-1, 1)$

1) _____

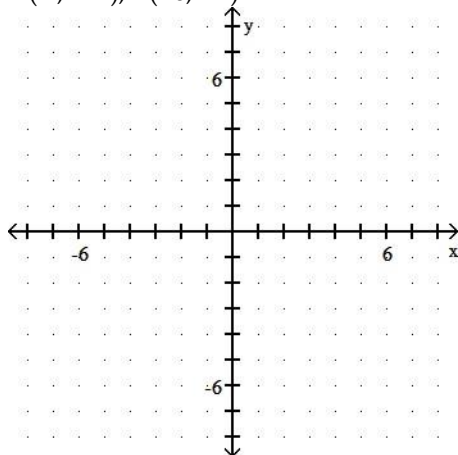


Answer:

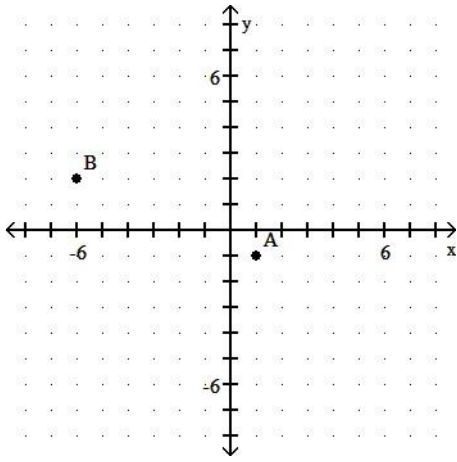


2) $A(1, -1), B(-6, 2)$

2) _____

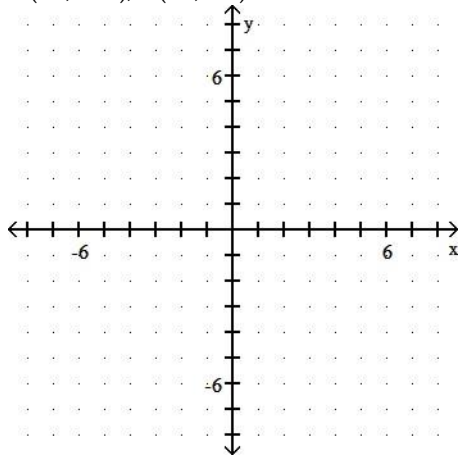


Answer:

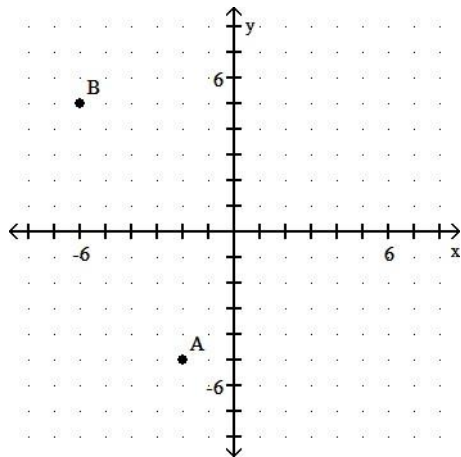


3) A(-2, -5), B(-6, 5)

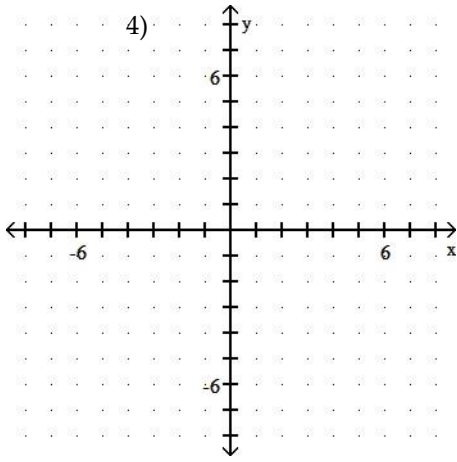
3) _____



Answer:

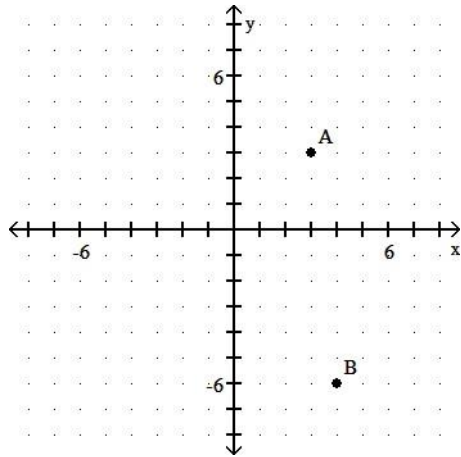


4) A(3, 3), B(4, -6)

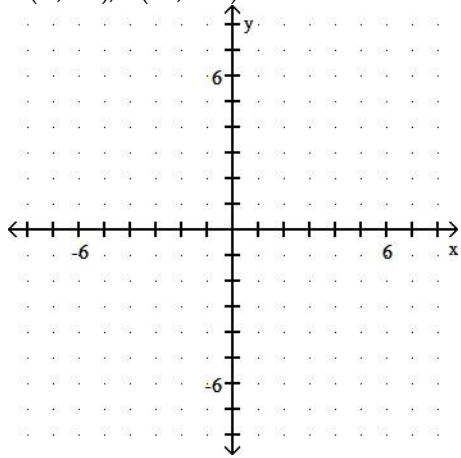


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Answer:

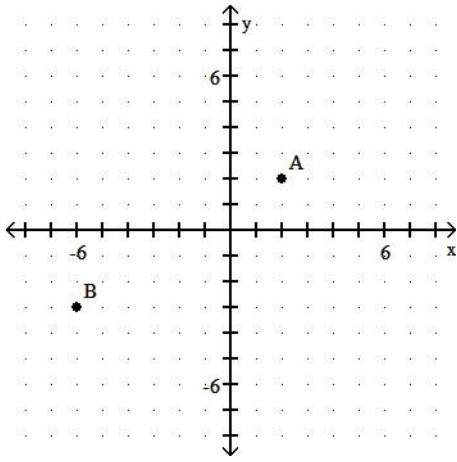


5) A(2, 2), B(-6, -3)



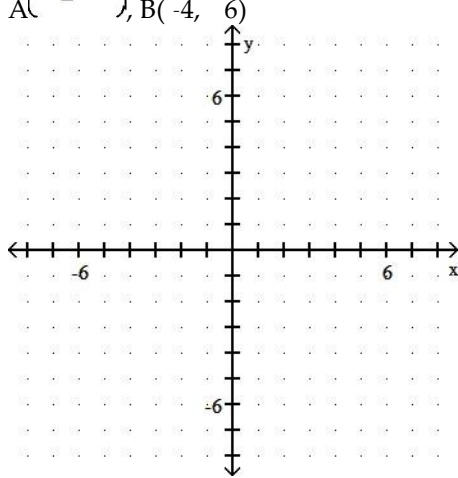
5) _____

Answer:

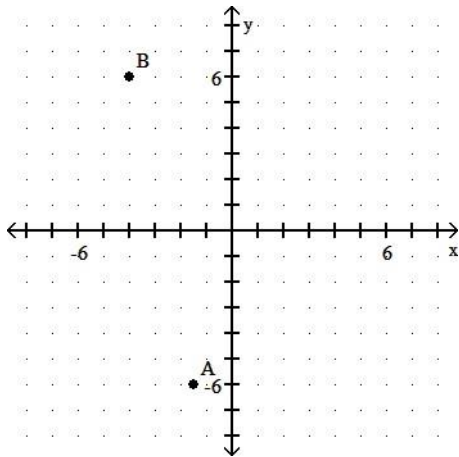


6) $A\left(-\frac{3}{2}, -6\right), B(-4, 6)$

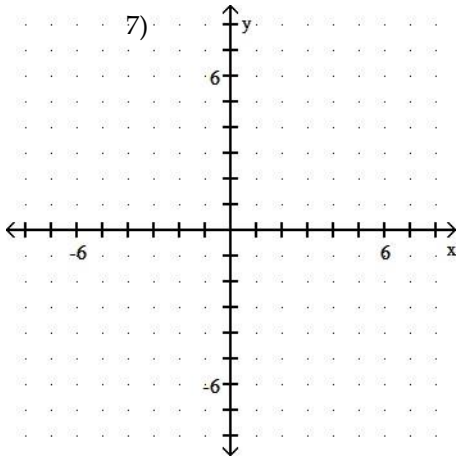
6) _____



Answer:

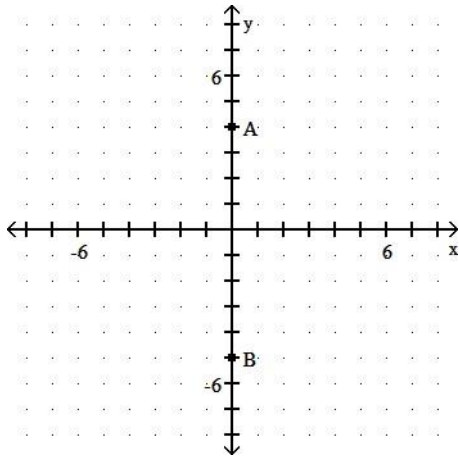


7) $A(0, 4), B(0, -5)$

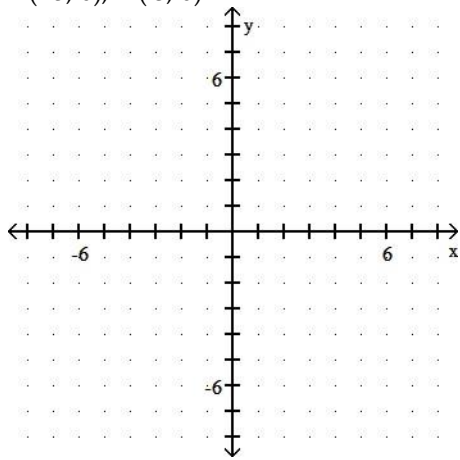


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Answer:

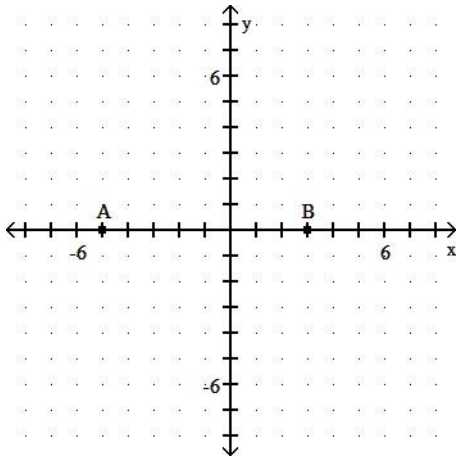


8) A(-5, 0), B (3, 0)



Answer:

8) _____



MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.
Determine whether the given point is a solution of the equation.

9) $x + y = 8$; (6, 2) 9) _____
 A) No B) Yes
 Answer: B

10) $x + y = 16$; (8, 2) 10) _____
 A) No B) Yes
 Answer: A

11) $x - y = 36$; (6, 3) 11) _____
 A) Yes B) No
 Answer: B

12) $2x + y = 11$; (3, 5) 12) _____
 A) No B) Yes
 Answer: B

13) $4x + 5y = 37$; (3, 5) 13) _____
 A) No B) Yes
 Answer: B

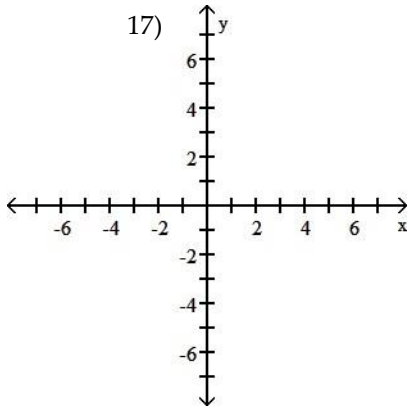
14) $5x - 2y = 26$; (4, 3) 14) _____
 A) Yes B) No
 Answer: B

15) $-11x + 6y = 50$; (-4, 1) 15) _____
 A) Yes B) No
 Answer: A

16) $y = -2x$; (2, -4) 16) _____
 A) No B) Yes
 Answer: B

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.
Show that the two ordered pairs are solutions to the given equation. Then use the graph of the two points to determine another solution. Answers may vary.

17) $y = x - 2$; (7, 5), (-2, -4)



Answer: Show that (7, 5) is a solution:

$$y = x - 2$$

$$5 = ? \quad 7 - 2$$

$$5 = ? \quad 5 \qquad \text{TRUE}$$

Show that (-2, -4) is a solution:

$$y = x - 2$$

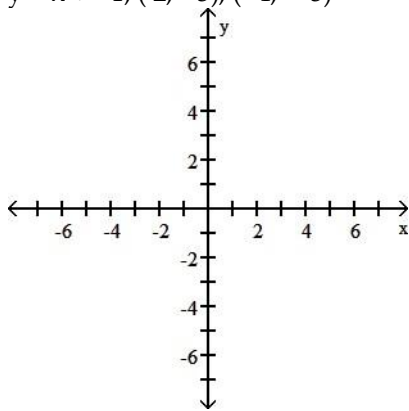
$$-4 = ? \quad -2 - 2$$

$$-4 = ? \quad -4 \qquad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $y = x - 2$.

18) $y = x + 1$; (2, 3), (-4, -3)

18) _____



Answer: Show that (2, 3) is a solution:

$$y = x + 1$$

$$3 = ? \quad 2 + 1$$

$$3 = ? \quad 3 \qquad \text{TRUE}$$

Show that (-4, -3) is a solution:

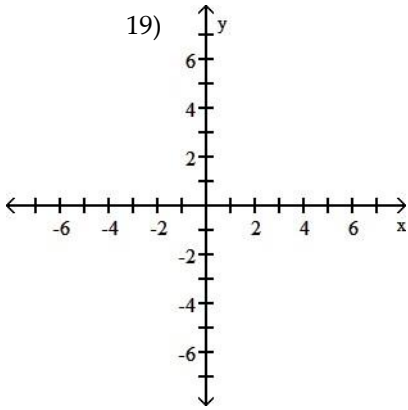
$$y = x + 1$$

$$-3 = ? \quad -4 + 1$$

$$-3 = ? \quad -3 \qquad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $y = x + 1$.

19) $y = \frac{1}{2}x + 3$; (4, 5), (-6, 0)



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Answer: Show that (4, 5) is a solution:

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

$$5 = ? \frac{1}{2}(4) + 3$$

$$5 = ? 2 + 3$$

$$5 = ? 5 \quad \text{TRUE}$$

Show that (-6, 0) is a solution:

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

$$0 = ? \frac{1}{2}(-6) + 3$$

$$0 = ? -3 + 3$$

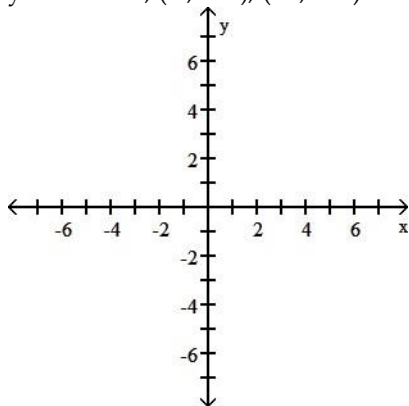
$$0 = ? 0 \quad \text{TRUE}$$

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

Coordinates of the additional solution may vary but should satisfy

20) $y = \frac{1}{2}x - 3; (2, -2), (-4, -5)$

20) _____



Answer: Show that (2, -2) is a solution:

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

$$-2 = ? \frac{1}{2}(2) - 3$$

$$-2 = ? 1 - 3$$

$$-2 = ? -2 \quad \text{TRUE}$$

Show that (-4, -5) is a solution:

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

$$-5 =? -2 - 3$$

$$-5 =? -5$$

TRUE

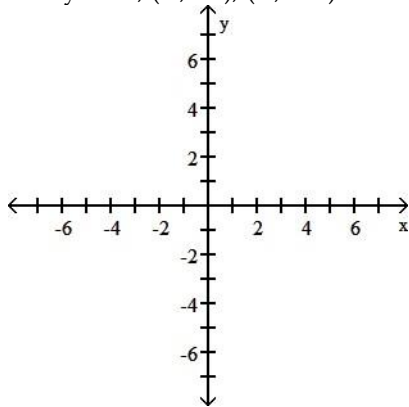
$$y = \frac{1}{2}x - 3.$$

$$-5 =? \frac{1}{2}(-4) - 3$$

Coordinates of the additional solution may vary but should satisfy

21) $2x + y = 7$; (2, 3), (6, -5)

21) _____



Answer: Show that (2, 3) is a solution:

$$2x + y = 7$$

$$2(2) + 3 =? 7$$

$$4 + 3 =? 7$$

$$7 =? 7 \quad \text{TRUE}$$

Show that (6, -5) is a solution:

$$2x + y = 7$$

$$2(6) + (-5) =? 7$$

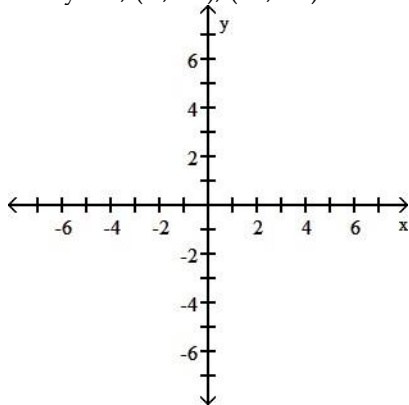
$$12 + (-5) =? 7$$

$$7 =? 7 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $2x + y = 7$.

22) $x + 2y = 8$; (4, 2), (-6, 7)

22) _____



Answer: Show that (4, 2) is a solution:

$$x + 2y = 8$$

$$4 + 2(2) =? 8$$

$$4 + 4 =? 8$$

$$8 =? 8 \quad \text{TRUE}$$

Show that (-6, 7) is a solution:

$$x + 2y = 8$$

$$-6 + 2(7) =? 8$$

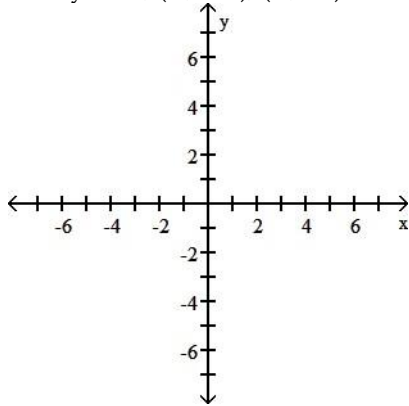
$$-6 + 14 =? 8$$

$$8 =? 8 \quad \text{TRUE}$$

Coordinates of the may vary but should satisfy $x + 2y = 8$.
 additional solution

23) $6x - 2y = 6$; $(0, -3), (3, 6)$

23) _____



Answer: Show that $(0, -3)$ is a solution:

$$6x - 2y = 6$$

$$6(0) - 2(-3) \quad =? \quad 6$$

$$0 - (-6) =? \quad 6$$

$$6 \quad =? \quad 6 \quad \text{TRUE}$$

Show that $(3, 6)$ is a solution:

$$6x - 2y = 6$$

$$6(3) - 2(6) \quad =? \quad 6$$

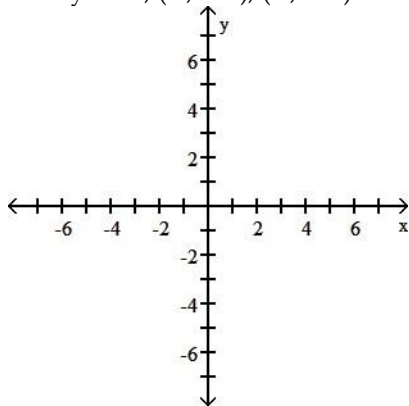
$$18 - 12 \quad =? \quad 6$$

$$6 \quad =? \quad 6 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $6x - 2y = 6$.

24) $3x - 3y = 9$; $(0, -3), (2, -1)$

24) _____



Answer: Show that $(0, -3)$ is a solution:

$$3x - 3y = 9$$

$$3(0) - 3(-3) \quad =? \quad 9$$

$$0 + 9 =? \quad 9$$

$$9 \quad =? \quad 9 \quad \text{TRUE}$$

Show that $(2, -1)$ is a solution:

$$3x - 3y = 9$$

$$3(2) - 3(-1) \quad =? \quad 9$$

$$6 - (-3) =? \quad 9$$

$$9 \quad =? \quad 9 \quad \text{TRUE}$$

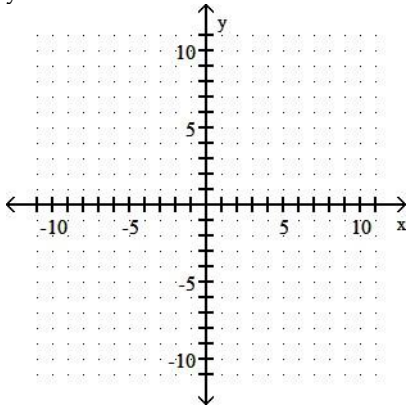
Coordinates of the additional solution may vary but should satisfy $3x - 3y = 9$.

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

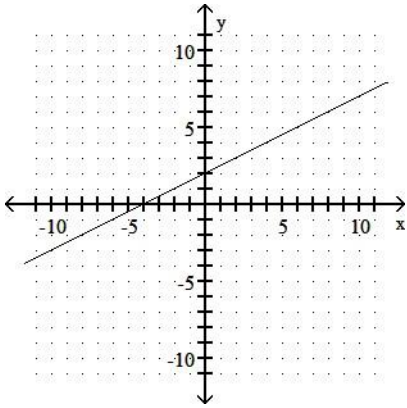
Graph the linear equation.

25) $y = 2x + 2$

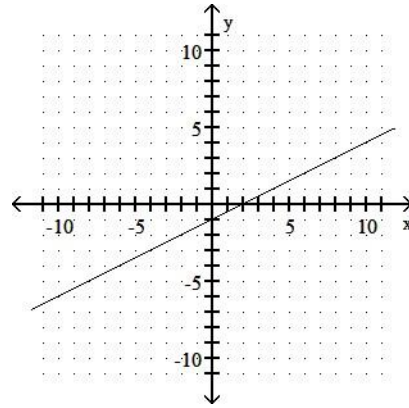
25) _____



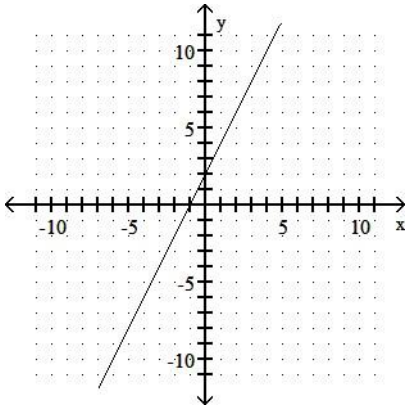
A)



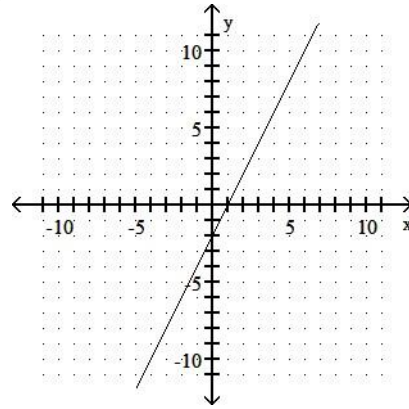
B)



C)



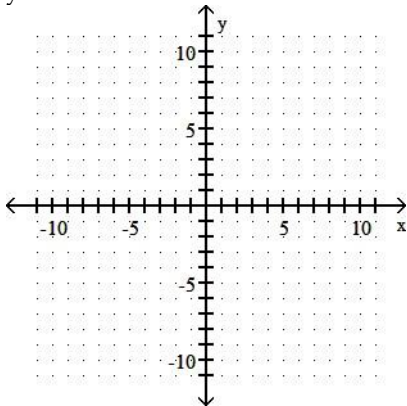
D)



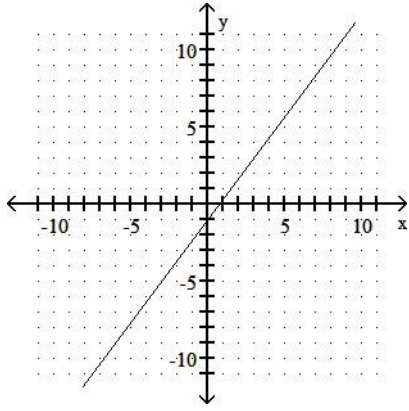
Answer: C

26) $y = \frac{4}{3}x - 1$

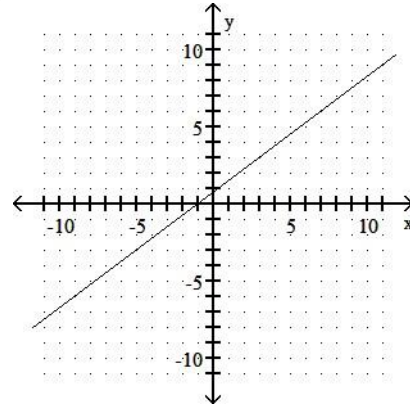
26) _____



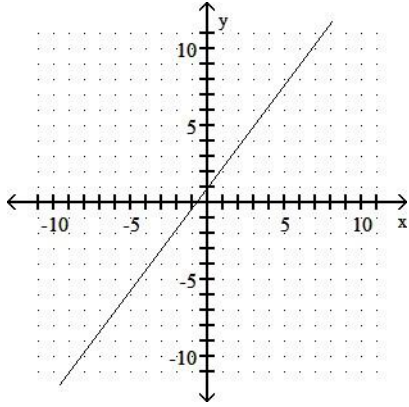
A)



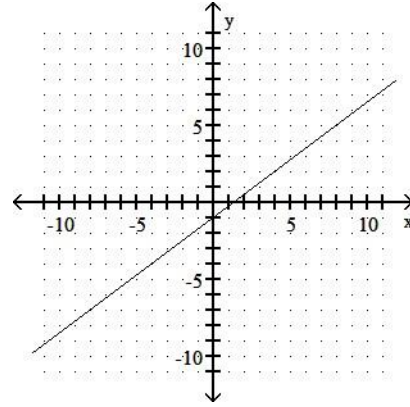
B)



C)



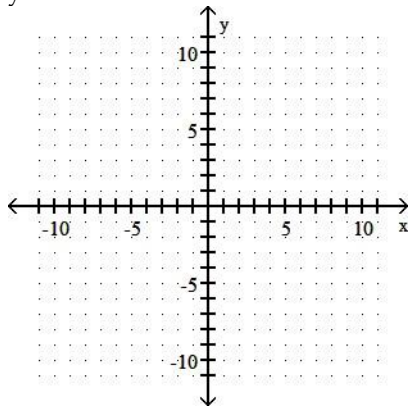
D)



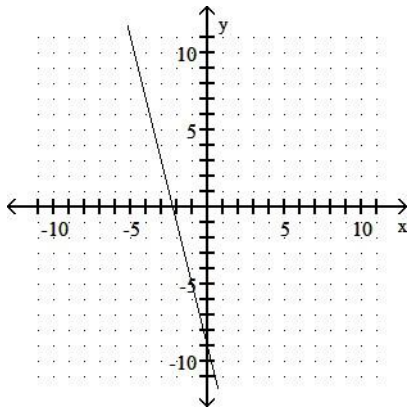
Answer: A

27) $y = -\frac{1}{4}x - \frac{9}{4}$

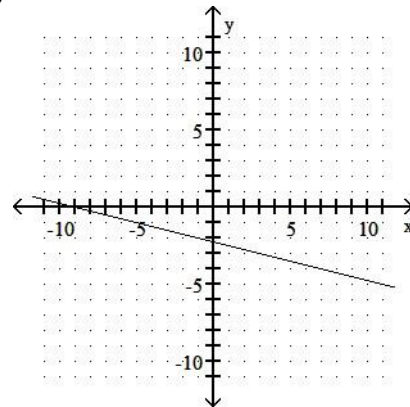
27) _____



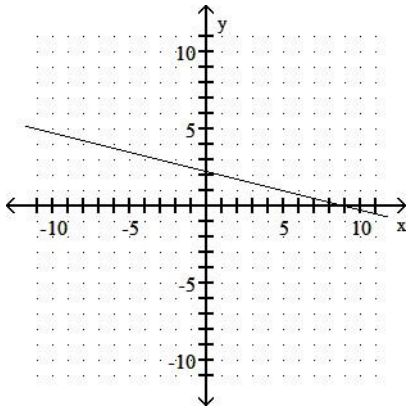
A)



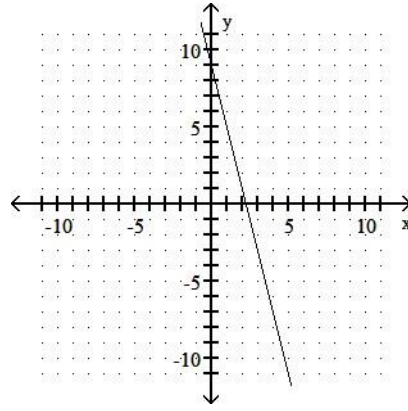
B)



C)



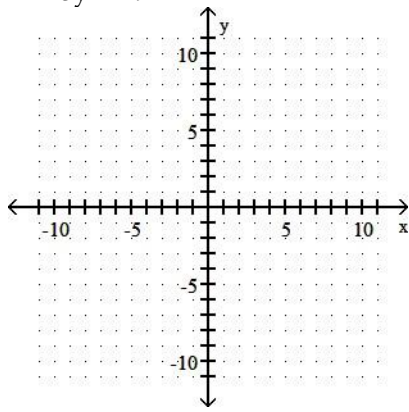
D)



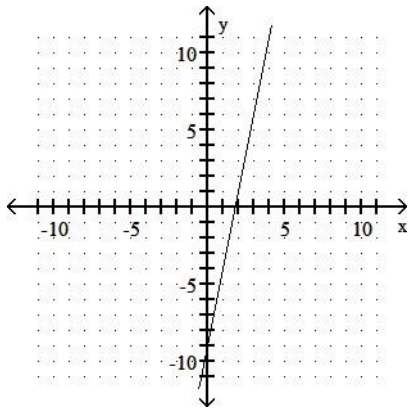
Answer: B

28) $x - 5y = 9$

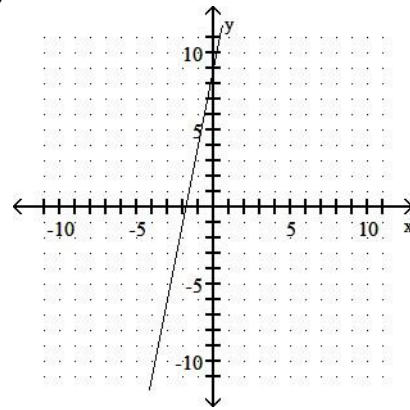
28) _____



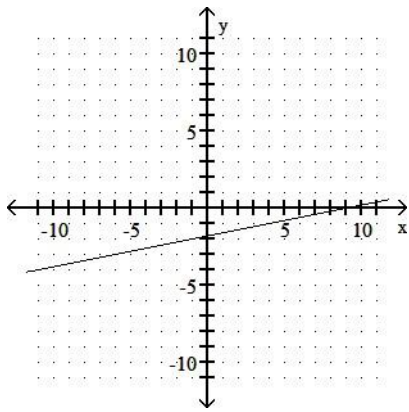
A)



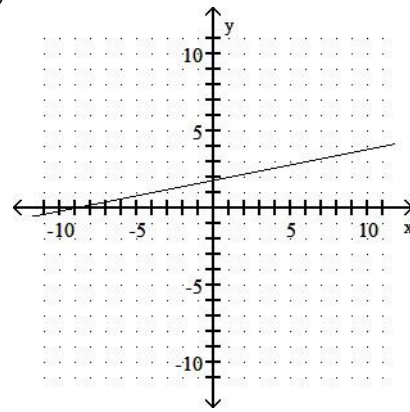
B)



C)



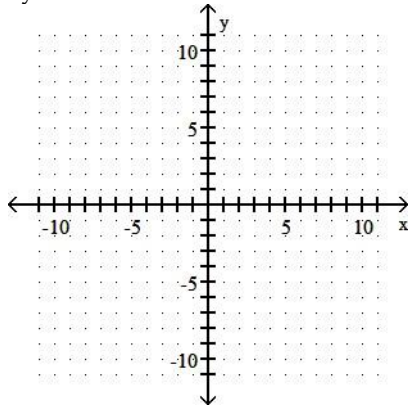
D)



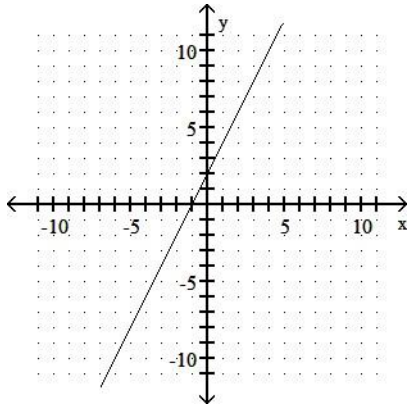
Answer: C

29) $4y - 8x = -8$

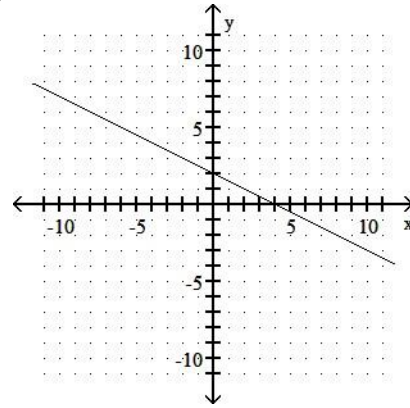
29) _____



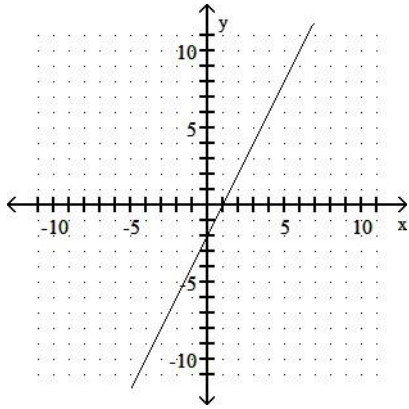
A)



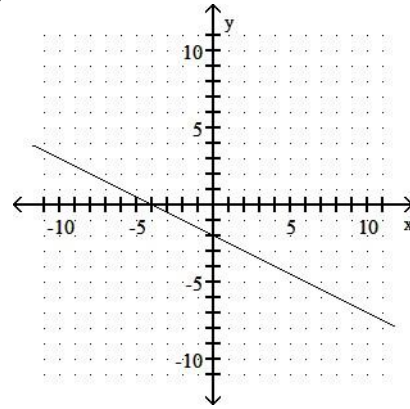
B)



C)



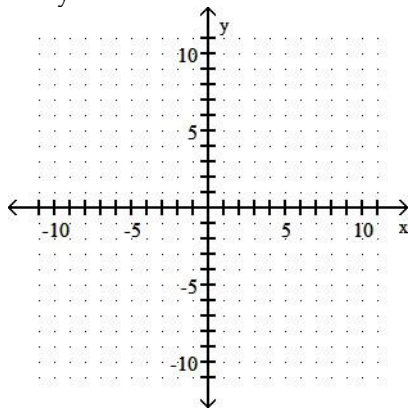
D)



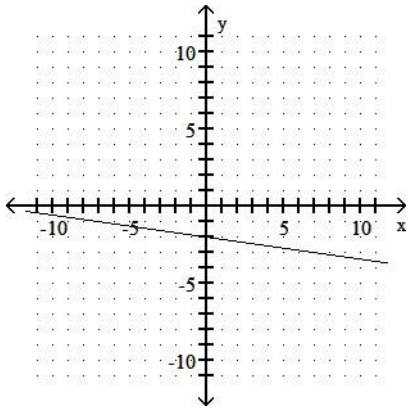
Answer: C

30) $7x - y = 2$

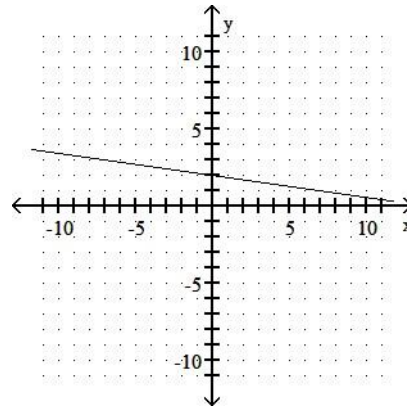
30) _____



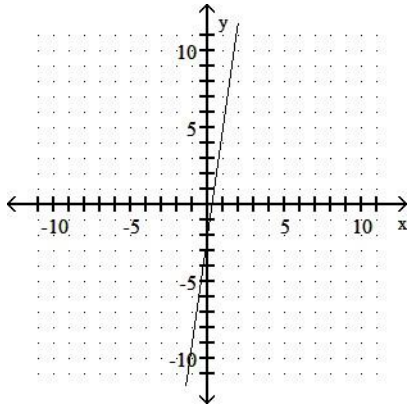
A)



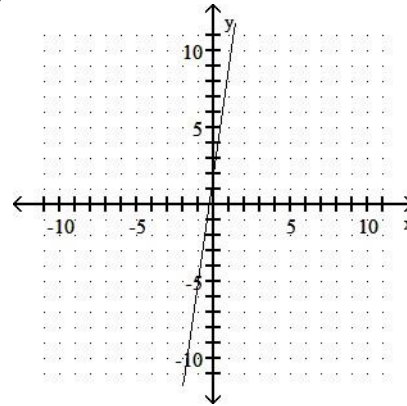
B)



C)



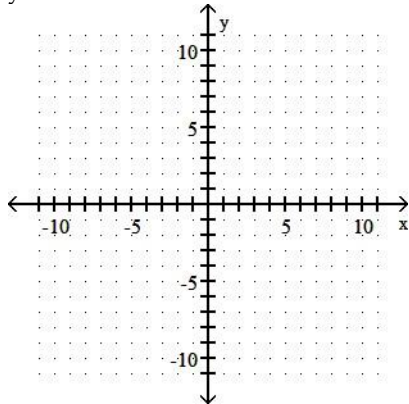
D)



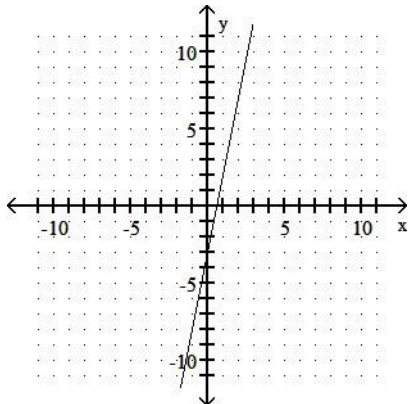
Answer: C

31) $y = \frac{1}{5}x - \frac{3}{5}$

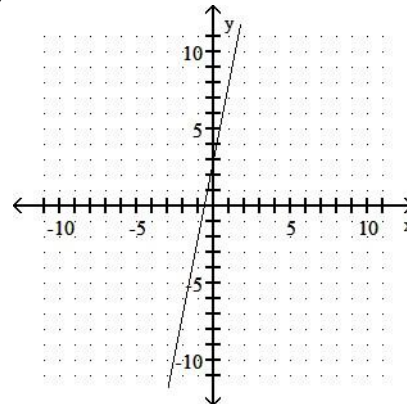
31) _____



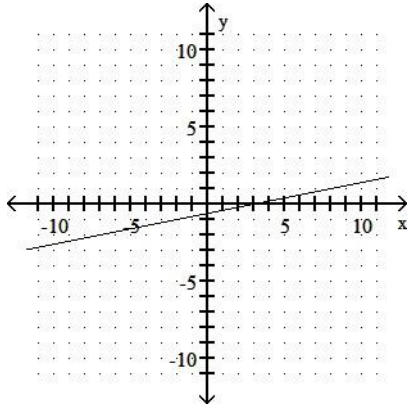
A)



B)

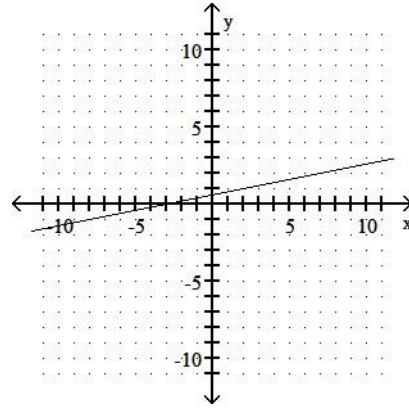


C)

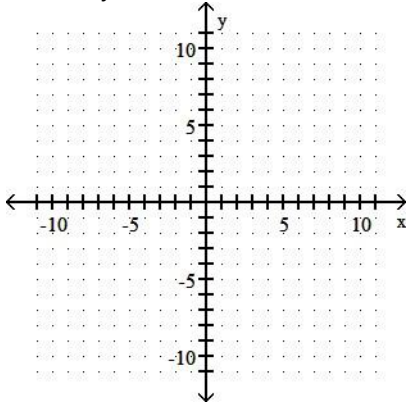


Answer: C

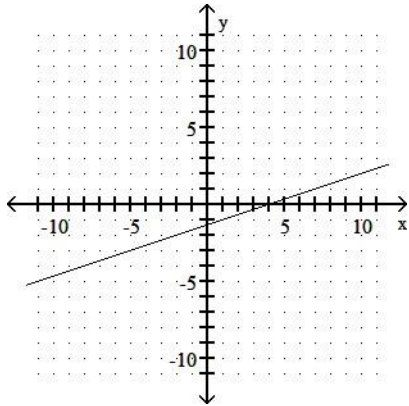
D)



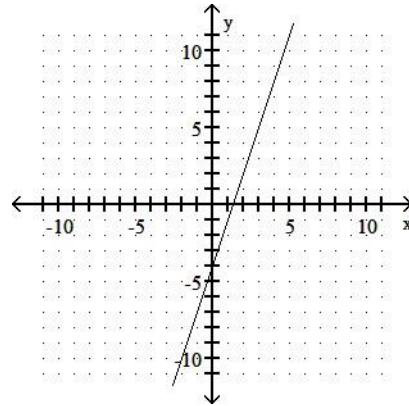
32) $-2x + 6y = 8$



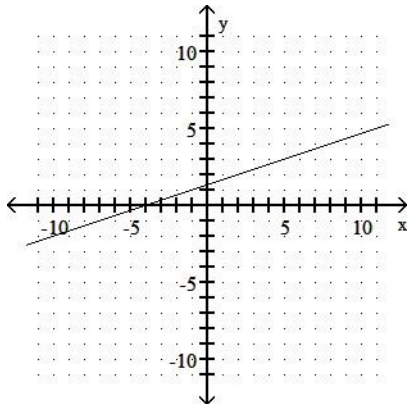
A)



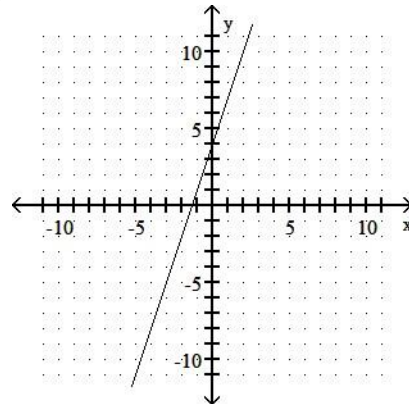
B)



C)



D)

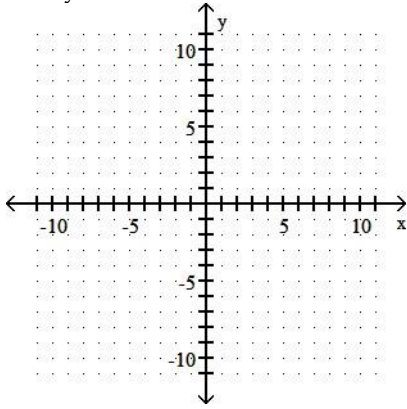


Answer: C

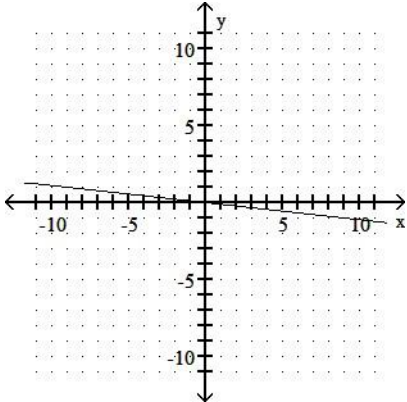
32) _____

33) $-9x - y = 0$

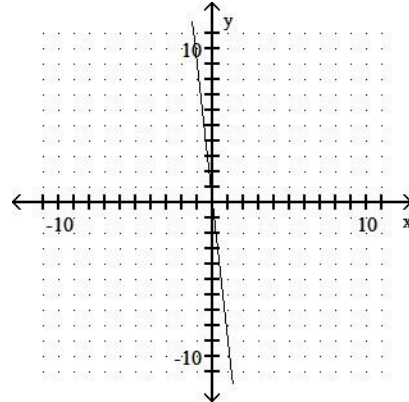
33) _____



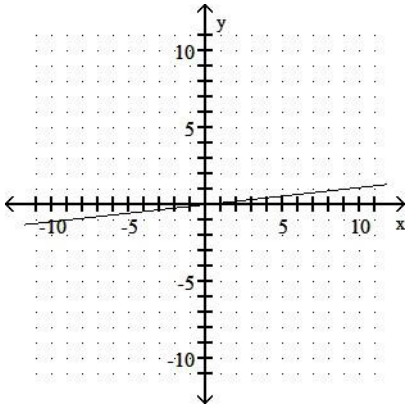
A)



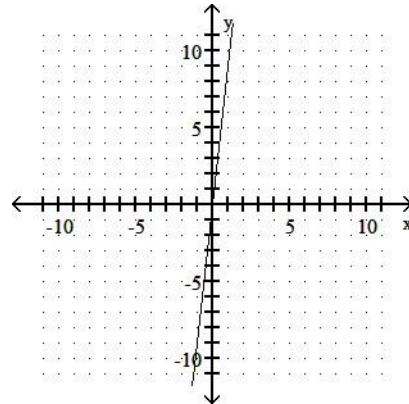
B)



C)



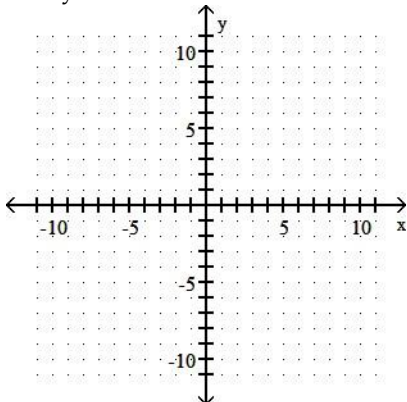
D)



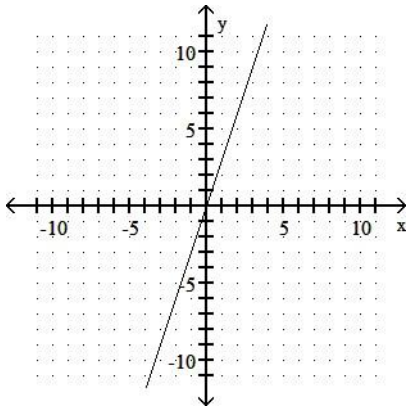
Answer: B

34) $3x + y = 0$

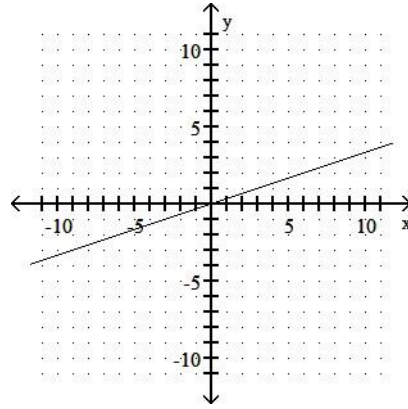
34) _____



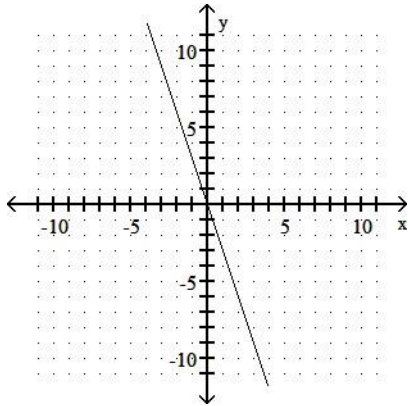
A)



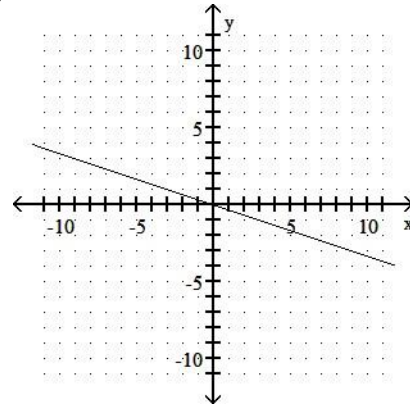
B)



C)



D)

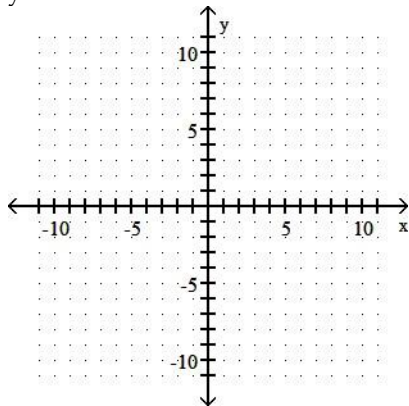


Answer: C

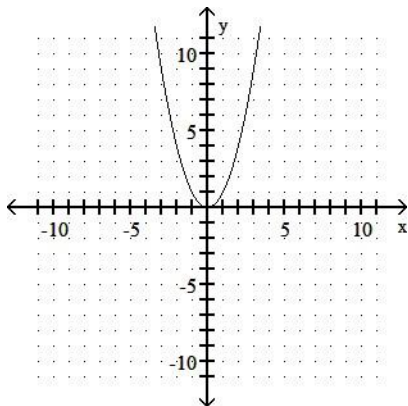
Graph.

35) $y = 2x^2$

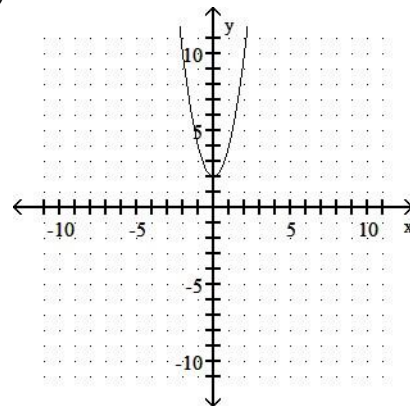
35) _____



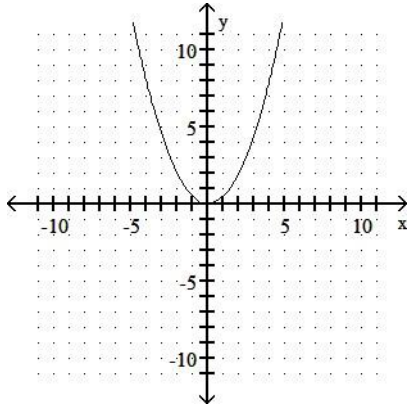
A)



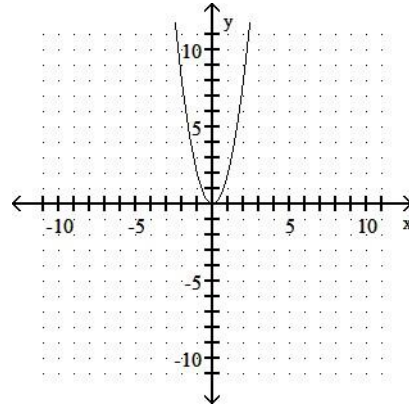
B)



C)



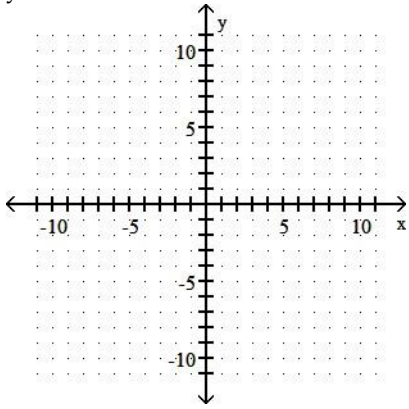
D)



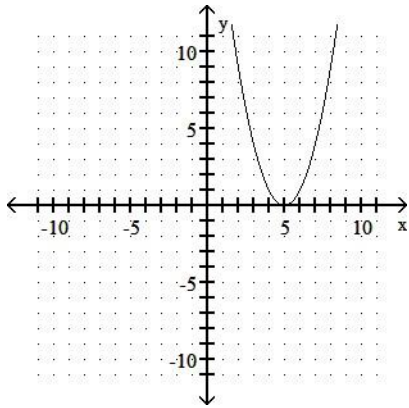
Answer: D

36) $y = x^2 - 5$

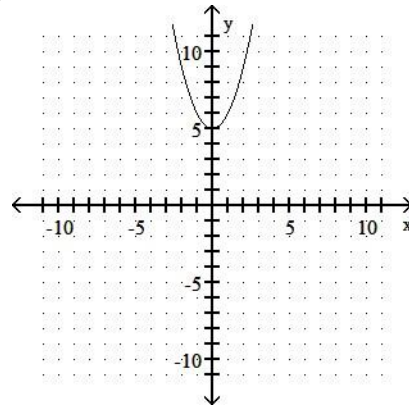
36) _____



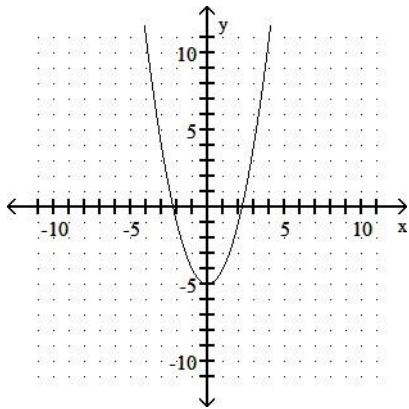
A)



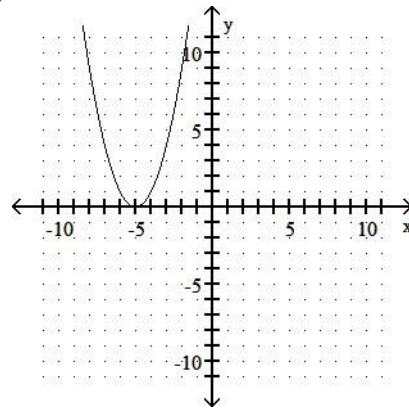
B)



C)



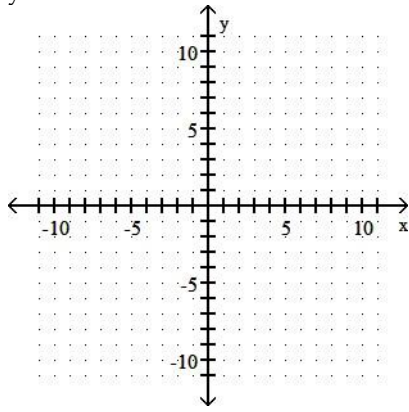
D)



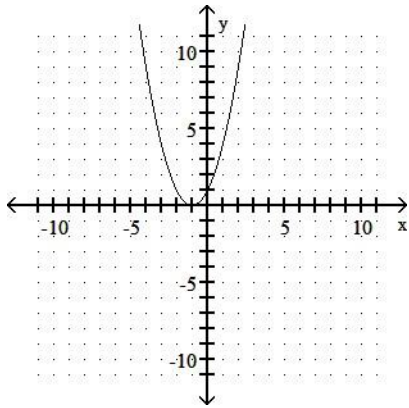
Answer: C

37) $y = -x^2 - 1$

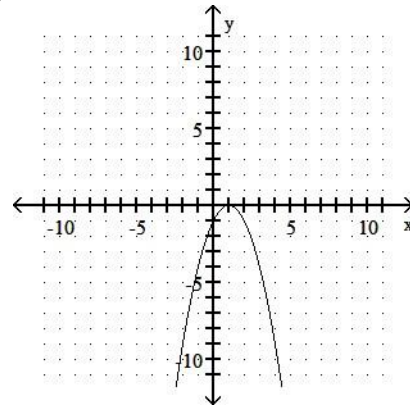
37) _____



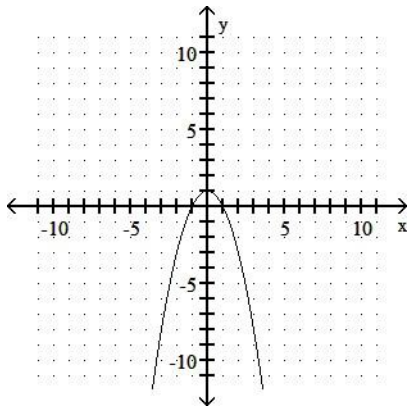
A)



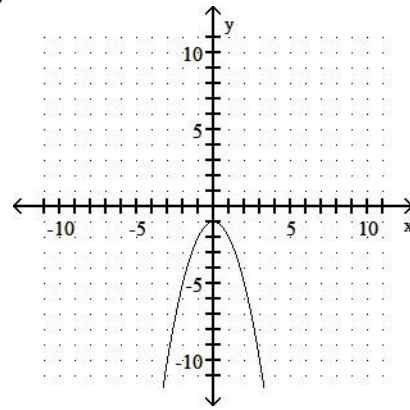
B)



C)



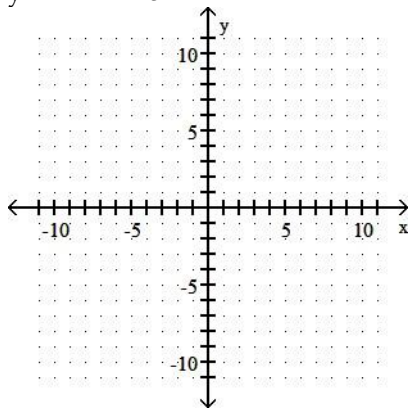
D)



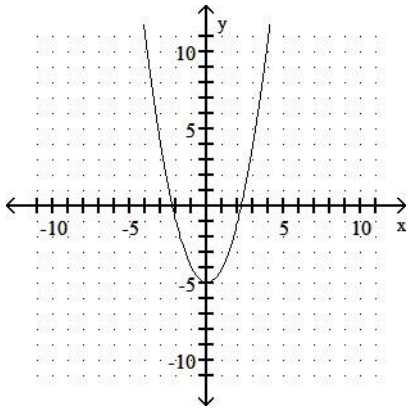
Answer: D

38) $y = 1x^2 - 5$

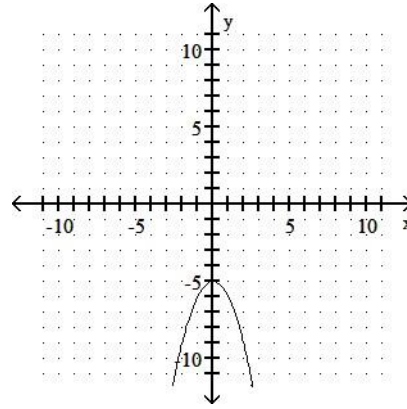
38) _____



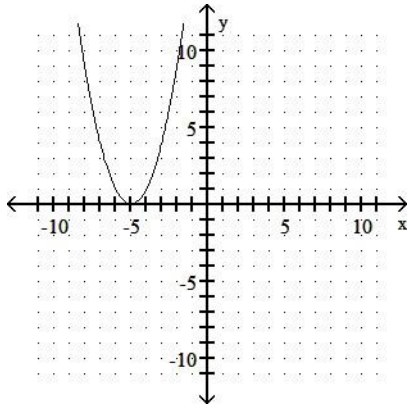
A)



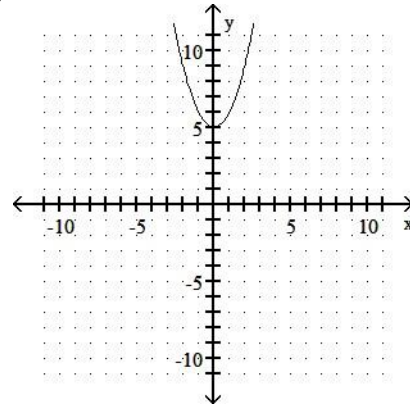
B)



C)



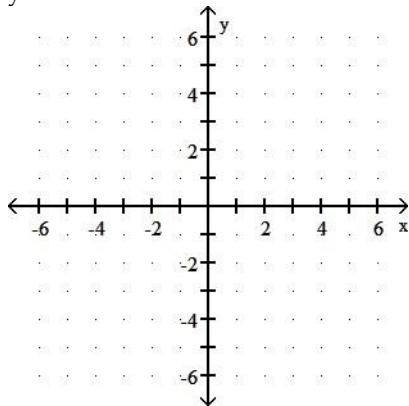
D)



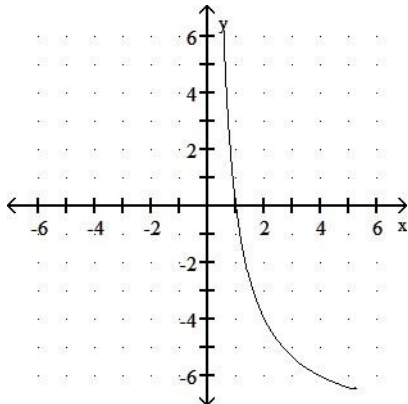
Answer: A

39) $y = \frac{8}{x}$

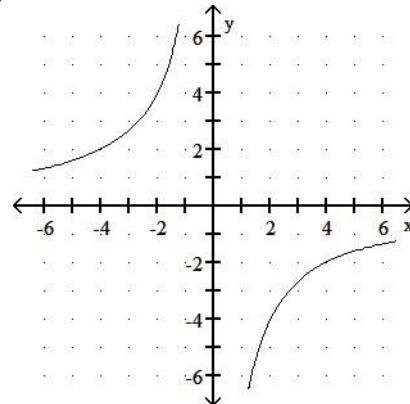
39) _____



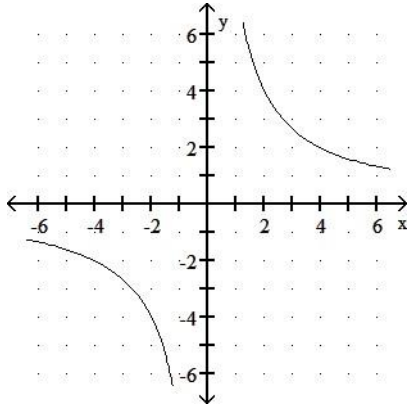
A)



B)

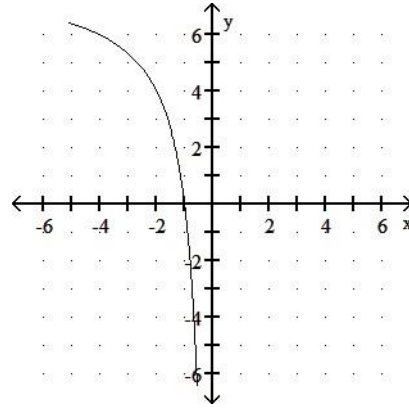


C)



Answer: C

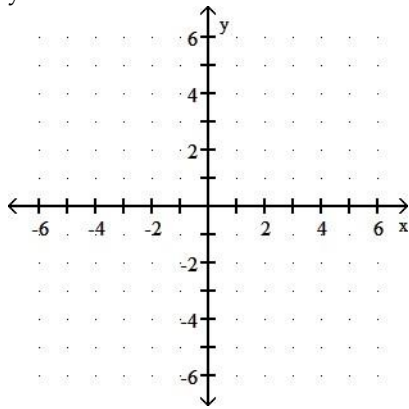
D)



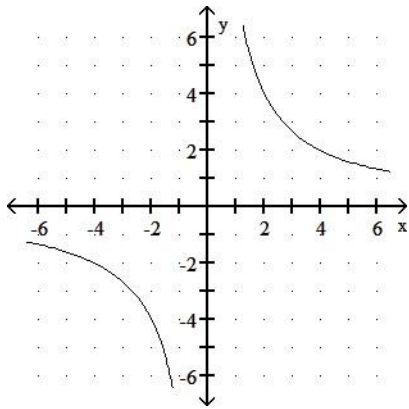
40)

$$y = -\frac{8}{x}$$

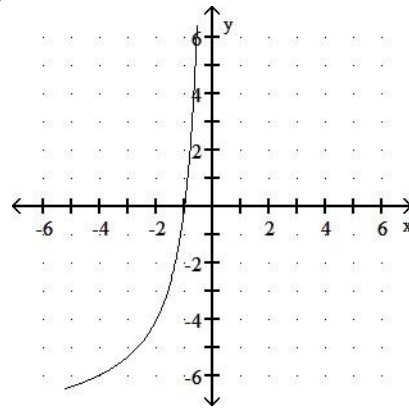
40) _____



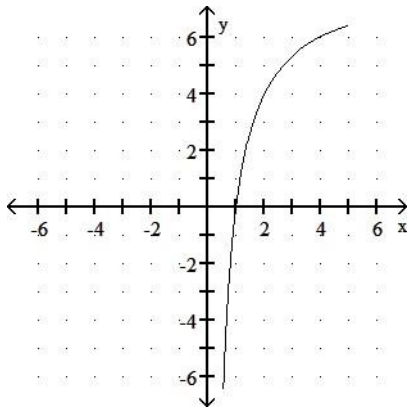
A)



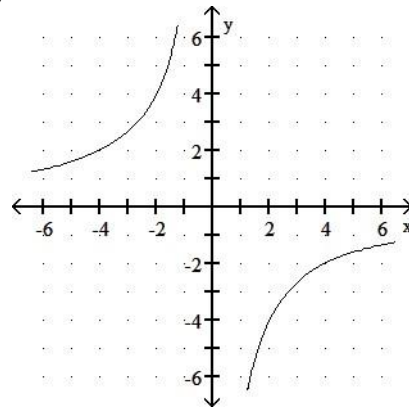
B)



C)



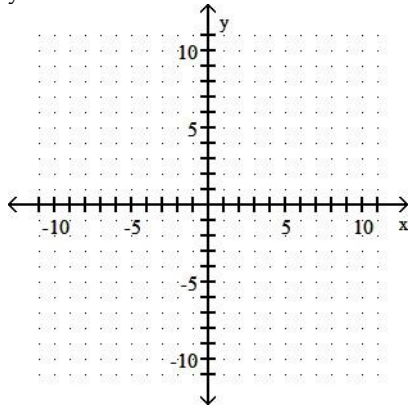
D)



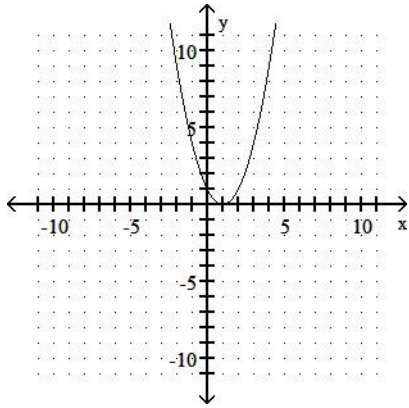
Answer: D

41) $y = |-1 - x|$

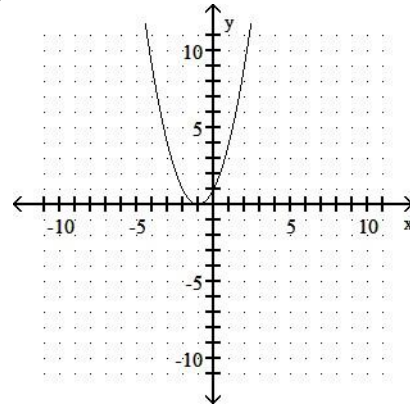
41) _____



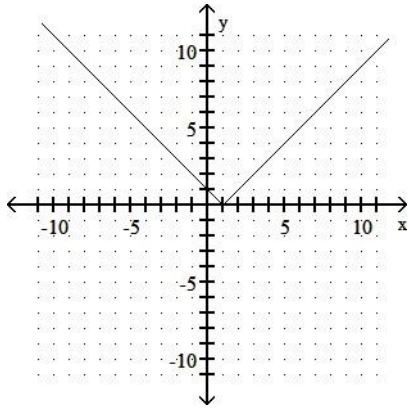
A)



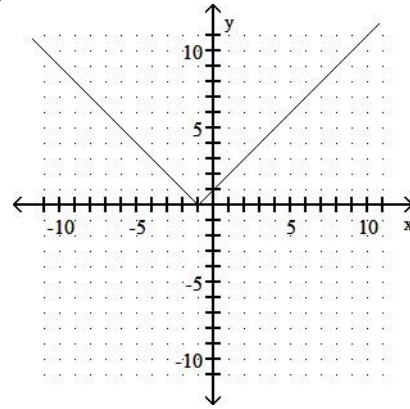
B)



C)



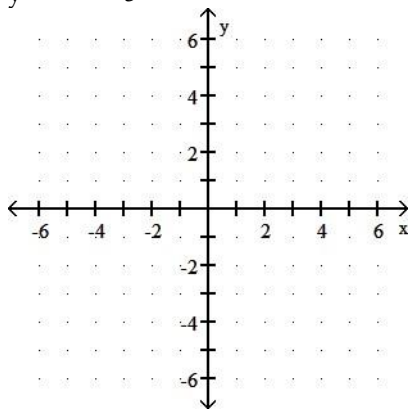
D)



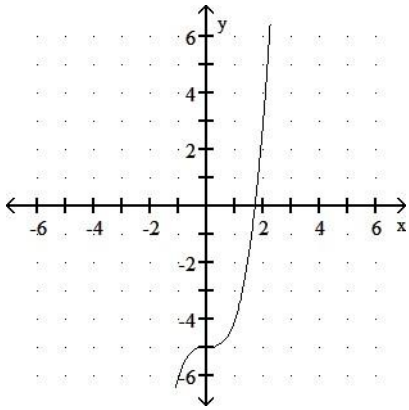
Answer: D

42) $y = x^3 - 5$

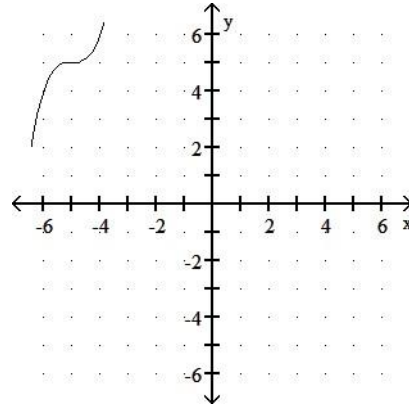
42) _____



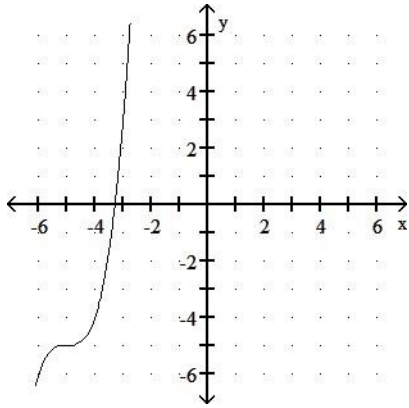
A)



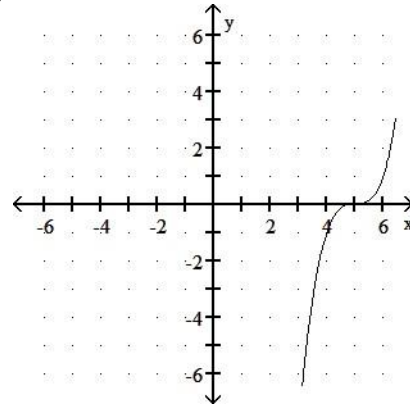
B)



C)



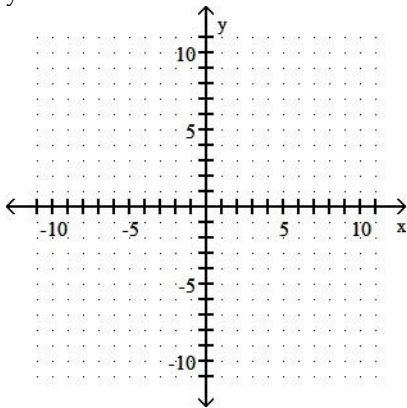
D)



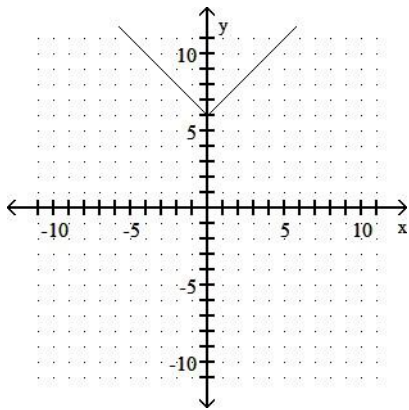
Answer: A

43) $y = |x| + 6$

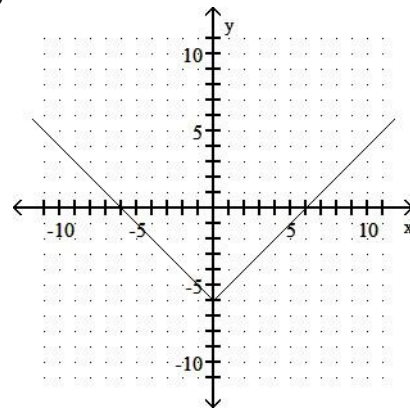
43) _____



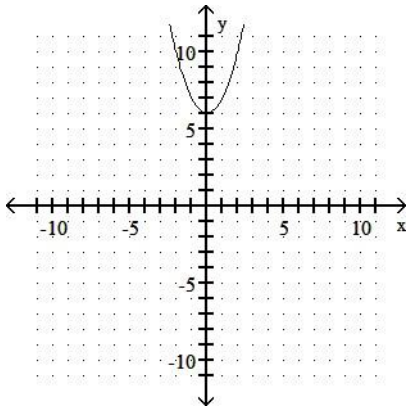
A)



B)

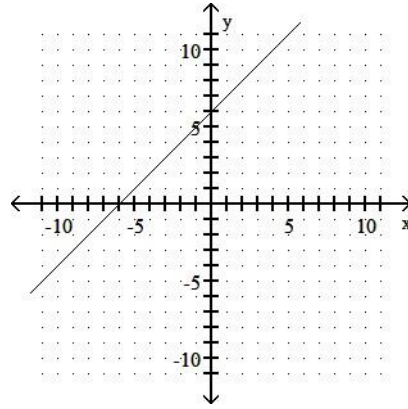


C)



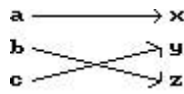
Answer: A

D)



Is the following correspondence a function?

44)

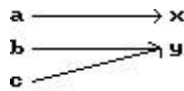


A) Yes
Answer: A

44) _____

B) No

45)

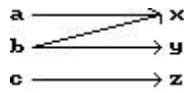


A) No
Answer: B

45) _____

B) Yes

46)

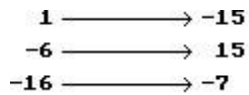


A) Yes
Answer: B

46) _____

B) No

47)

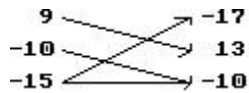


A) No
Answer: B

47) _____

B) Yes

48)

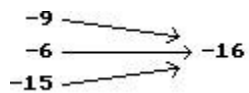


A) Yes
Answer: B

48) _____

B) No

49)



A) No

49) _____

B) Yes

Answer: B

50)



A) Yes

B) No

Answer: B

50) _____

51) Domain: All students attending Laughlin Community College

Correspondence: Each student's Social Security Number

Range: A set of Social Security Numbers

A) No

B) Yes

Answer: B

51) _____

52) Domain: All students attending the University of Ohio

Correspondence: Each student's teachers

Range: A set of teachers

A) No

B) Yes

Answer: A

52) _____

53)

Name	Test Score
Bob L.	83
Susan H.	83
Jim H.	76
Bruce B.	96

A) No

B) Yes

Answer: B

53) _____

Find the function value.

54) Find $f(2)$ when $f(x) = -x + 7$.

A) 2

B) 10

C) 5

D) -5

Answer: C

54) _____

55) Find $f(-7)$ when $f(x) = -5x - 29$.

A) -29

B) 4

C) 145

D) 6

Answer: D

55) _____

56) Find $f(-5)$ when $f(x) = 8x - 6$.

A) 46

B) -20

C) -46

D) -49

Answer: C

56) _____

57) Find $g(a + 1)$ when $g(x) = 2x + 1$.

A) $\frac{1}{2}a + 1$

B) $2a + 3$

C) $2a - 1$

D) $2a + 1$

Answer: B

57) _____

58) Find $f(3)$ when $f(x) = -4x$.

A) -4

B) 3

C) 4

D) -12

Answer: A

58) _____

59) Find $f(-3)$ when $f(x) = x^2 - 3x + 7$.

59) _____

- A) -7 B) 11 C) 7 D) 25
 Answer: D

- 60) Find $f(0)$ when $f(x) = x^2 + 3x + 5$. 60) _____
 A) -5 B) 5 C) 0 D) 25
 Answer: B

- 61) Find $f(2a)$ when $f(x) = 8x^2 + 5x$. 61) _____
 A) $16a^2 + 10a$ B) $32a^2 + 10a$ C) $8a^2 + 10a$ D) $32a^2 + 5a$
 Answer: B

- 62) Find $f(-3)$ when $f(x) = 3x^2 + 4x - 1$. 62) _____
 A) -4 B) 16 C) 14 D) 38
 Answer: C

- 63) Find $f(4)$ when $f(x) = |x + 1|$. 63) _____
 A) -5 B) -1 C) 5 D) 4
 Answer: C

- 64) Find $f(8)$ when $f(x) = x^3$. 64) _____
 A) 512 B) 6561 C) 24 D) 343
 Answer: A

- 65) Find $f(-3)$ when $f(x) = x^4 + -3$. 65) _____
 A) -84 B) 9 C) 78 D) 24
 Answer: C

Solve the problem.

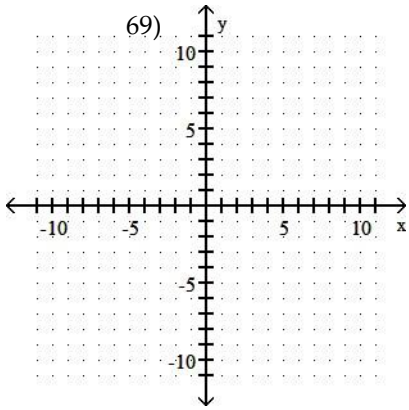
- 66) It has been determined that the number of fish $f(t)$ that can be caught in t minutes in a certain pond using a certain bait is $f(t) = .28t + 1$, for $t > 10$. Find the approximate number of fish that can be caught if you fish for 24 minutes. 66) _____
 A) About 16 fish B) About 28 fish C) About 26 fish D) About 7 fish
 Answer: D

- 67) $\frac{d}{33}$ 67) _____
 The function $P(d) = 1 + \frac{d}{33}$ gives the pressure, in atmospheres (atm), at a depth d feet in the sea. Find the pressure at 35 feet.
 A) $\frac{68}{33}$ atm B) $\frac{12}{11}$ atm C) $\frac{2}{33}$ atm D) $\frac{35}{33}$ atm
 Answer: A

- 68) $\frac{9}{5}$ 68) _____
 The function F described by $F(C) = \frac{9}{5}C + 32$ gives the Fahrenheit temperature corresponding to the Celsius temperature C . Find the Fahrenheit temperature equivalent to 20 °C.
 A) 176 °F B) 68 °F C) 104 °F D) 140 °F
 Answer: B

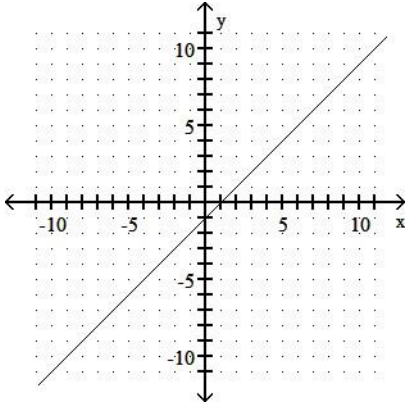
Graph the function.

- 69) $f(x) = x - 1$

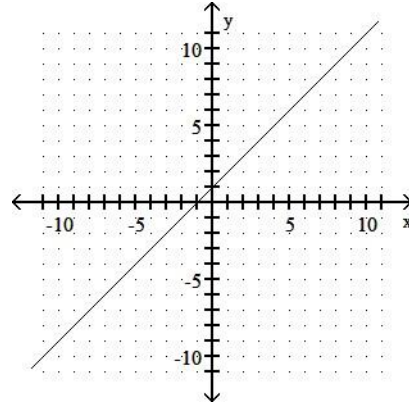


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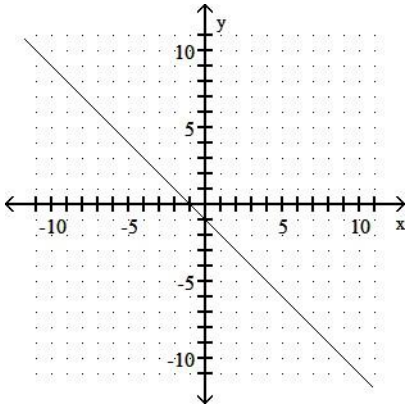
A)



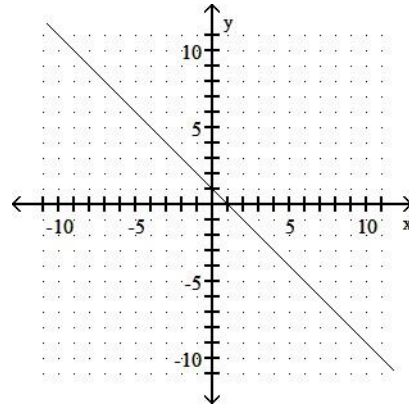
B)



C)



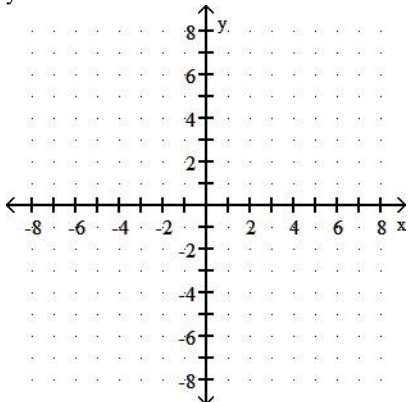
D)



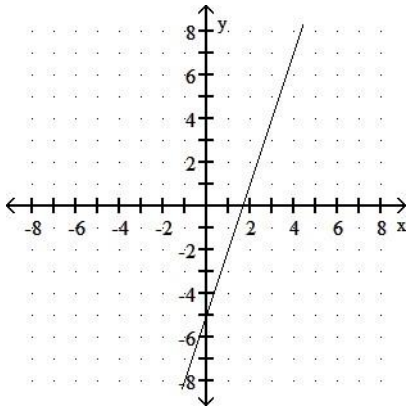
Answer: A

70) $y = -3x - 5$

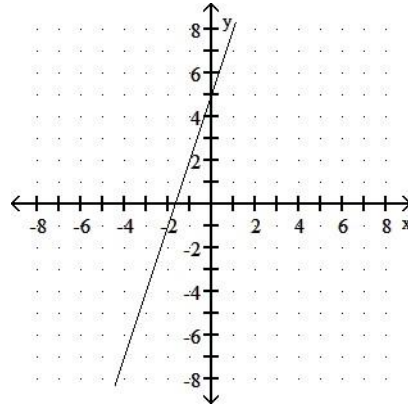
70) _____



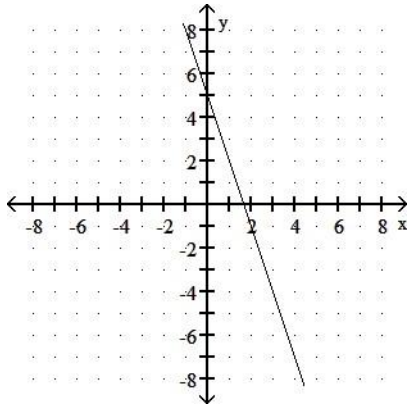
A)



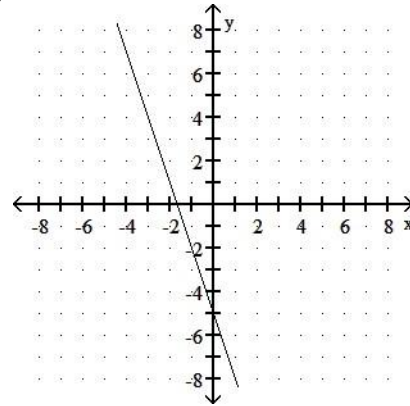
B)



C)



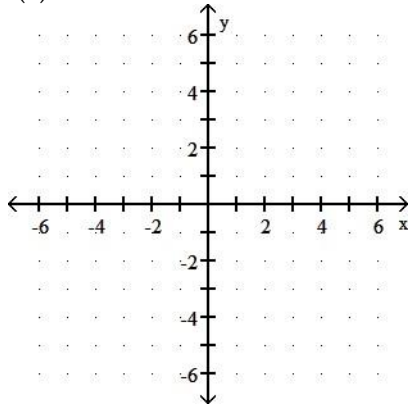
D)



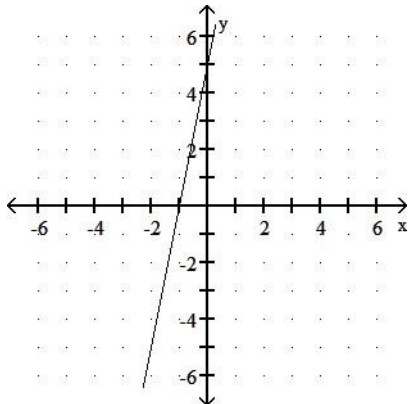
Answer: D

71) $f(x) = \frac{1}{5}x - 5$

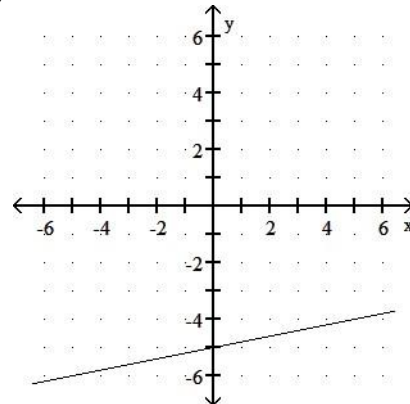
71) _____



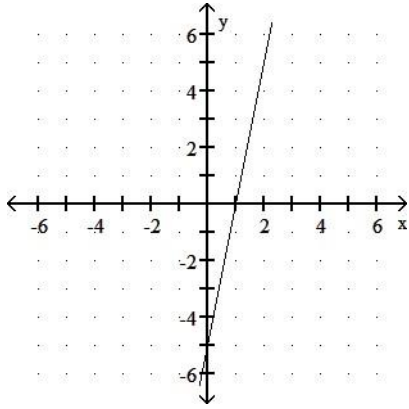
A)



B)

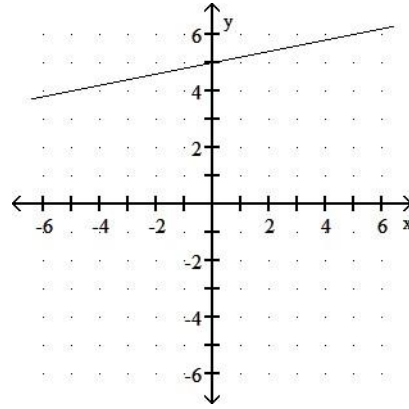


C)



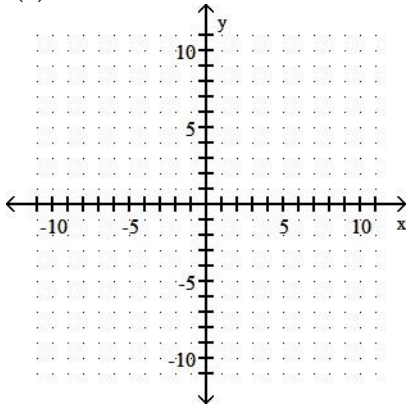
Answer: B

D)

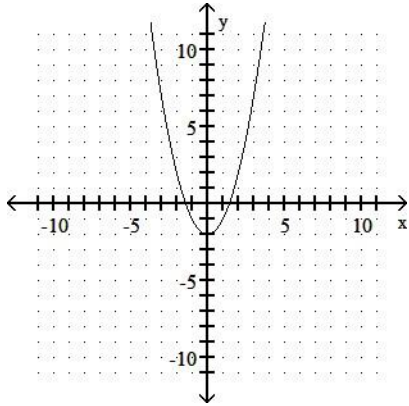


72) $f(x) = x^2 - 2$

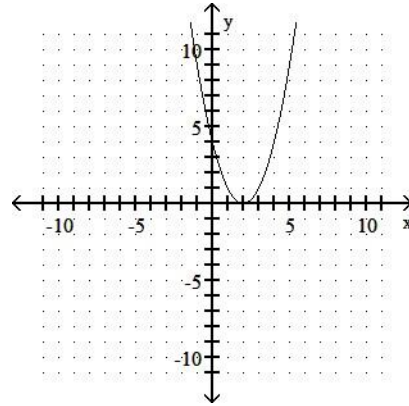
72) _____



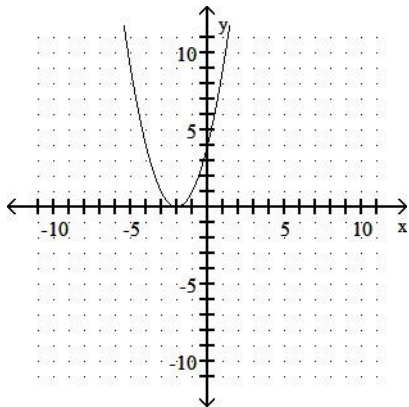
A)



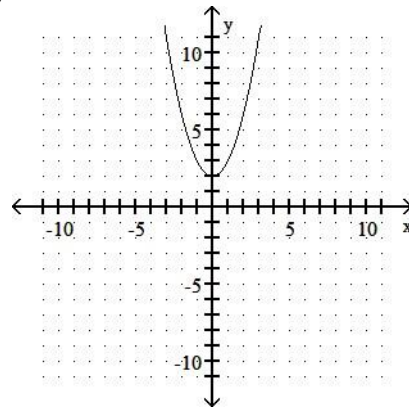
B)



C)



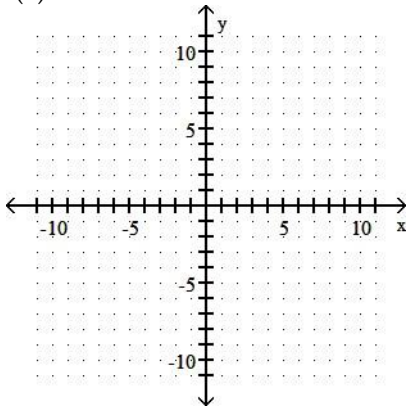
D)



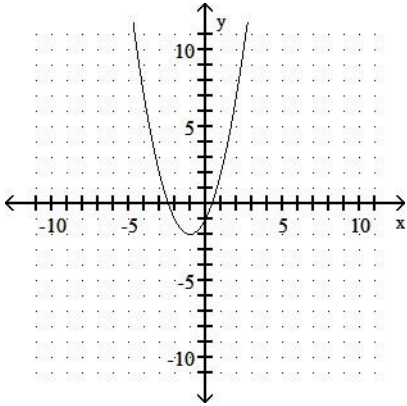
Answer: A

73) $f(x) = x^2 + 2x + 1$

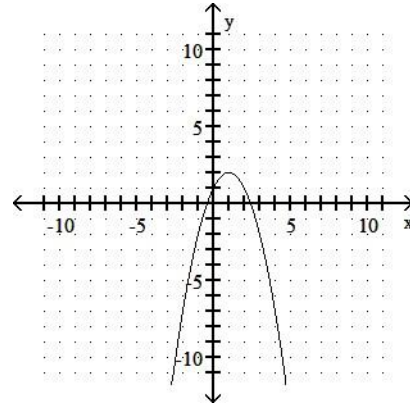
73) _____



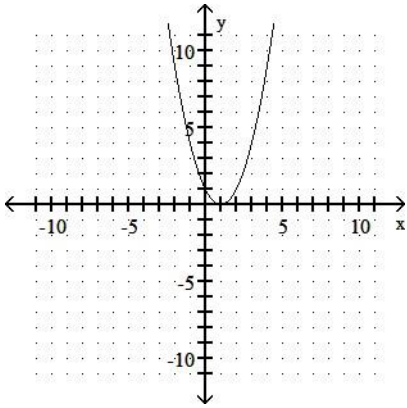
A)



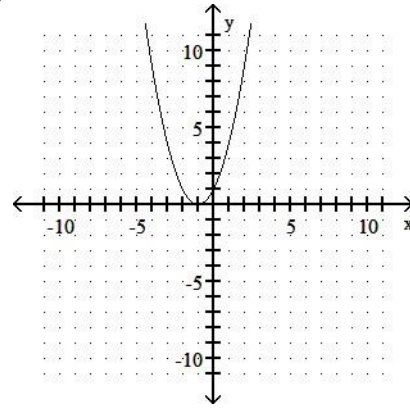
B)



C)



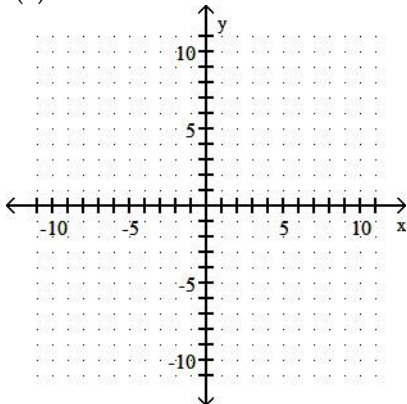
D)



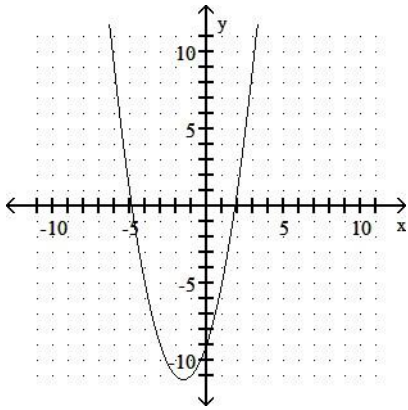
Answer: D

74) $f(x) = -x^2 - 3x - 9$

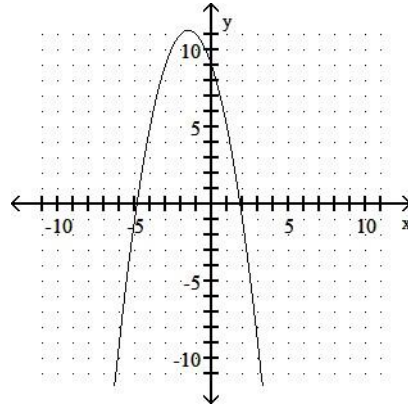
74) _____



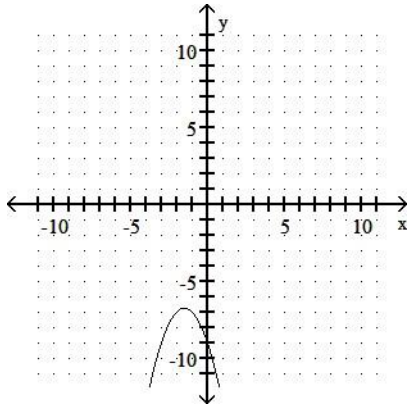
A)



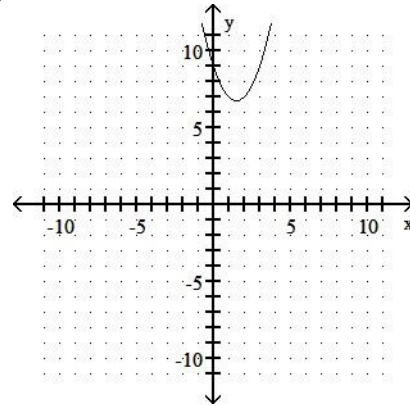
B)



C)



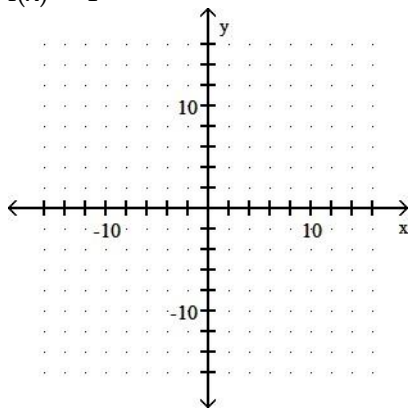
D)



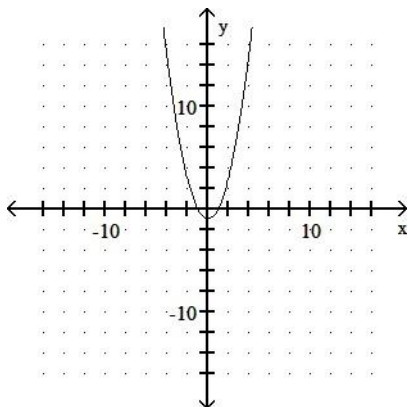
Answer: C

75) $f(x) = -1 - x^2$

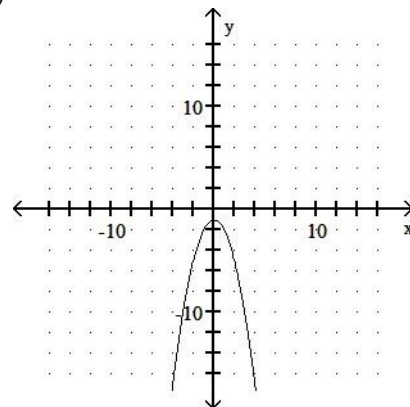
75) _____



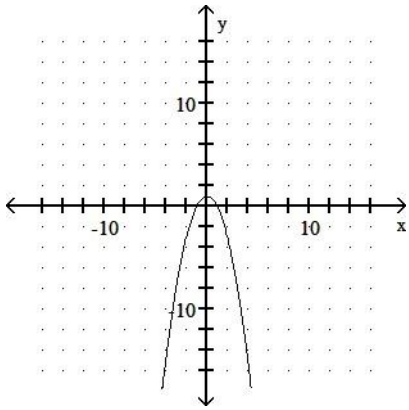
A)



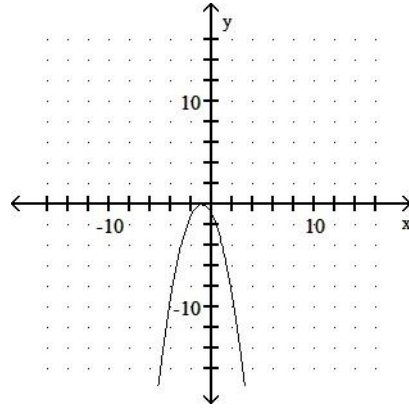
B)



C)



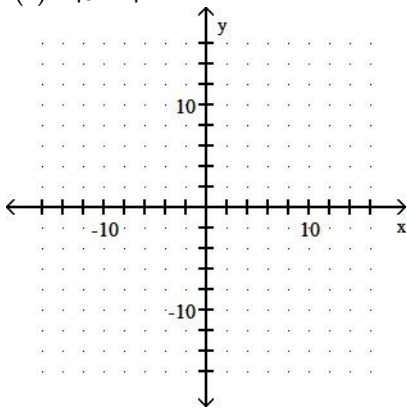
D)



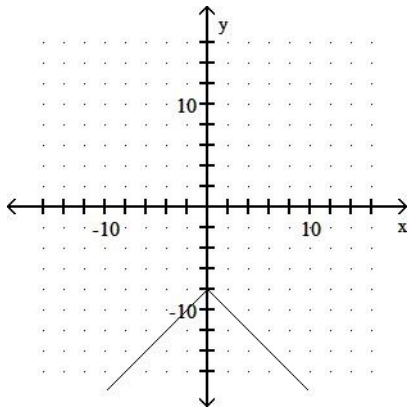
Answer: B

76) $f(x) = |8 - x|$

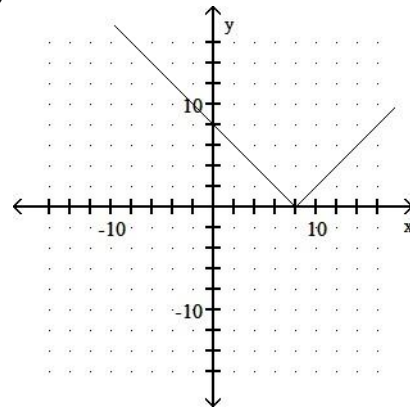
76) _____



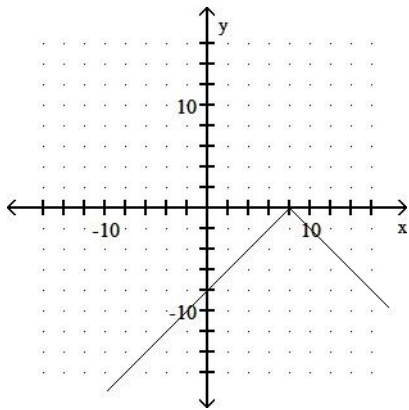
A)



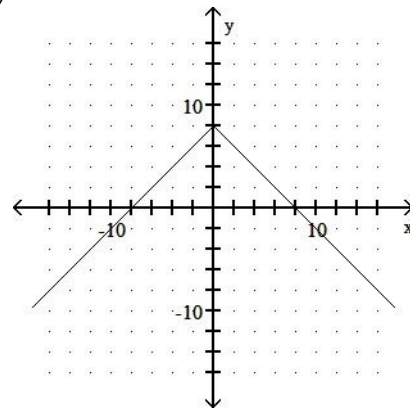
B)



C)



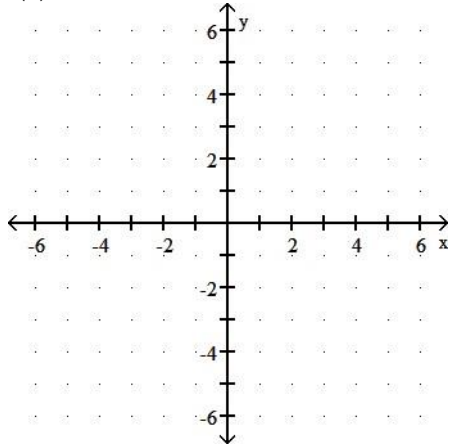
D)



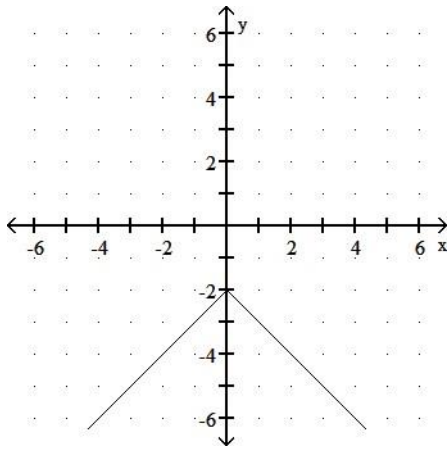
Answer: B

77) $f(x) = |x| + 2$

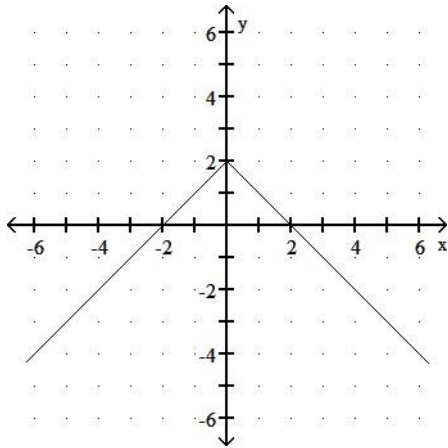
77) _____



A)

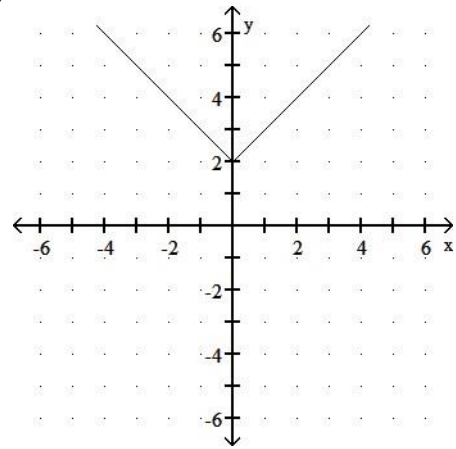


C)

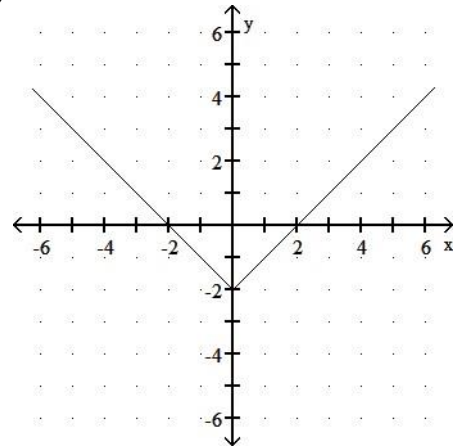


Answer: B

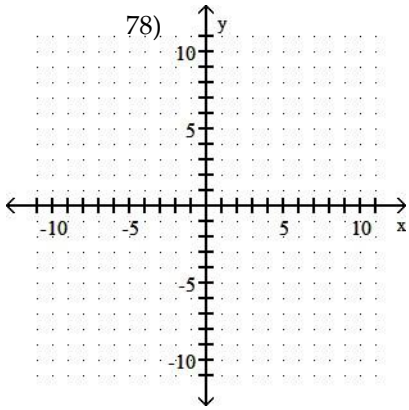
B)



D)

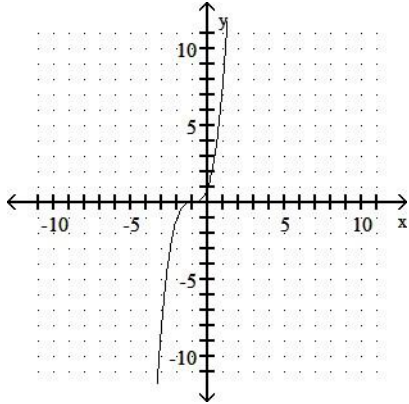


78) $f(x) = x^3 + 1$

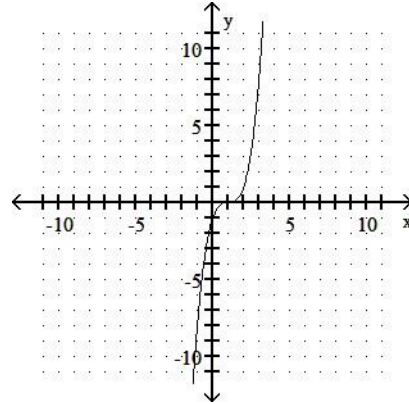


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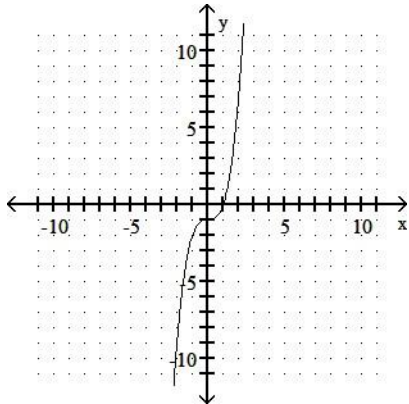
A)



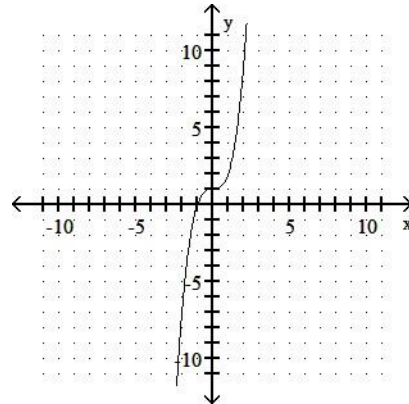
B)



C)



D)

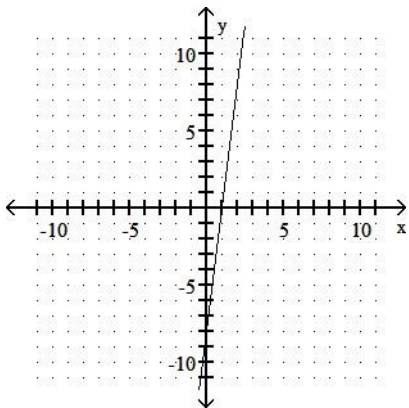


Answer: D

Determine whether the graph is the graph of a function.

79)

79) _____

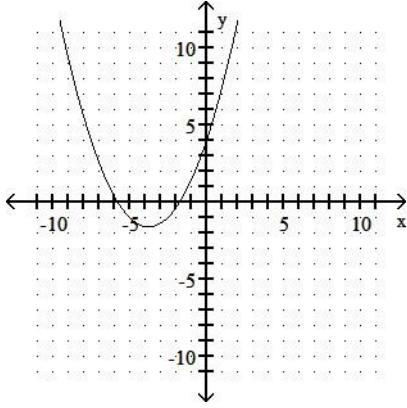


A) Not a function

B) Function

Answer: B

80)



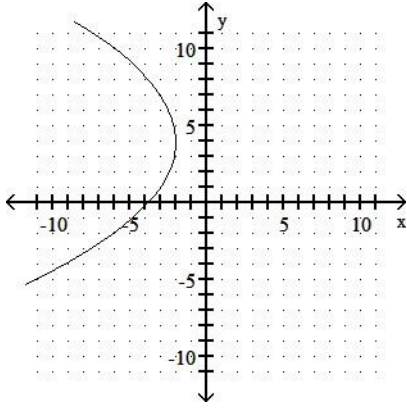
A) Not a function

B) Function

Answer: B

80) _____

81)



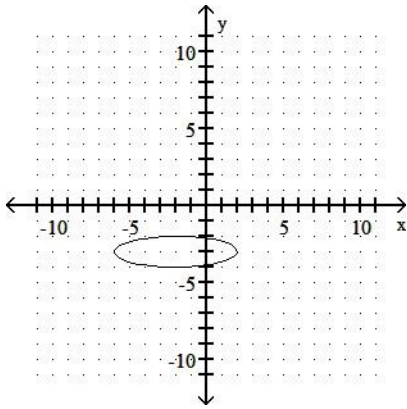
A) Not a function

B) Function

Answer: A

81) _____

82)



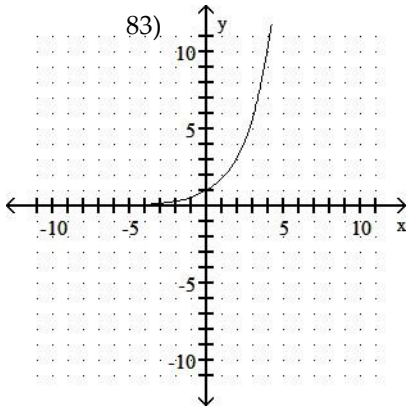
A) Function

B) Not a function

Answer: B

82) _____

83)

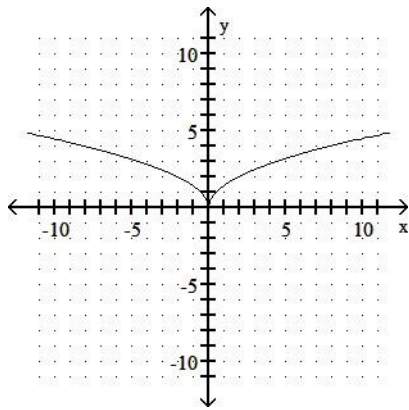


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A) Not a function
Answer: B

B) Function

84)



84) _____

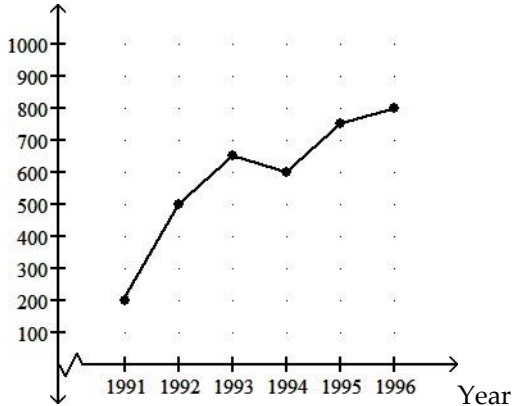
A) Not a function
Answer: B

B) Function

Solve.

85) Cars sold

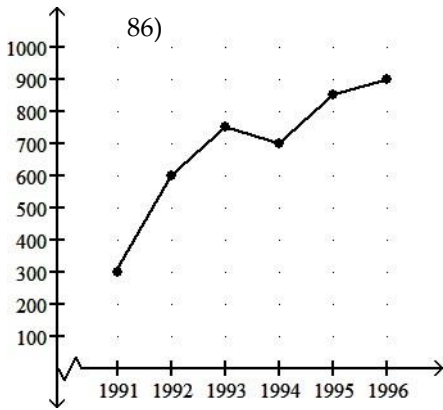
85) _____



Crafty Bill's Cool Car Sales opened as a used car sales lot in 1991. The graph shows the number of cars sold as a function of time. What is the approximate number of cars sold in 1993?

A) 500 cars B) 650 cars C) 600 cars D) 250 cars
Answer: B

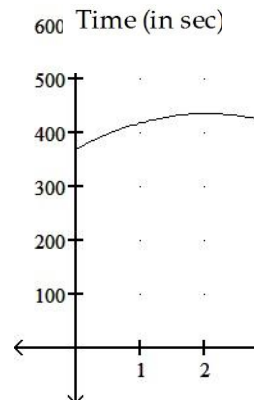
86) Cars sold



Year
 Crafty
 Bill's
 Cool Car
 Sales
 opened
 as a used
 car sales
 lot in
 1991. The
 graph
 shows
 the
 number
 of cars
 sold as a
 function
 of time.
 What is
 the
 approxi
 mate
 number
 of cars
 sold in
 1995?

- A) 800 cars B) 850 cars C) 600 cars D) 250 cars
- Answer: B

87) The height h in feet of a projectile thrown upward from the roof of a building after time t seconds is shown in the graph below. How high will the projectile be after 1.1 seconds?
 Height (in ft)

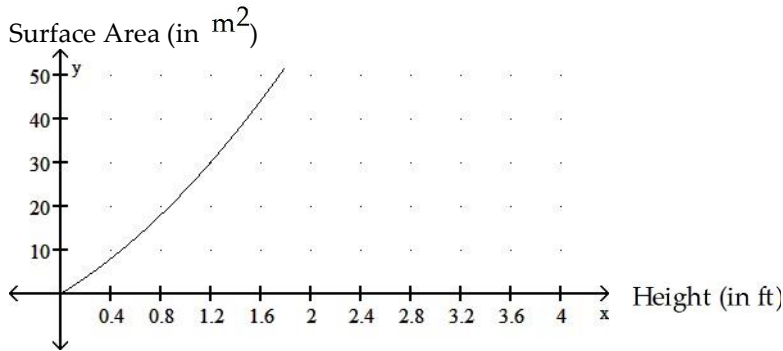


87)

- A) 450 ft B) 375 ft C) 400 ft D) 425 ft
 Answer: D

88) The surface area A of a cylinder is shown in the graph below. What is the radius if the surface area is 10 m^2 ?

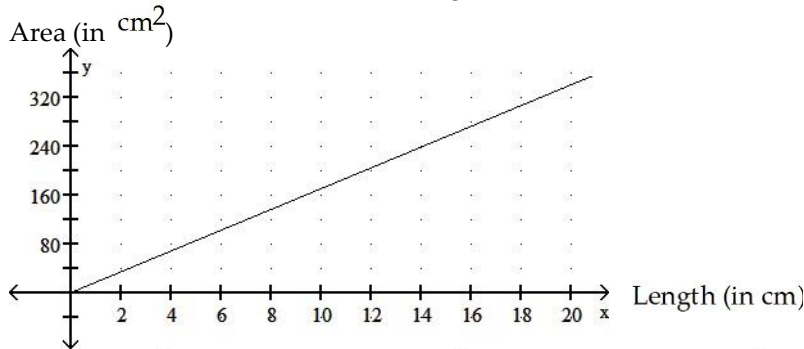
88) _____



- A) 0.4 m B) 0.6 m C) 0.0 m D) 0.2 m
 Answer: A

89) The graph shows the relationship between the area A of a rectangle and the length L , if the width is fixed. Find the area if the length is 17 cm .

89) _____

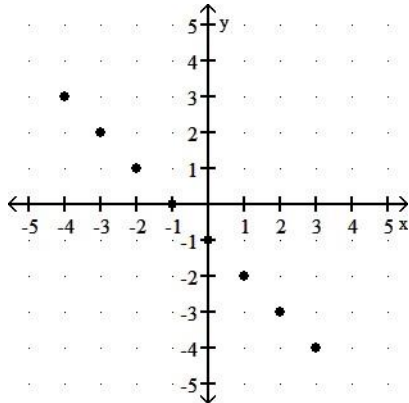


- A) 255 cm^2 B) 323 cm^2 C) 289 cm^2 D) 238 cm^2
 Answer: C

For the function represented in the graph, determine the domain or range, as requested.

90) Find the domain.

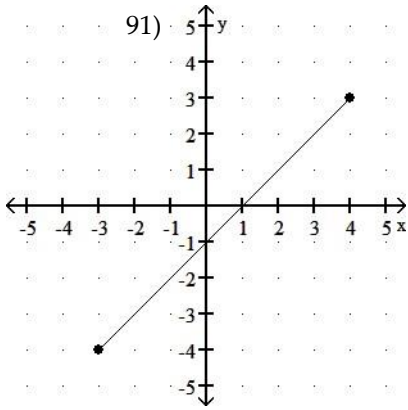
90) _____



- A) $\{-4, -3, -2, -1, 0, 1, 2, 3\}$ B) $\{-5, -4, -3, -2, -1, 0, 1, 2, 3\}$
 C) $[-4, 4]$ D) $[-2, 2]$

Answer: A

91) Find the domain.



A) $[-3, 4]$
 Answer: A

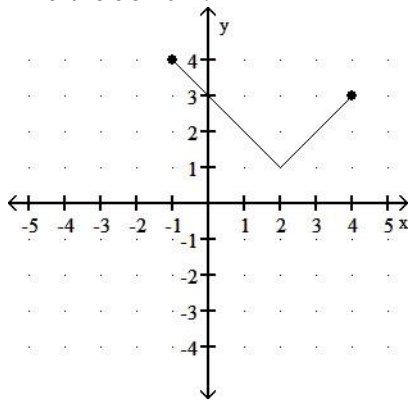
B) $[-5, 5]$

C) $[2, -2]$

D) $[-4, 5]$

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92) Find the domain.

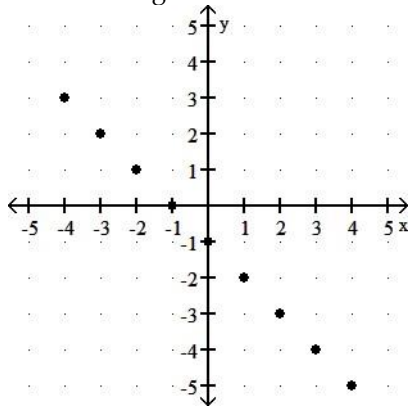


A) $[2, 4]$
 C) $[-1, 1]$
 Answer: B

B) $[-1, 4]$
 D) $\{-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5\}$

92) _____

93) Find the range.

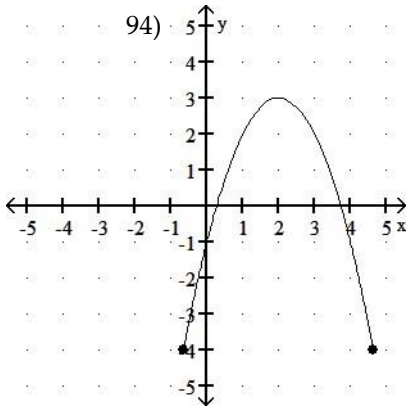


A) $[-3, 3]$
 C) $[-5, 3]$
 Answer: B

B) $\{-5, -4, -3, -2, -1, 0, 1, 2, 3\}$
 D) $\{-4, -3, -2, -1, 0, 1, 2, 3, 4\}$

93) _____

94) Find the range.



A) $[-2, 2]$
 Answer: D

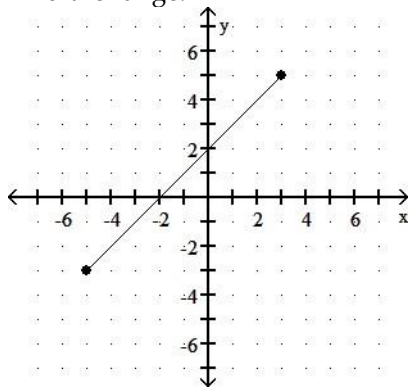
B) $[-0.65, 4.65]$

C) $[-5, 5]$

D) $[-4, 3]$

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 —

95) Find the range.

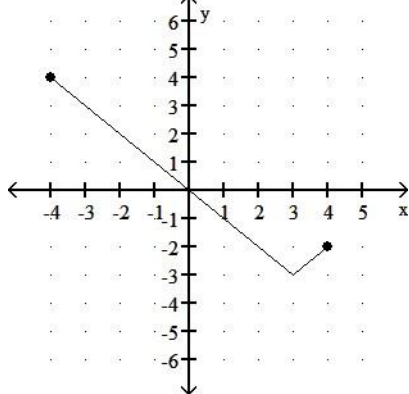


A) $[-5, 3]$
 C) $[-3, 5]$
 Answer: C

B) $[-5, 5]$
 D) $\{-3, -2, -1, 0, 1, 2, 3, 4, 5\}$

95) _____

96) Find the range.

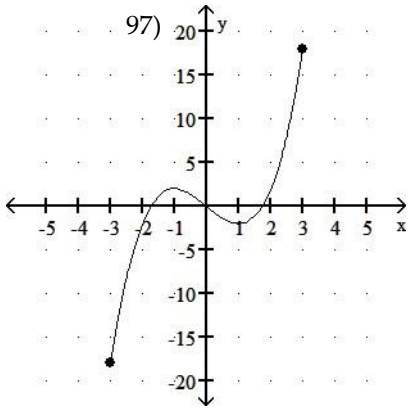


A) $\{-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5\}$
 C) $[-3, 3]$
 Answer: D

B) $[4, -2]$
 D) $[-3, 4]$

96) _____

97) Find the domain.

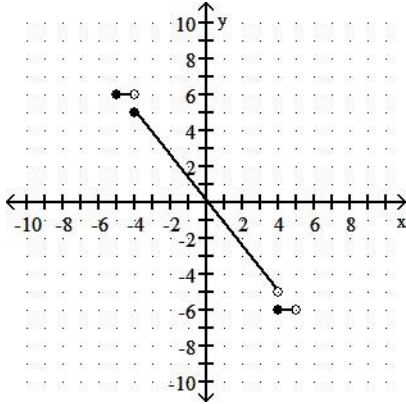


- A) $[-5, 5]$
 C) $[-18, 18]$
 Answer: B

- B) $[-3, 3]$
 D) all real numbers

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 —

98) Find the domain.



- A) $[-4, 4]$
 Answer: D

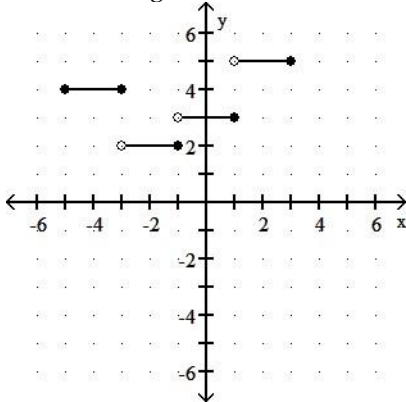
B) $[-5, 5]$

C) $(-5, 5)$

D) $[-5, 5)$

98) _____

99) Find the range.



- A) $\{2, 3, 4, 5\}$
 Answer: A

B) $\{-5, -3, -1, 1, 3\}$

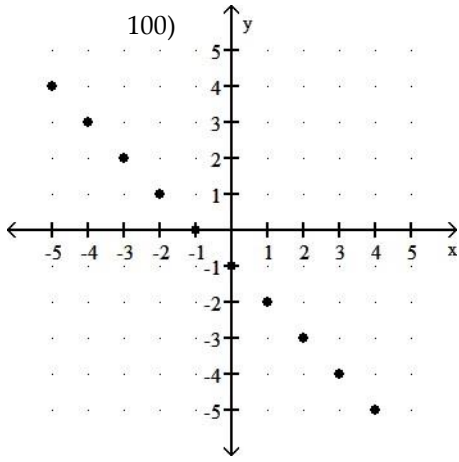
C) $[2, 5]$

D) $[-5, 3]$

99) _____

The graph of a function f is provided. Determine the requested function value.

100) $f(-2)$



A) -1
Answer: D

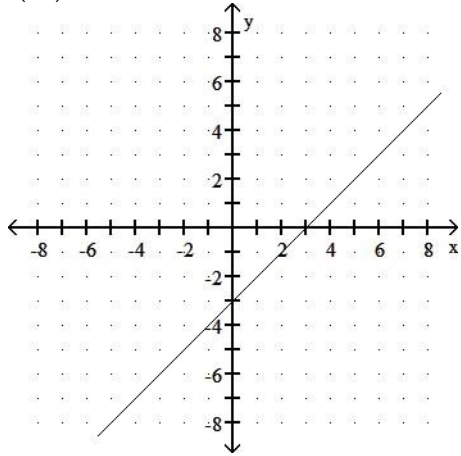
B) 3

C) -3

D) 1

—
—

101) $f(-1)$



A) 4
Answer: B

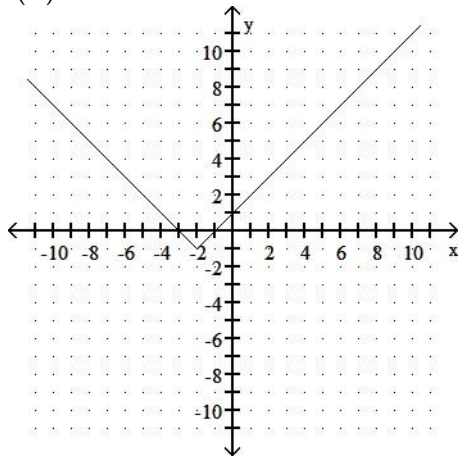
B) -4

C) -1

D) 2

101) _____

102) $f(4)$



A) 7
Answer: B

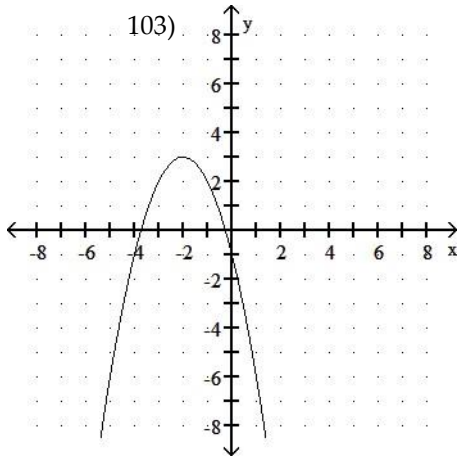
B) 5

C) 1

D) 3

102) _____

103) $f(-3)$



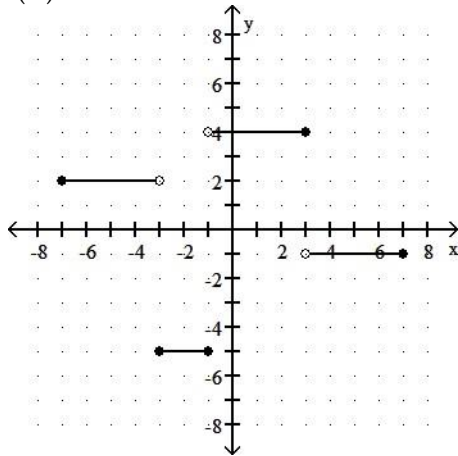
A) -6
Answer: C

B) -4

C) 2

D) 4

104) $f(1)$



A) 4
Answer: A

B) -1

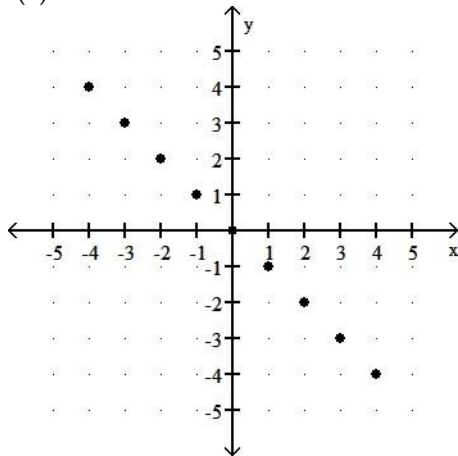
C) 1

D) -5

104) _____

A function f is depicted in the graph. Find any input values that produce the indicated output.

105) $f(x) = -2$



A) -2
Answer: D

B) 4

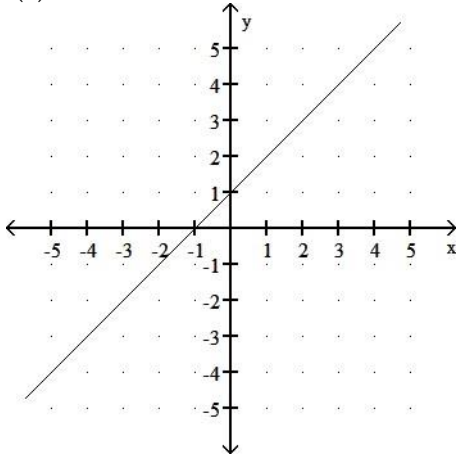
C) 3

D) 2

105) _____

106) $f(x) = 3$

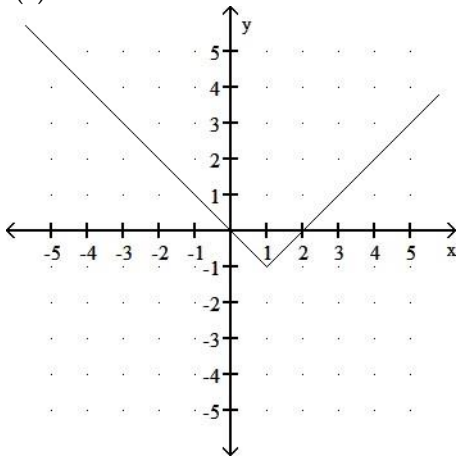
106) _____



- A) 4 B) -2 C) 2 D) -1
- Answer: C

107) $f(x) = 2$

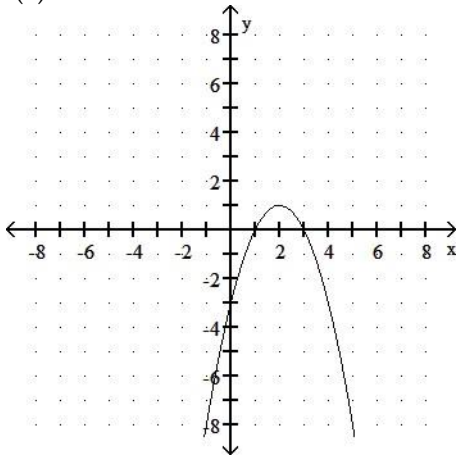
107) _____



- A) $x = -2$ B) $x = 2$ and $x = -4$ C) $x = 2$ and $x = 0$ D) $x = -2$ and $x = 4$
- Answer: D

108) $f(x) = 0$

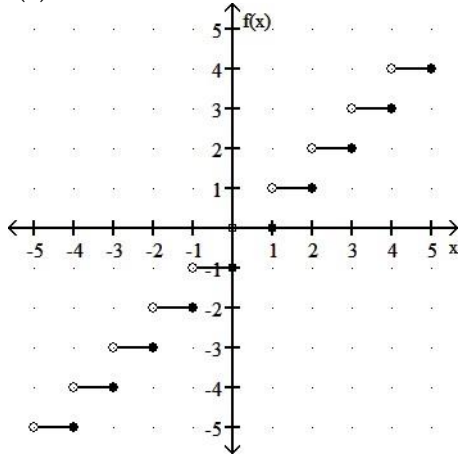
108) _____



- A) $x = 1$ B) $x = 3$ and $x = 1$ C) $x = 0$ and $x = 4$ D) $x = 3$

Answer: B

109) $f(x) = 4$



A) $\{x \mid 4 < x \leq 5\}$

B) 5

C) $\{x \mid 4 < x < 5\}$

D) $\{x \mid 4 \leq x \leq 5\}$

Answer: A

109) _____

Find the domain.

110) $f(x) = \frac{-5}{x-2}$

A) $\{x \mid x \text{ is a real number and } x \neq -5\}$

C) $\{x \mid x \text{ is a real number and } x \neq 5\}$

B) $\{x \mid x \text{ is a real number and } x \neq -2\}$

D) $\{x \mid x \text{ is a real number and } x \neq 2\}$

Answer: D

110) _____

111) $f(x) = \frac{-1}{-6-x}$

A) $\{x \mid x \text{ is a real number and } x \neq 1\}$

C) $\{x \mid x \text{ is a real number and } x \neq -6\}$

B) $\{x \mid x \text{ is a real number and } x \neq 6\}$

D) $\{x \mid x \text{ is a real number and } x \neq -1\}$

Answer: C

111) _____

112) $f(x) = -2x + 9$

A) $\{x \mid x \text{ is a real number and } x \neq 4.5\}$

C) All real numbers

B) $\{x \mid x \text{ is a real number and } x \neq 9\}$

D) $\{x \mid x \text{ is a real number and } x \neq -2\}$

Answer: C

112) _____

113) $f(x) = 6x + 9$

A) All real numbers

B) $\{x \mid x \text{ is a real number and } x \neq -2.25\}$

C) $\{x \mid x \text{ is a real number and } x \neq -0.44444444\}$

D) $\{x \mid x \text{ is a real number and } x \neq -4\}$

Answer: A

113) _____

114) $f(x) = x^2 + 6$

A) $\{x \mid x \text{ is a real number and } x \neq \sqrt{6}\}$

C) All real numbers

B) $\{x \mid x \text{ is a real number and } x \neq -6\}$

D) $\{x \mid x \text{ is a real number and } x \neq 6\}$

Answer: C

114) _____

115) $f(x) = |-2x + 5|$

A) $\{x \mid x \text{ is a real number and } x \neq 0.4\}$

B) $\{x \mid x \text{ is a real number and } x \neq 2.5\}$

115) _____

C) All real numbers

Answer: C

D) $\{x \mid x \text{ is a real number and } x \neq -5\}$

116) $f(x) = \frac{1}{|85 - x|}$

A) $\{x \mid x \text{ is a real number and } x \neq -85\}$

C) All real numbers

Answer: D

B) $\{x \mid x \text{ is a real number and } x < 85\}$

D) $\{x \mid x \text{ is a real number and } x \neq 85\}$

117) $f(x) = x^3 + 7$

A) All real numbers

C) $\{x \mid x \text{ is a real number and } x \neq 7\}$

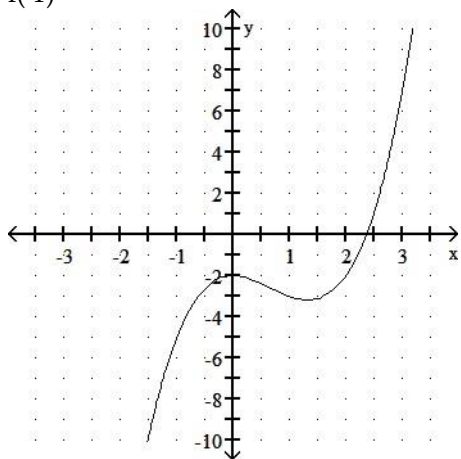
Answer: A

B) $\{x \mid x \text{ is a real number and } x \neq \sqrt[3]{7}\}$

D) $\{x \mid x \text{ is a real number and } x \neq -7\}$

Find the function value.

118) $f(1)$



A) -5

B) -3

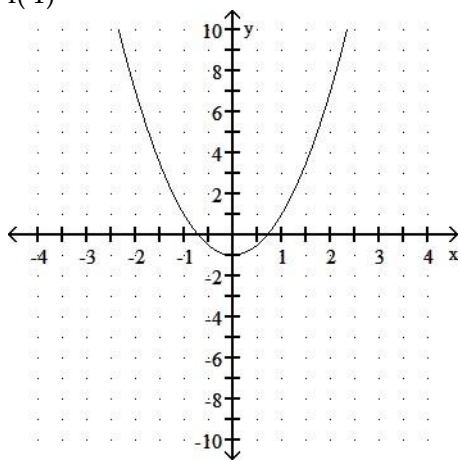
C) -1

D) -2

Answer: B

118) _____

119) $f(1)$



A) 3

B) 2

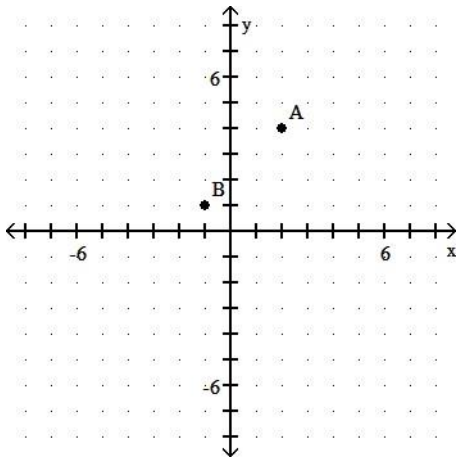
C) -1

D) 1

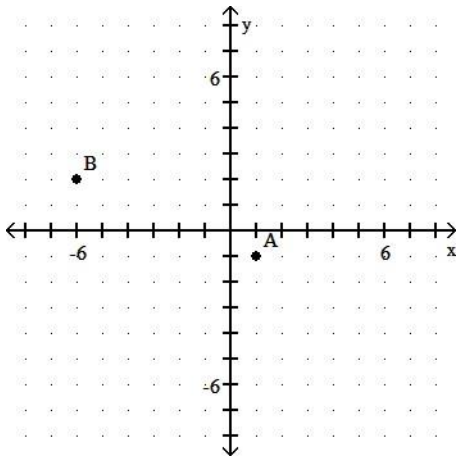
Answer: D

119) _____

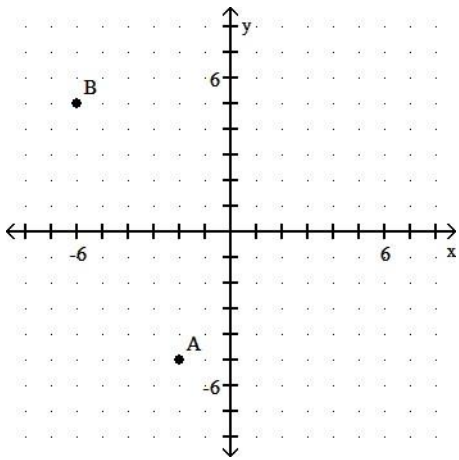
1)



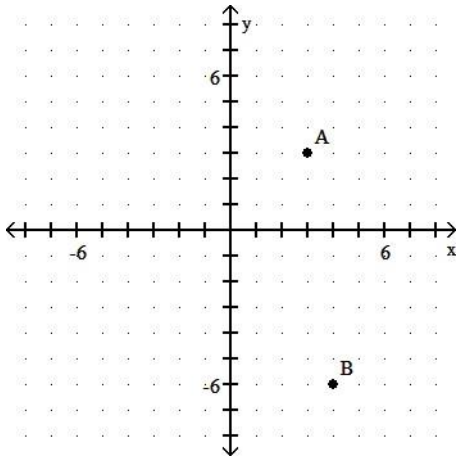
2)



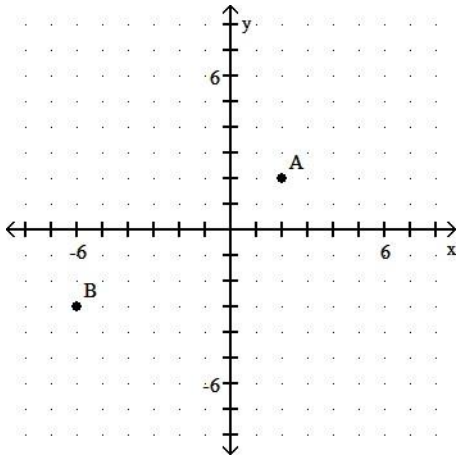
3)



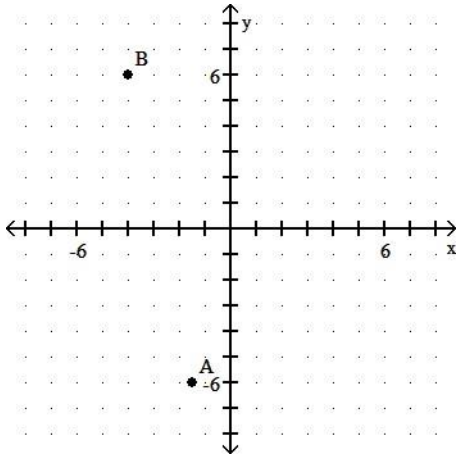
4)



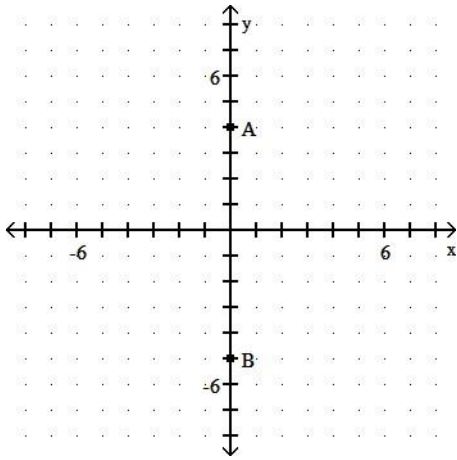
5)



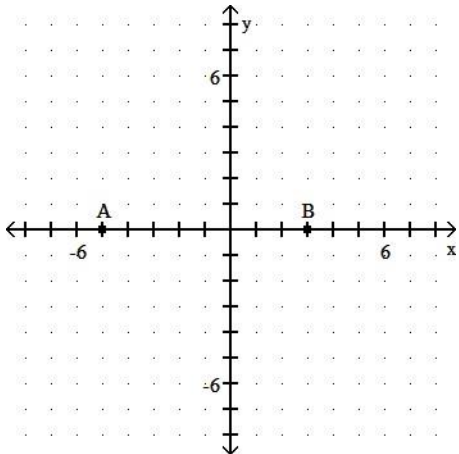
6)



7)



8)



- 9) B
- 10) A
- 11) B
- 12) B
- 13) B
- 14) B
- 15) A
- 16) B

17) Show that (7, 5) is a solution:

$$y = x - 2$$

$$5 =? 7 - 2$$

$$5 =? 5 \quad \text{TRUE}$$

Show that (-2, -4) is a solution:

$$y = x - 2$$

$$-4 =? -2 - 2$$

$$-4 =? -4 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $y = x - 2$.

18) Show that (2, 3) is a solution:

$$y = x + 1$$

$$3 =? 2 + 1$$

$$3 =? 3 \quad \text{TRUE}$$

Show that (-4, -3) is a solution:

$$y = x + 1$$

$$-3 =? -4 + 1$$

$$-3 =? -3 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $y = x + 1$.

19) Show that (4, 5) is a solution:

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

$$5 =? \frac{1}{2}(4) + 3$$

$$5 =? 2 + 3$$

$$5 =? 5 \quad \text{TRUE}$$

Show that (-6, 0) is a solution:

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

$$0 =? \frac{1}{2}(-6) + 3$$

$$0 =? -3 + 3$$

$$0 =? 0 \quad \text{TRUE}$$

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

Coordinates of the additional solution may vary but should satisfy

20) Show that (2, -2) is a solution:

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

$$-2 =? \frac{1}{2}(2) - 3$$

$$-2 =? 1 - 3$$

$$-2 =? -2 \quad \text{TRUE}$$

Show that (-4, -5) is a solution:

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

$$-5 =? \frac{1}{2}(-4) - 3$$

$$-5 =? -2 - 3$$

$$-5 =? -5 \quad \text{TRUE}$$

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

Coordinates of the additional solution may vary but should satisfy

21) Show that (2, 3) is a solution:

$$2x + y = 7$$

$$2(2) + 3 =? 7$$

$$4 + 3 =? 7$$

$$7 =? 7 \quad \text{TRUE}$$

Show that (6, -5) is a solution:

$$2x + y = 7$$

$$2(6) + (-5) =? 7$$

$$12 + (-5) =? 7$$

$$7 =? 7 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $2x + y = 7$.

22) Show that (4, 2) is a solution:

$$x + 2y = 8$$

$$4 + 2(2) =? 8$$

$$4 + 4 =? 8$$

$$8 =? 8 \quad \text{TRUE}$$

Show that (-6, 7) is a solution:

$$x + 2(7) =? 8$$

$$2y = -6 + 14 =? 8$$

$$8 = 8 =? 8 \quad \text{TRUE}$$

-6 + Coordinates of the additional solution may vary but should satisfy $x + 2y = 8$.

23) Show that (0, -3) is a solution:

$$6x - 2y = 6$$

$$6(0) - 2(-3) =? 6$$

$$0 - (-6) =? 6$$

$$6 =? 6 \quad \text{TRUE}$$

Show that (3, 6) is a solution:

$$6x - 2y = 6$$

$$6(3) - 2(6) =? 6$$

$$18 - 12 =? 6$$

$$6 =? 6 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $6x - 2y = 6$.

24) Show that (0, -3) is a solution:

$$3x - 3y = 9$$

$$3(0) - 3(-3) =? 9$$

$$0 + 9 =? 9$$

$$9 =? 9 \quad \text{TRUE}$$

Show that (2, -1) is a solution:

$$3x - 3y = 9$$

$$3(2) - 3(-1) =? 9$$

$$6 - (-3) =? 9$$

$$9 =? 9 \quad \text{TRUE}$$

Coordinates of the additional solution may vary but should satisfy $3x - 3y = 9$.

- 25) C
- 26) A
- 27) B
- 28) C
- 29) C
- 30) C
- 31) C
- 32) C
- 33) B
- 34) C
- 35) D
- 36) C
- 37) D
- 38) A
- 39) C
- 40) D
- 41) D
- 42) A
- 43) A
- 44) A
- 45) B
- 46) B
- 47) B
- 48) B
- 49) B
- 50) B

- 51) B
- 52) A
- 53) B
- 54) C
- 55) D
- 56) C
- 57) B
- 58) A
- 59) D
- 60) B
- 61) B
- 62) C
- 63) C
- 64) A
- 65) C
- 66) D
- 67) A
- 68) B
- 69) A
- 70) D
- 71) B
- 72) A
- 73) D
- 74) C
- 75) B
- 76) B
- 77) B
- 78) D
- 79) B
- 80) B
- 81) A
- 82) B
- 83) B
- 84) B
- 85) B
- 86) B
- 87) D
- 88) A
- 89) C
- 90) A
- 91) A
- 92) B
- 93) B
- 94) D
- 95) C
- 96) D
- 97) B
- 98) D
- 99) A
- 100) D
- 101) B
- 102) B

- 103) C
- 104) A
- 105) D
- 106) C
- 107) D
- 108) B
- 109) A
- 110) D
- 111) C
- 112) C
- 113) A
- 114) C
- 115) C
- 116) D
- 117) A
- 118) B
- 119) D