Test Bank for College Algebra 12th Edition by Lial Hornsby Schneider and Daniels ISBN 0134217454 9780134217451

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Solution Manual:

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

List the ordered pairs from the
table. 1)

x	y
1	3
2	0
4	-6
5	-9

A) (3, 1), (0, 2), (-6, 4), (-9, 5)
B) (1, 0), (2, 3), (4, -9), (5, -6)
C) (1, -9), (2, -6), (4, 0), (5, 3)
D) (1, 3), (2, 0), (4, -6), (5, -9)
Answer: D

2)

Sales at the University Bookstore

Month	Sales
1	$720,000
2	$180,000
3	$1,060,000
4	$300,000

A) (1, 180,000), (2, 720,000), (3, 300,000), (4, 1,060,000)
B) (720,000, 1), (180,000, 2), (1,060,000, 3), (300,000, 4)
C) (1, 720,000), (2, 180,000), (3, 1,060,000), (4, 300,000)
D) (300,000, 1), (1,060,000, 2), (180,000, 3), (720,000, 4)
Answer: C

For the points   P and Q, find   the distance   d(P, Q).
3) P(5, 4), Q(-4, -1)

A) 4
B)
56 C)
45
D)
106
Answer: D

4) P(3, -5), Q(7, -7)
A) 12   3
B) 12
C) 2
5 D) 6
Answer: C

5) P(-2, -3), Q(1, 6)

   A) 72

   B) 72 $\sqrt{}$

   2   C) $\sqrt{3}$

   10   D) 6

Answer: C

6) P(7, -2), Q(5, 2)

    A) $12\sqrt{3}$

    B) $2\sqrt{5}$

    C) 12

    D) 6

  Answer: B

7) $P(3\sqrt{5}, 5\sqrt{7})$, $Q(-2\sqrt{5},$
    $-9\sqrt{1497}$ A)

    B) 1497

    C) $\sqrt{123}$

    D) 123

  Answer: A

For the points P and Q, find the coordinates of the midpoint of the segment PQ.

  8) P(5, 9), Q(7, 1)

    A) $(6, 5)$

    B) (-2, 8)

    C) $(-1, 4)$

    D) (12, 10)

  Answer: A

  9) P(7, -9), Q(0, 8)

    A) (7, -1)

    B) (7, -17)

    C) $\left(\dfrac{7}{2}, -\dfrac{1}{2}\right)$

    D) $\left(\dfrac{7}{2}, -\dfrac{17}{2}\right)$

  Answer: C

  10) P(0, -1), Q(8, 8)

    A) $\left(4, \dfrac{7}{2}\right)$

    B) (8, 7)

    C) $\left(-4, -\dfrac{9}{2}\right)$

    D) (-8, -9)

  Answer: A

  11) P(-5, 2), Q(2, 6)

    A) (-3, 8)

    B) $\left(-\dfrac{7}{2}, -2\right)$

    C) (-7, -4)

    D) $\left(-\dfrac{3}{2}, 4\right)$

  Answer: D

12) P(7$\sqrt{3}$, -$\sqrt{13}$), Q($\sqrt{3}$, 0)   A) (-3, 13)

B) 6, -$3\sqrt{\dfrac{39}{2}}$

C) 3, -$3\sqrt{\dfrac{13}{2}}$

D) 4$\sqrt{5}$, $-\sqrt{\dfrac{13}{2}}$

Answer: C

13) P(13$\sqrt{3}$,$\sqrt{10}$), Q($\sqrt{3}$,4$\sqrt{10}$)

A) 6, -$6\sqrt{\dfrac{30}{2}}$

B) 6$\sqrt{10}$, $3\sqrt{5}$

C) 7$\sqrt{3}$, $-\sqrt{\dfrac{10}{2}}$

D) 3, $6\sqrt{\dfrac{5}{102}}$

Answer: D

14) P(-$\sqrt{10}$, 1), Q(0, $\sqrt{5}$)

A) -$\sqrt{10}$, $1+\dfrac{\sqrt{5}\;2}{2}$

B) (-$\sqrt{10}$, 1 +$\sqrt{5}$)

C) 1, -$\sqrt{\dfrac{10+5}{2}}$$\dfrac{2}{2}$

D) $\sqrt{\dfrac{10}{2}}$, $1-\dfrac{\sqrt{5}}{2}$

Answer: A

Determine whether   the three   points   are the vertices of a right   triangle

15) (3, -9), (10, -9), (10, -1)
   A) Yes
   B) No

   Answer: A

16) (-2, 3), (0, 7), (2, 6)
   A) Yes
   B) No
   Answer: A

17) (5, 8), (11, 10), (15, -2)
   A) Yes
   B) No
   Answer: A

18) (-1, -1), (5, 1), (4, -4)
 A) Yes
 B) No
 Answer: B

19) (3, -5), (9, -3), (15, -10)
 A) Yes
 B) No
 Answer: B

20) (-6, 7), (5, -4), (7, -2)
 A) Yes
 B) No
 Answer: A

Determine whether the three points are collinear.

21) (-2, 6), (-4, -3), (0, 15)
 A) Yes
 B) No
 Answer: A

22) (13, -10), (5, -4), (7, -2)
 A) Yes
 B) No
 Answer: B

23) (-5, -11), (4, 7), (9, 17)
 A) Yes
 B) No
 Answer: A

24) (8, -4), (-5, 8), (1, 1)
 A) Yes
 B) No
 Answer: B

Find the coordinates of the other endpoint of the segment, given its midpoint and one endpoint. 25) midpoint (3, 1), endpoint (2, -3)
 A) (4, 5)
 B) (0, -11)
 C) (4, -7)
 D) (10, -1)
 Answer: A

26) midpoint (-1, -1), endpoint (3, 1)
 A) (-1, -7)
 B) (11, 5)
 C) (-5, 3)
 D) (-5, -3)
 Answer: D

27) midpoint (-8, -9), endpoint (-10, -5)
    A) (-6, -13)
    B) (-14, 3)
    C) (-18, -1)
    D) (-6, -1)
   Answer: A

28) midpoint (-8, 7), endpoint (-4, 6)
    A) (-12, 8)
    B) (-2, -2)
    C) (4, 4)
    D) (-12, 5)
   Answer: A

29) midpoint   (c, y), endpoint (m, q)
    A) (c - m, y - q)
    B) (2m - c, 2q - y)
    C) (2c - m, 2y - q)
    D) $\left[\dfrac{c+m}{2}, \dfrac{y+q}{2} - \right]$
   Answer: C

30) midpoint $\left[\dfrac{p+a}{2}, \dfrac{q-w}{2} \right]$ endpoint (p, q)
    A) (a, w)
    B) $\left[\dfrac{3p+a, \; 3q-w}{4} \right]$
    C) (a, -w)
    D) $\left[\dfrac{a}{2}, -\dfrac{w}{2} \right]$
   Answer: C

Solve the problem.

31) The graph shows an idealized linear relationship for the average monthly payment to retirees from 1995 to 1999. Use the midpoint formula to estimate the average payment in 1997.

Average Monthly Payment to Retirees

```
     ↑Payment
560
550

540
530                              ● b

520
510

500
490

480
470

460

450 ●
              a
        ┤    ┤ ┤   ┤   ┤  Year
     ³1995   2    1997
            4
```
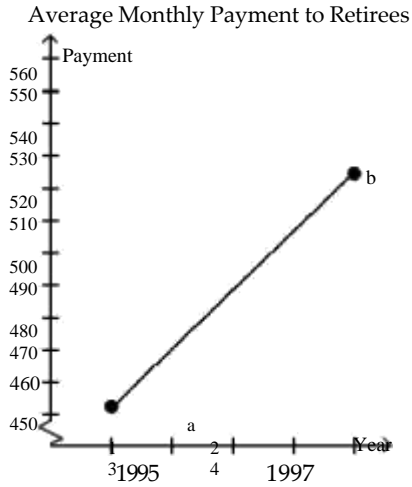
1999 a = $452; b = $524

A) $36
B) $500
C) $524

D) $488
Answer: D

32) The table lists how financial aid income cutoffs (in dollars) for a family of four have changed over time. Use the midpoint formula to approximate the financial aid cutoff for 1985.

Year	Income (in dollars)
1960	20,250
1970	25,500
1980	30,750
1990	36,000
2000	41,250

A) $33,375
B) $20,250
C) $51,750

D) $17,625
Answer: A

33) The table shows enrollment in 2-year technical schools for 1980, 1990 and 2000. Assuming a linear relationship, estimate the enrollment for 1995.

Year	Enrollment (in millions)
1980	2.3
1990	

2.9 2000
3.5

  A) 2.3 million
  B) 4.9 million
  C) 1.5 million

  D) 3.2 million
Answer: D

Graph the equation by determining the missing   values needed   to plot the ordered
    pairs.   34) $y + x = 3$;   (2,   ), (3,   ), (1,   )
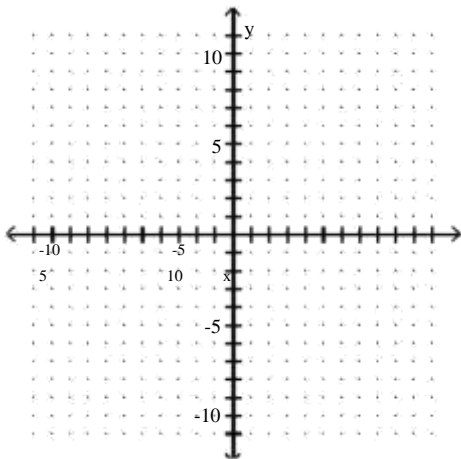
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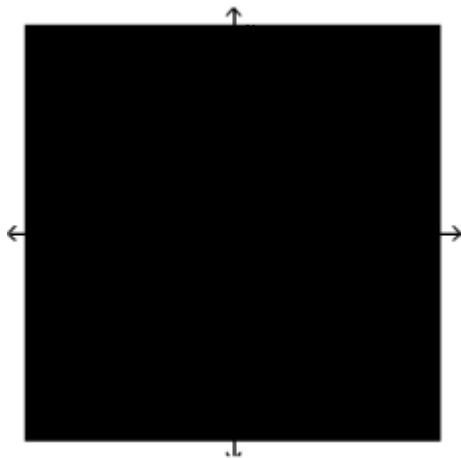
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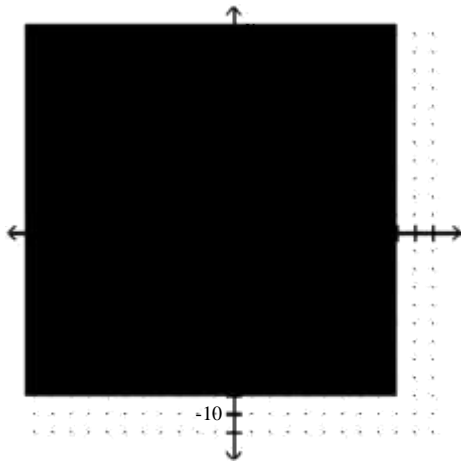
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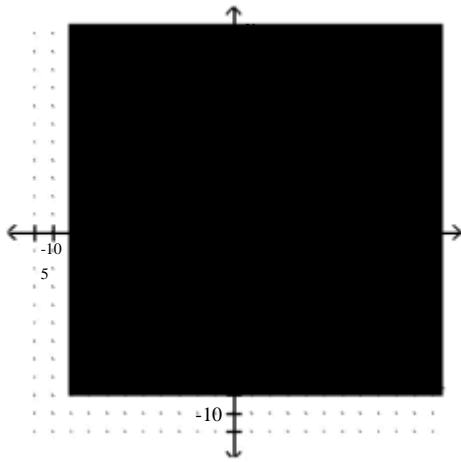
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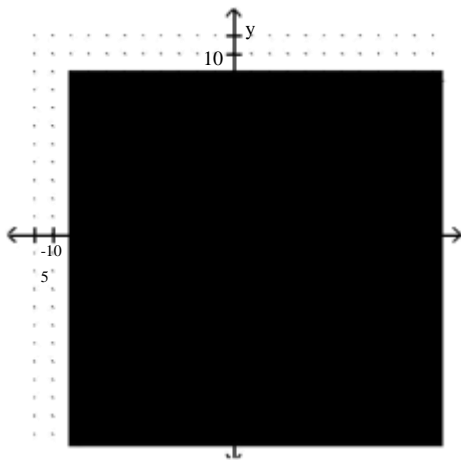
Answer: C

35) y - x = 2; (2,   ), (, 8),
(4,   )
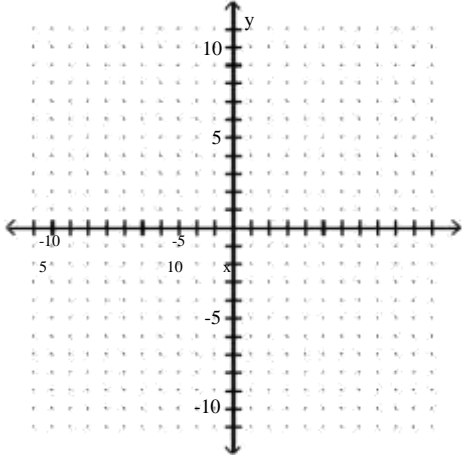
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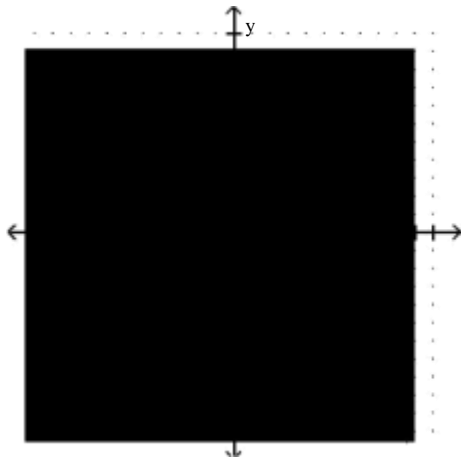
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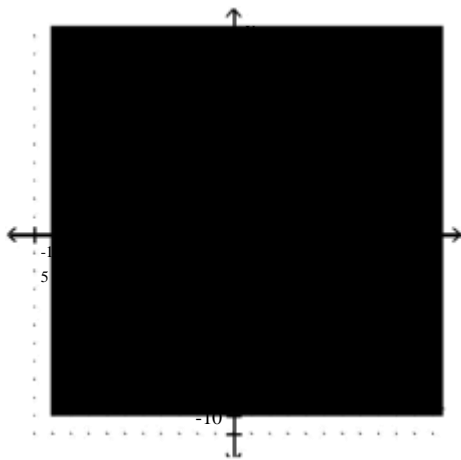
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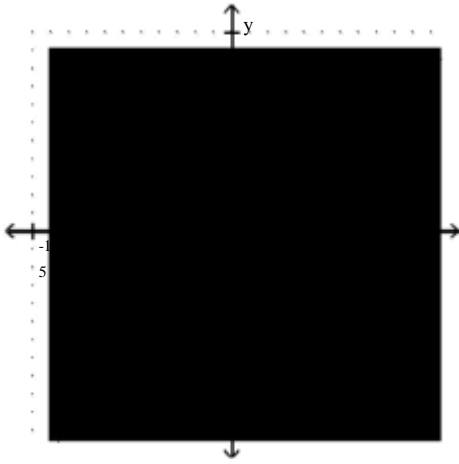
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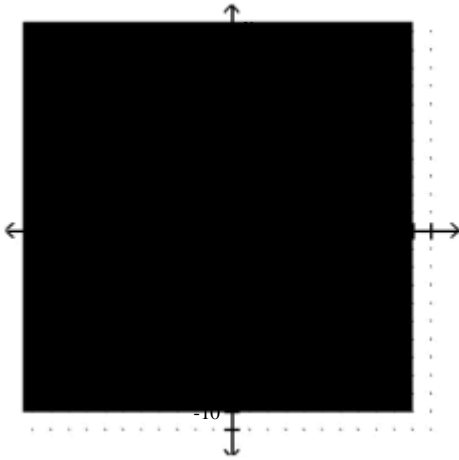
Answer: D

36) x + 2y = 4; (0,   ), (, 0), (1,   ),
(, 1)
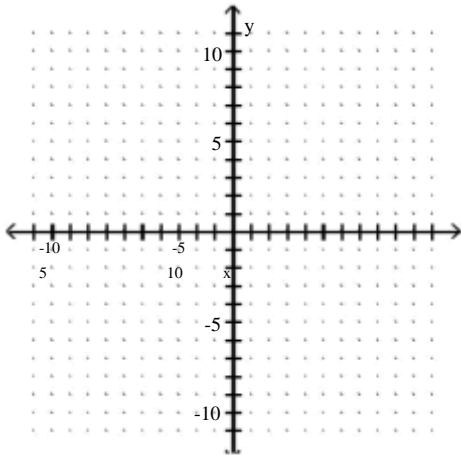
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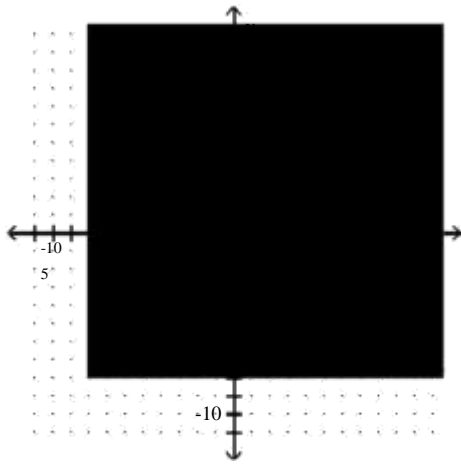
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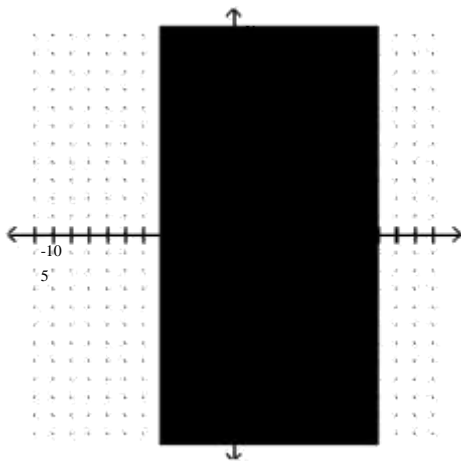
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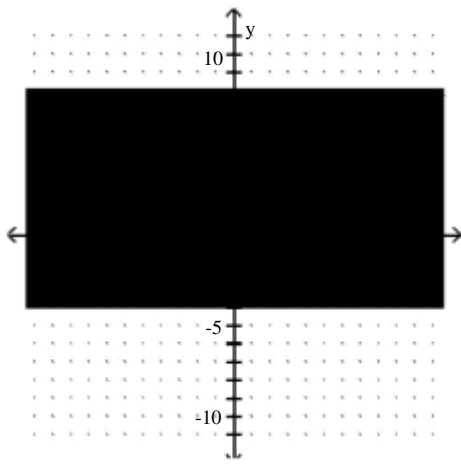
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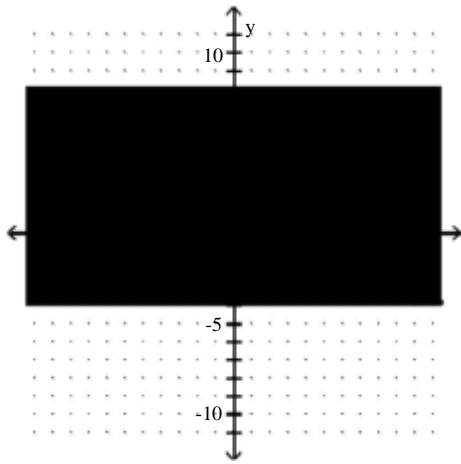
Answer: D

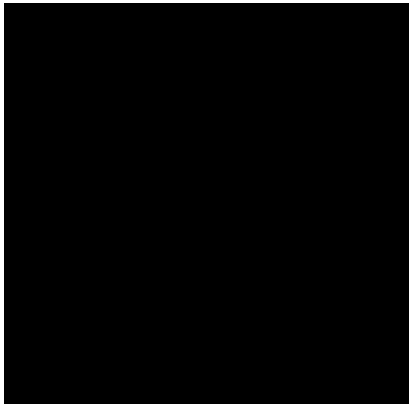37) $4x + 6y = 24$; $(0, \quad)$, $(\quad, 0)$, $(2, \quad)$
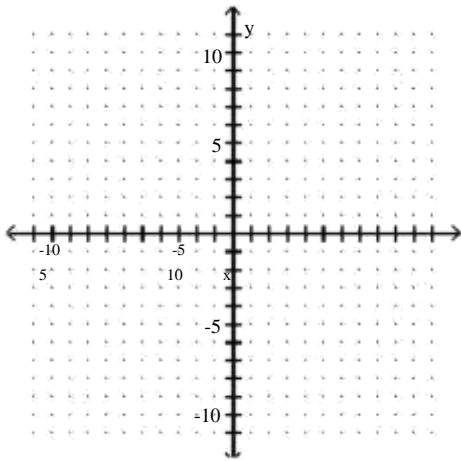
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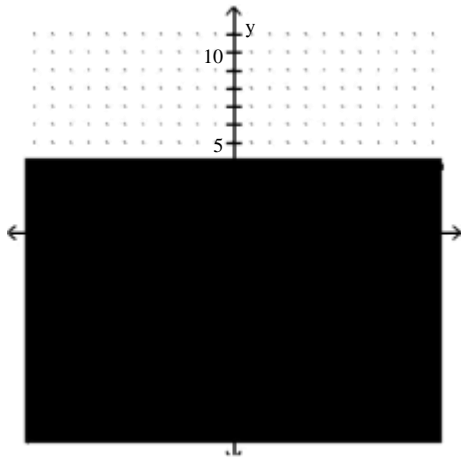
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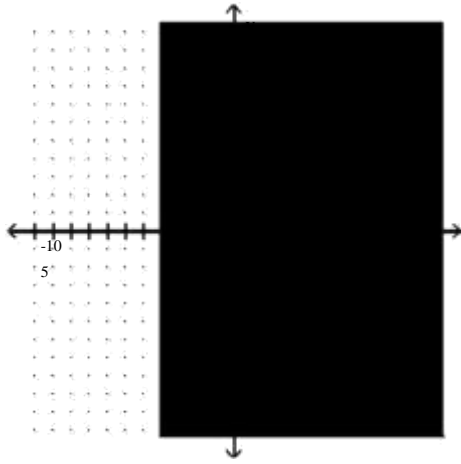
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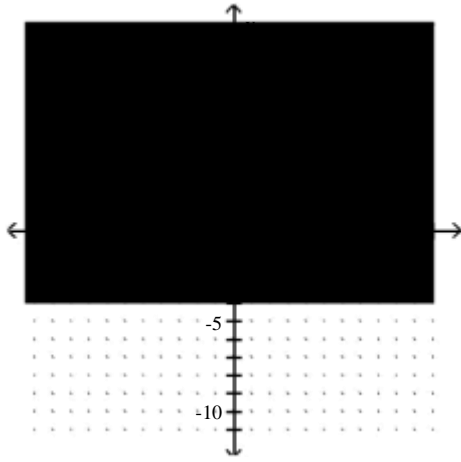
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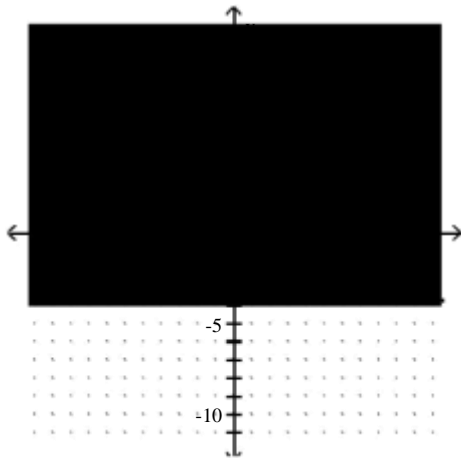
Answer: D

38) $5y = -2x + 10$; $(0, \quad)$, $(\quad, 0)$, $(1, \quad)$

A)
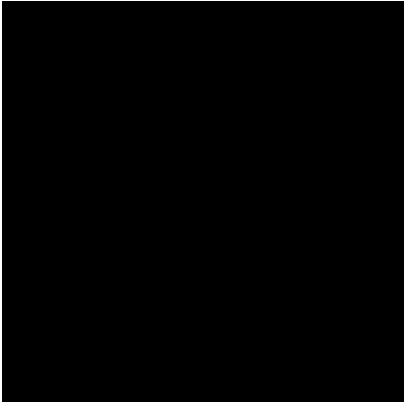
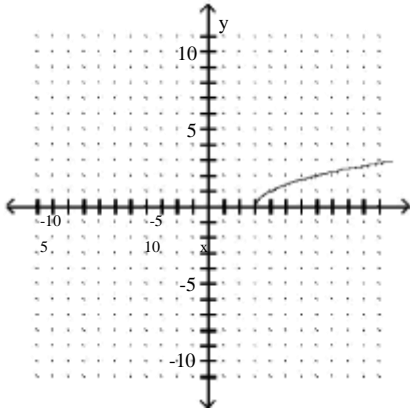B)
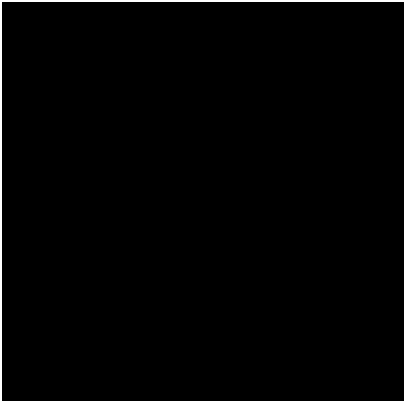
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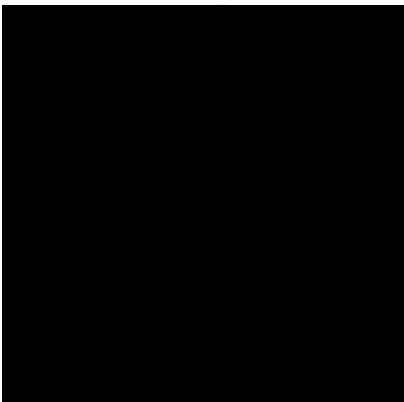
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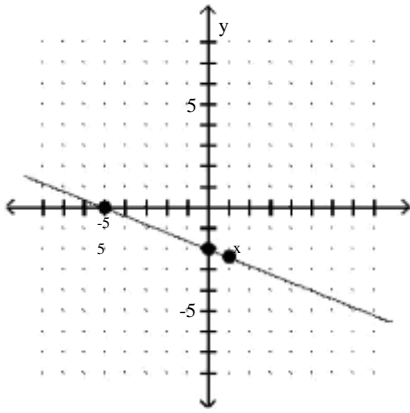
Answer: B

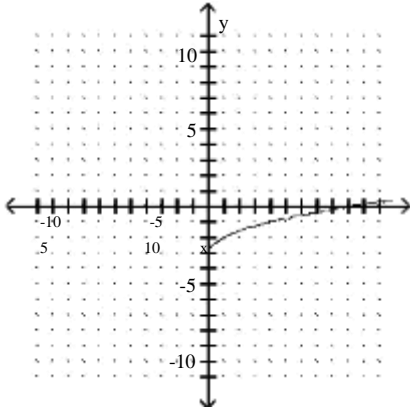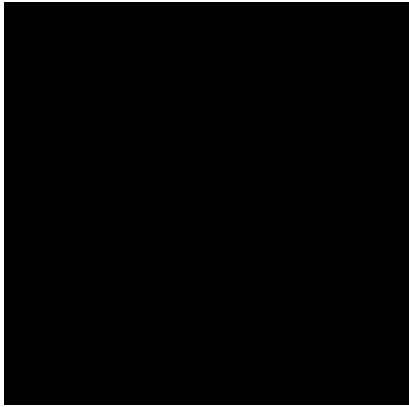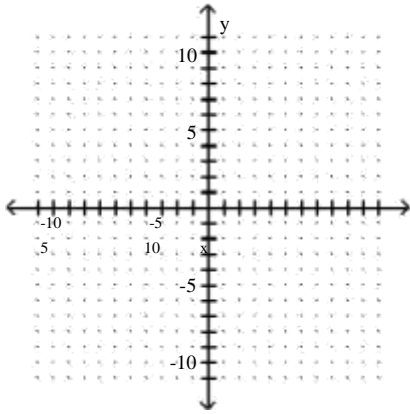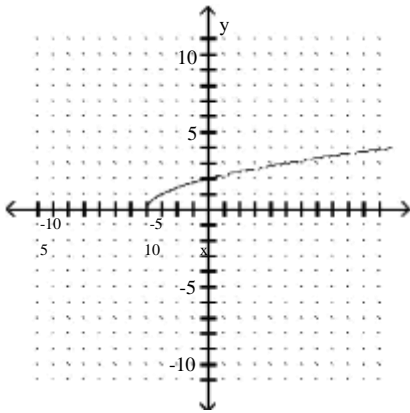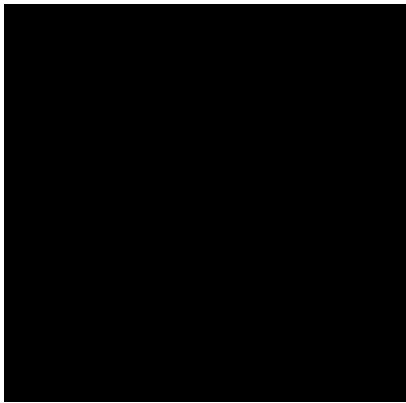Graph   the equation   by plotting   points.
39) $y = \sqrt{x - 3}$
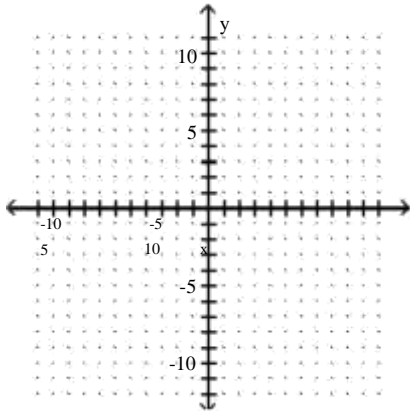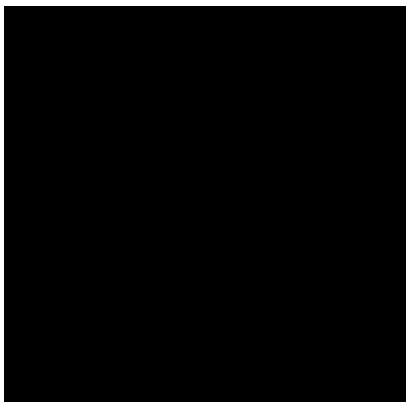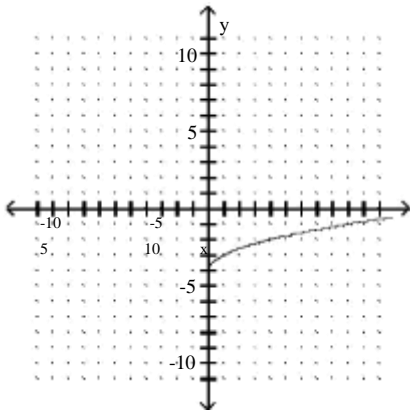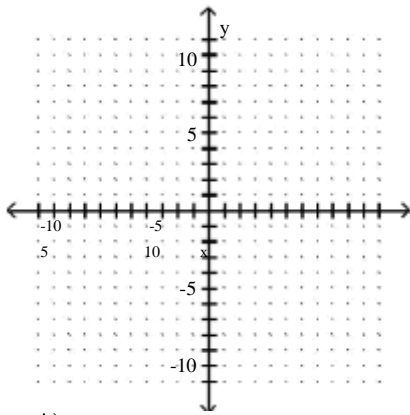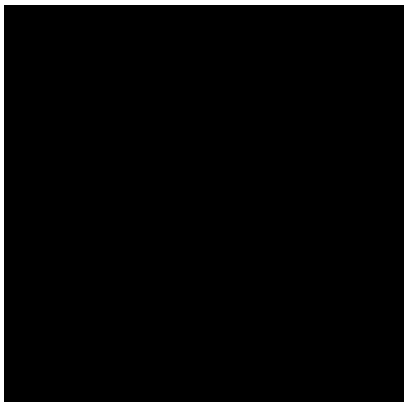

A)

B)

C)

D)

Answer:
B

40) $y = \sqrt{x} - 4$

A)

B)

C)

D)

Answer: D

41) $y = x^2 - 1$

A)

B)

C)

D)

Answer:

B

42) y = | -4 - x |

A)

B)

C)

D)

Answer: B

43) $y = |x| + 3$
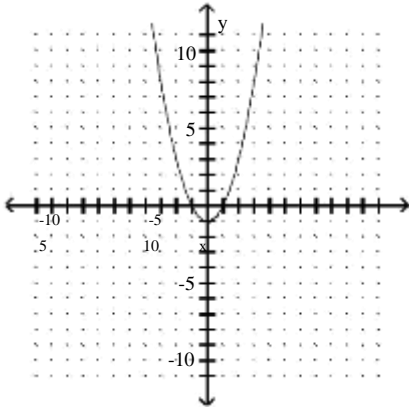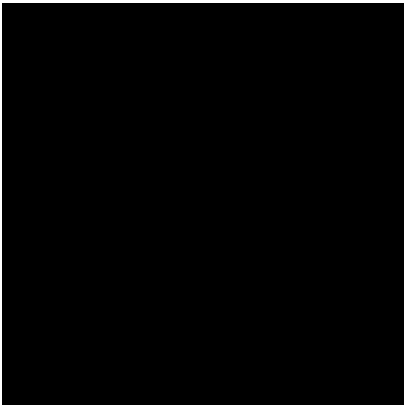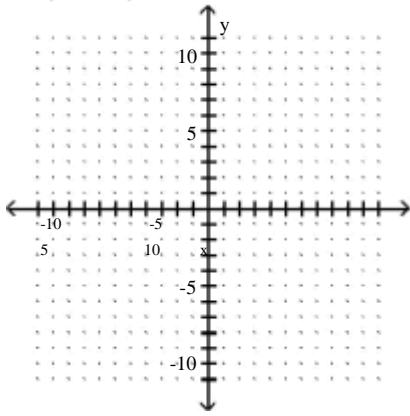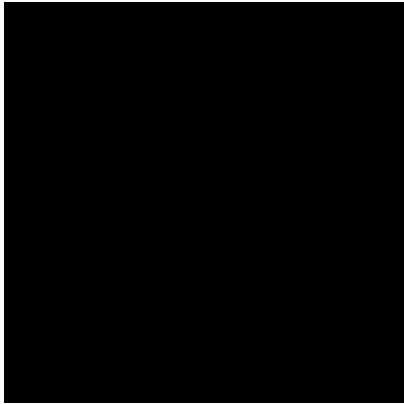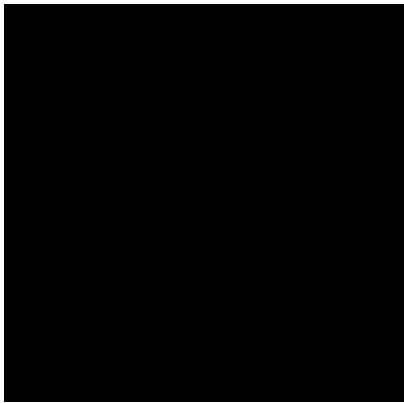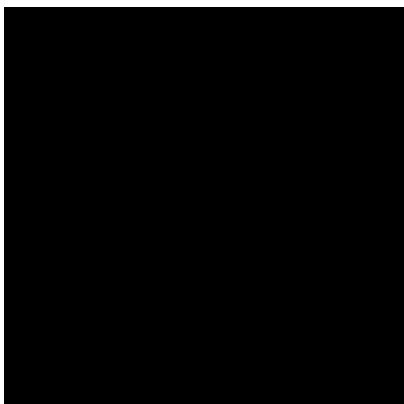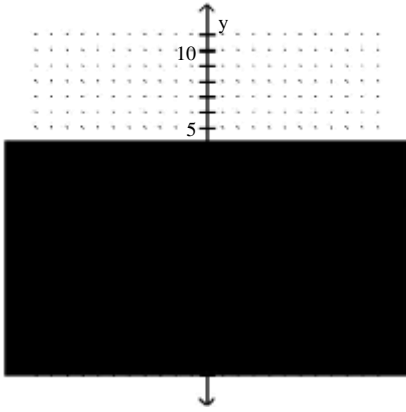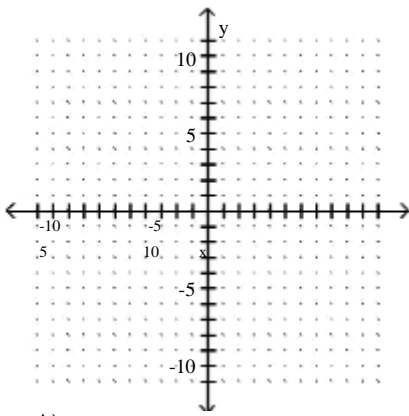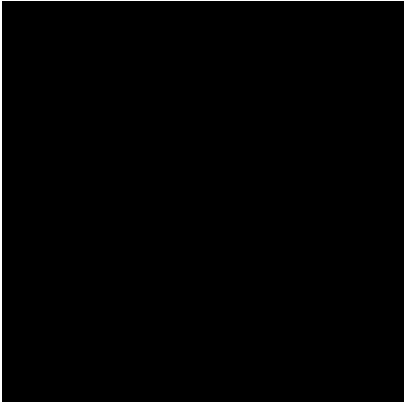

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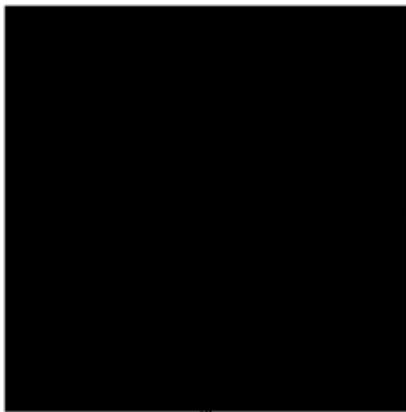
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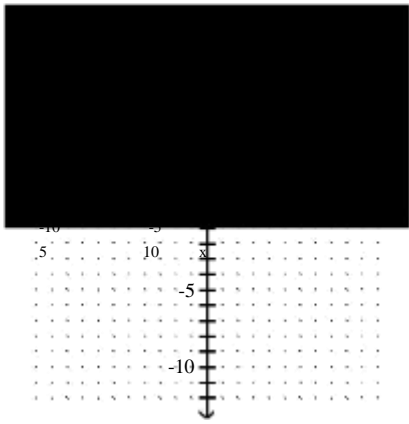
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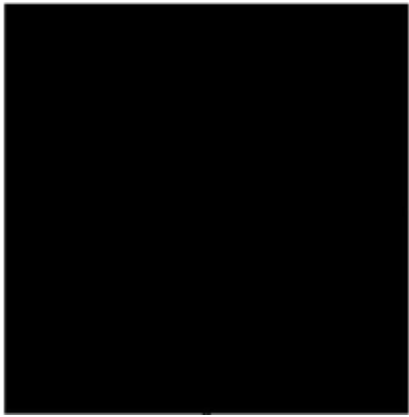
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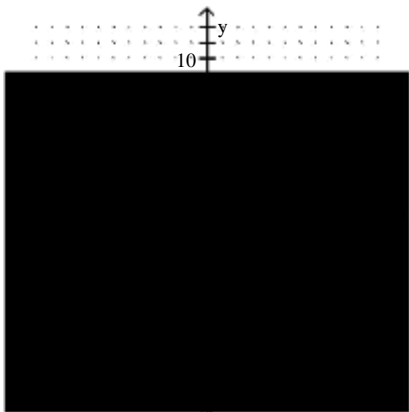
Answer:
B

44) $y = -x^2 + 1$
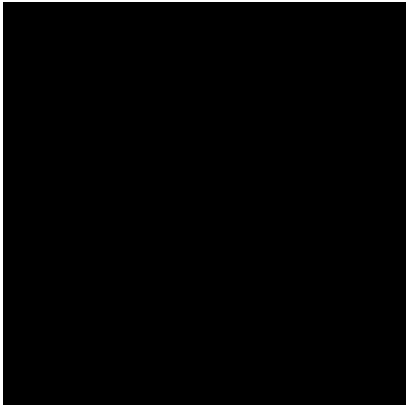
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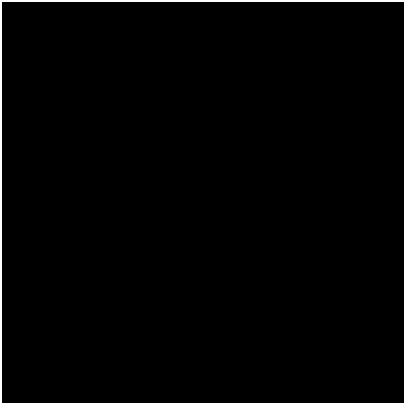
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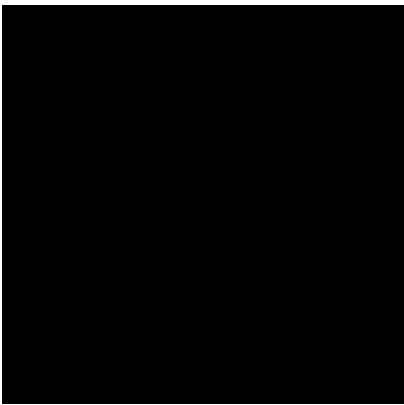
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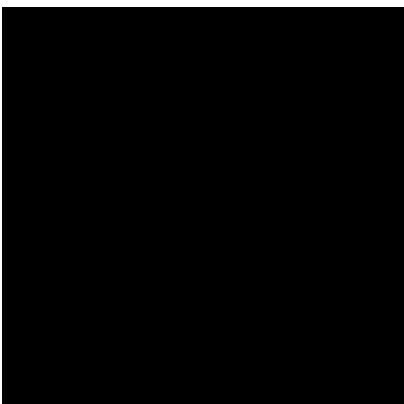
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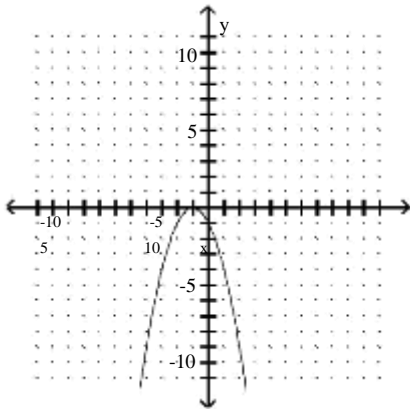
Answer: B

45) $y = x^3 + 2$
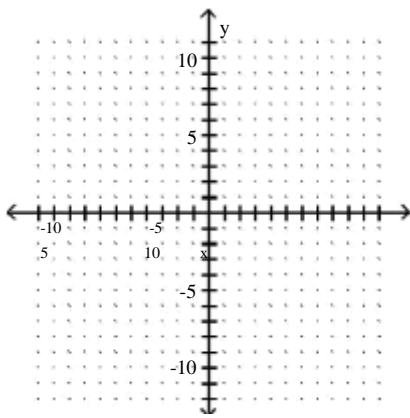
A)

B)
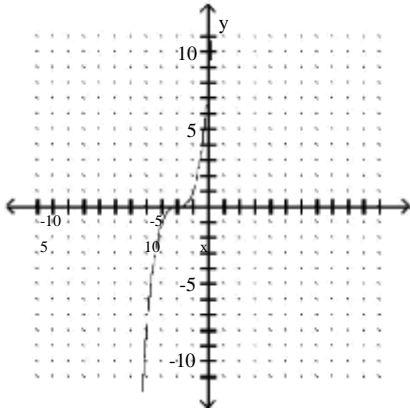
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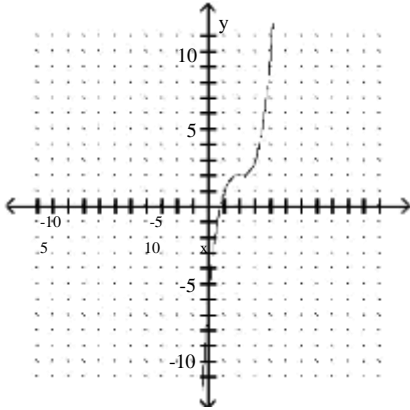
D)

Answer: D

46) $y = (x + 1)^3$
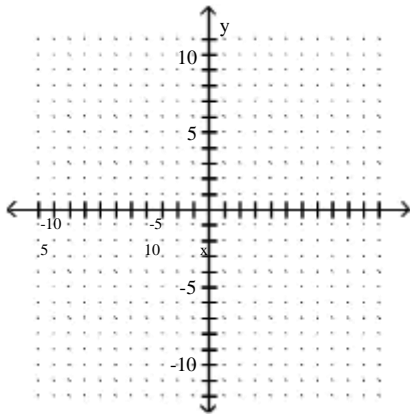
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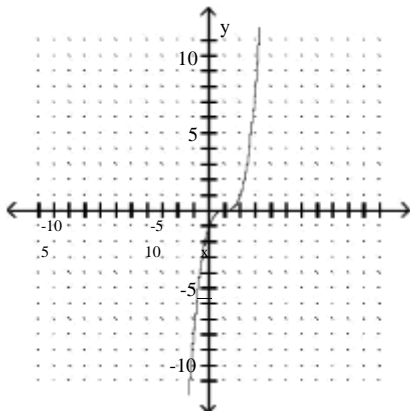
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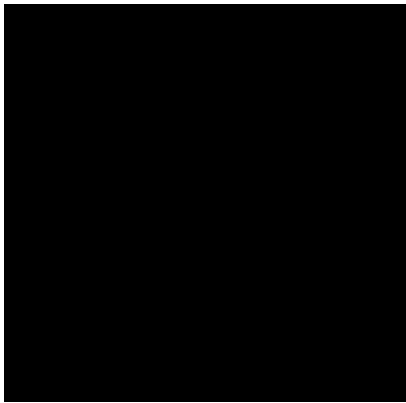
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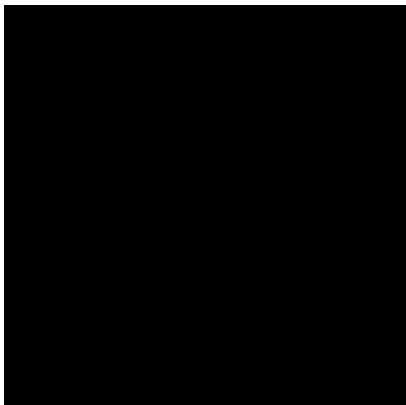
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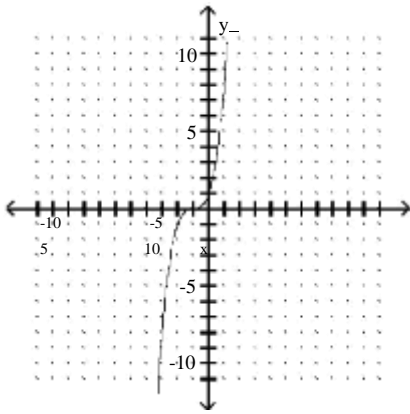
Answer: D

Provide an appropriate response.

47) If the point (a, b) is in the fourth quadrant, in what quadrant is (a, -b)?

A) II
B) I
C) III
D) IV

Answer: B

48) If the point (a, b) is in the fourth quadrant, in what quadrant is (-a, -b)? A)
I
B) III
C) IV
D) II

Answer: D

49) If the point (a, b) is in the fourth quadrant, in what quadrant is (b, a)? A)
II
B) IV
C) I
D) III

Answer: A

50) If a vertical line is drawn through the point (3, -4), where will it intersect the x-axis? A)
(3, 0)
B) (-4, 0)
C) (0, 3)
D) (0, -4)

Answer: A

51) If a horizontal line is drawn through the point (1, -8), where will it intersect the y-axis?

A) (-8, 0)
B) (0, 1)
C) (0, -8)
D) (1, 0)

Answer: C

52) What is the midpoint of the segment joining (c, y) and (-5c, 7y)?

    A) (-3c, 4y)

    B) (-2c, 4y)

    C) (-4c, 8y)

    D) (2c, 3y)

    Answer: B

53) What is the distance from the origin to the point (m, -n)?

    A) $\sqrt{m^2 + n^2}$

    B) $\sqrt{m - n}$

    C) $\sqrt{m^2 - n^2}$

    D) $m^2 + n^2$

    Answer: A

54) What is the distance from the point (a, w) to the point (m, q)?

    A) $\sqrt{(m - a)^2 + (q - w)^2}$

    B) $\sqrt{(a - w)^2 + (m - q)^2}$

    C) $\sqrt{(m - a)^2 - (q - w)^2}$

    D) $[\sqrt{m - a +} \quad q - \sqrt{} \; w]^2$

    Answer: A

55) Are the points A(3, 6), B(6, 9), C(8, 1), and D(11, 4) the vertices of a parallelogram (opposite sides equal in length)? of a rhombus (all sides equal in length)?

    A) no; yes

    B) yes; no

    C) no; no

    D) yes; yes

    Answer: B

56) Are the points A(-3, 5), B(0, 6), C(2, -2), and D(5, 1) the vertices of a parallelogram (opposite sides equal in length)? of a rhombus (all sides equal in length)?

    A) no; yes

    B) no; no

    C) yes; no

    D) yes; yes

    Answer: B

Find   the center-radius form   of the equation   of the circle.

    57) center (0, 0), radius 7

    A) $x^2 + y^2 = 14$ B) $x^2 + y^2 = 49$ C) $x^2 + y^2 = 7$

    D) $x^2 + y^2 = \sqrt{7}$

    Answer: B

58) center (1, -1), radius 6

A) $(x - 1)^2 + (y + 1)^2 = 6$ B)

$(x - 1)^2 + (y + 1)^2 = 36$ C) (x

$+ 1)^2 + (y - 1)^2 = 6$

D) $(x + 1)^2 + (y - 1)^2 = 36$

Answer: B

59) center (10, 0), radius 3

A) $x^2 + (y - 10)^2 = 3$

B) $(x + 10)^2 + y^2 = 9$ C)

$x^2 + (y + 10)^2 = 3$

D) $(x - 10)^2 + y^2 = 9$

Answer: D

60) center (0, 2), radius 4

A) $(x - 2)^2 + y^2 = 16$

B) $x^2 + (y - 2)^2 = 16$ C)

$x^2 + (y + 2)^2 = 4$

D) $(x + 2)^2 + y^2 = 16$

Answer: B

61) center (-8, -7),   radius $3\sqrt{}$

A) $(x + 7)^2 + (y + 8)^2 = 9$

B) $(x - 7)^2 + (y - 8)^2 = 9$ C)

$(x - 8)^2 + (y - 7)^2 = 3$

D) $(x + 8)^2 + (y + 7)^2 = 3$

Answer: D

62) center (0, -2),   radius $\sqrt{}$

7   A) $x^2 + (y - 2)^2 = 7$

B) $(x - 2)^2 + y^2 = 49$ C)

$x^2 + (y + 2)^2 = 7$

D) $(x + 2)^2 + y^2 = 49$

Answer: C

63) center (4, 0),   radius $\sqrt{}$

7   A) $(x - 4)^2 + y^2 = 7$

B) $(x + 4)^2 + y^2 = 7$ C)

$(x - 4)^2 + y^2 =$ 7 $\sqrt{}$

D) $x^2 + (y - 4)^2 = 49$

Answer: A

64) center $(-\sqrt{2}, -2)$, radius $\sqrt{2}$

  A) $(x - \sqrt{2})^2 + (y - 2)^2 = 4$

  B) $(x - \sqrt{2})^2 + (y - 2)^2 = 2$

  C) $(x + \sqrt{2})^2 + (y + 2)^2 = \sqrt{2}$

  D) $(x + \sqrt{2})^2 + (y + 2)^2 = 2$

  Answer: D

Graph   the circle.

65) $x^2 + y^2 = 25$

  A)

  B)
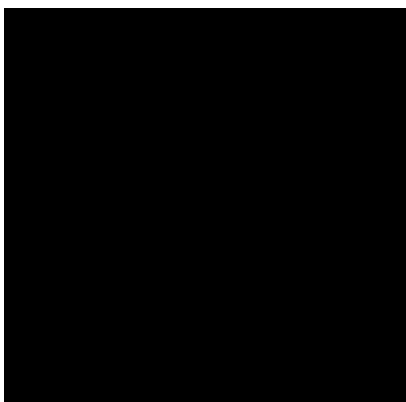
C)
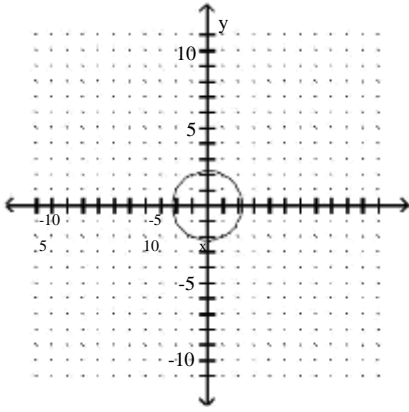
D)
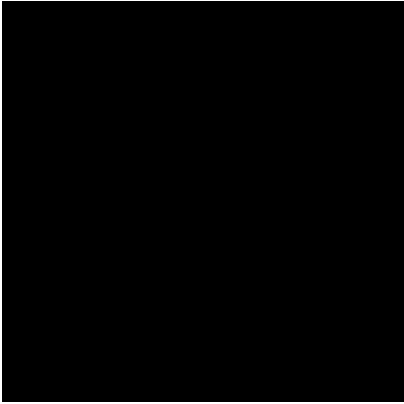
Answer: B

66) $(x - 1)^2 + (y + 3)^2 = 25$
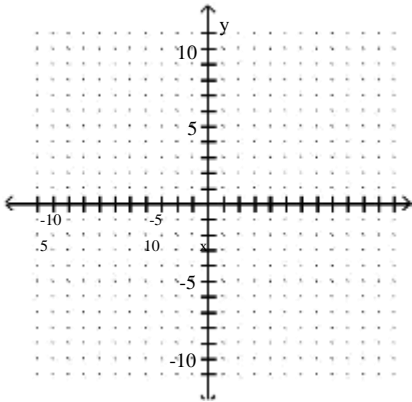
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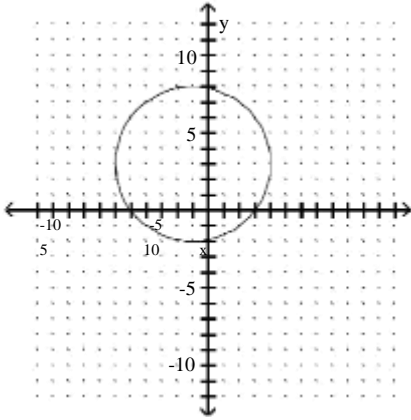
B)

C)
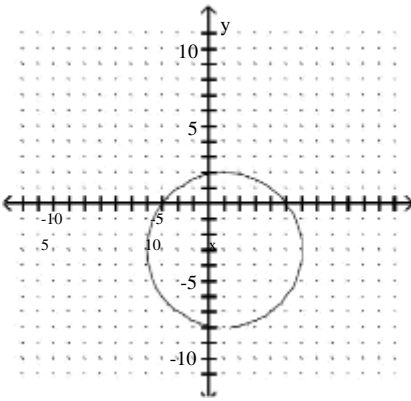
D)
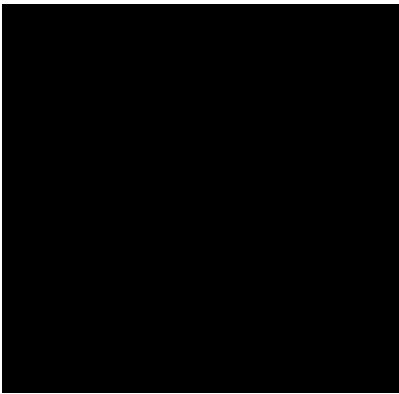
Answer: C

67) $(x - 2)^2 + (y - 4)^2 = 9$
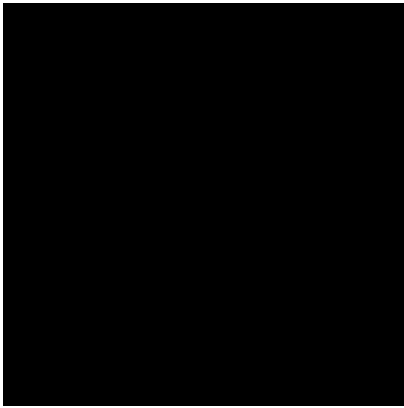
A)

B)

C)

D)
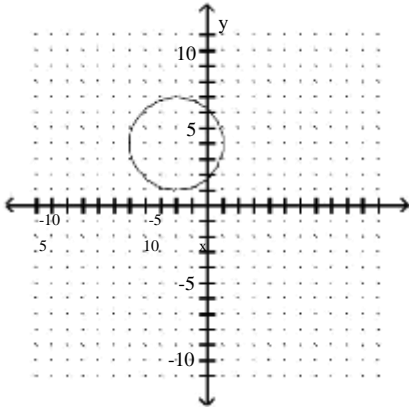
Answer: A

68) $x^2 + (y - 5)^2 = 9$
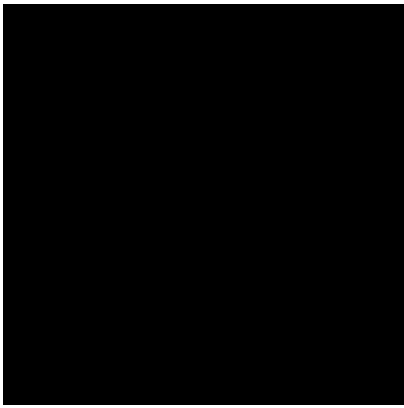
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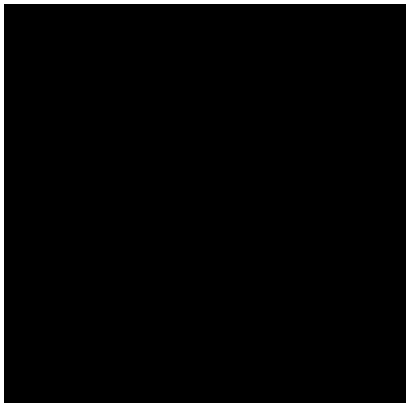
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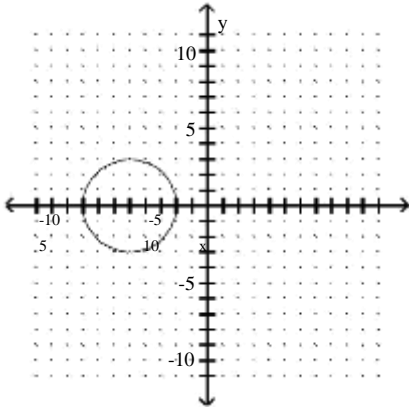
C)

D)
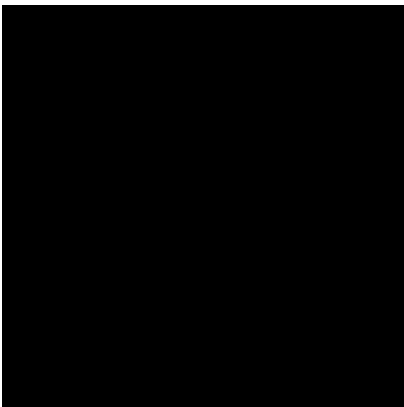
Answer: A

69) $(x - 5)^2 + y^2 = 4$
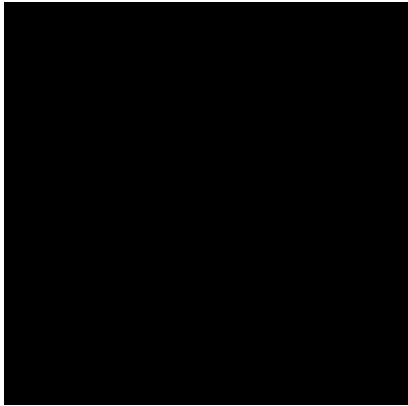
B)
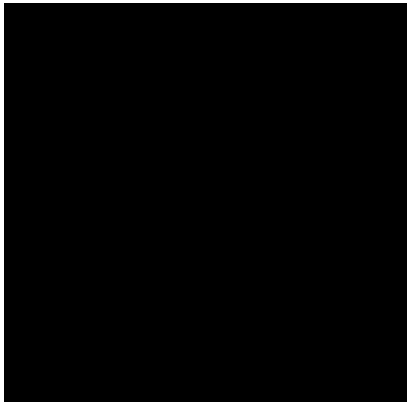
C)

D)
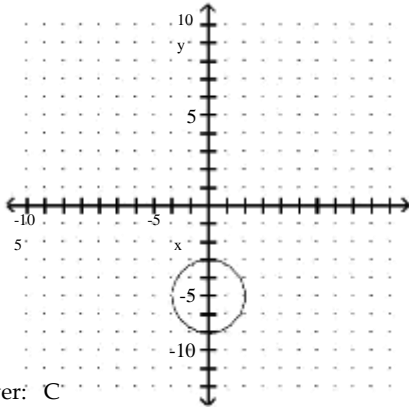
Answer: C

Use the graph to determine   the equation   of the circle   in center-radius form.
70)
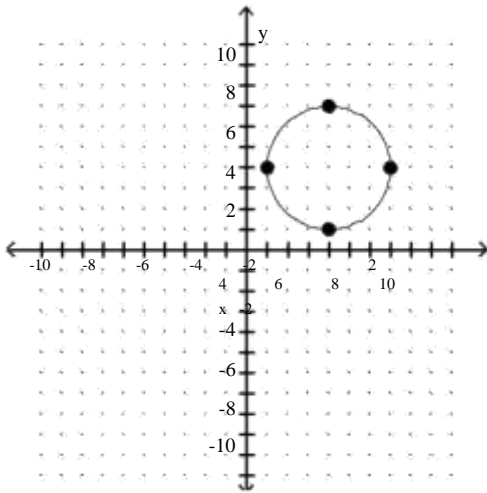
A) $(x - 4)^2 + (y - 4)^2 = 9$ B)
$(x - 4)^2 + (y - 4)^2 = 3$ C) $(x + 4)^2 + (y + 4)^2 = 3$

D) $(x + 4)^2 + (y + 4)^2 = 9$

Answer: A

71)
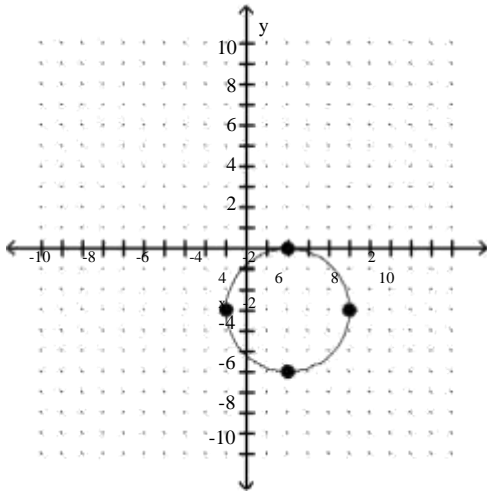
A) $(x - 2)^2 + (y + 3)^2 = 3$ B)

$(x + 2)^2 + (y - 3)^2 = 9$ C) $(x$

$+ 2)^2 + (y - 3)^2 = 3$

D) $(x - 2)^2 + (y + 3)^2 = 9$

Answer: D

72)
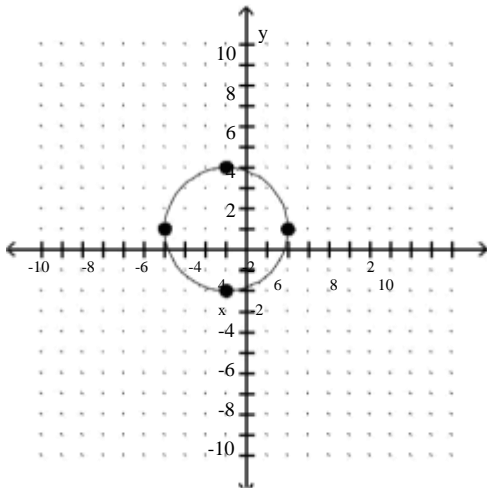
A) $(x + 1)^2 + (y - 1)^2 = 9$ B)

$(x - 1)^2 + (y + 1)^2 = 9$ C) $(x$

$- 1)^2 + (y + 1)^2 = 3$

D) $(x + 1)^2 + (y - 1)^2 = 3$

Answer: A

73)
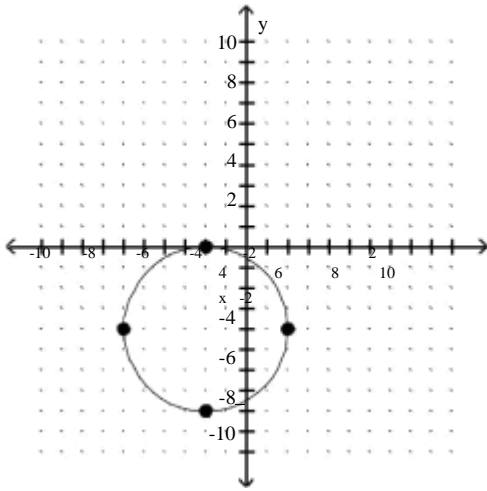
A) $(x + 2^2 + (y + 4)^2 = 4$ B)

$(x + 2)^2 + (y + 4)^2 = 16$ C) $(x$

$- 2)^2 + (y - 4)^2 = 16$

D) $(x - 2)^2 + (y - 4)^2 = 4$

Answer: B

Decide whether or not the equation has a circle as its graph. If it does not, describe the

graph. 74) $x^2 + y^2 + 10x - 18y + 42 = 0$

A) yes

B) no; the graph is the point (5, -9)

C) no; the graph is the point (-5, 9)

D) no; the graph is nonexistent

Answer: A

75) $x^2 + y^2 - 8x + 12y - 29 = 0$

A) no; the graph is nonexistent

B) yes

C) no; the graph is the point (-4, 6)

D) no; the graph is the point (4, -6)

Answer: B

76) $x^2 + y^2 + 6x - 18y + 90 = 0$

A) no; the graph is the point (-3, 9)

B) no; the graph is nonexistent

C) no; the graph is the point (3, -9)

D) yes

Answer: A

77) $x^2 + y^2 + 16x + 12y + 211 = 0$

A) no; the graph is nonexistent

B) no; the graph is the point (-8, -6)

C) no; the graph is the point (8, 6)

D) yes

Answer: A

78) $5x^2 + 5y^2 + 40x - 30y + 120 = 0$

      A) no; the graph is the point (4, -3)

      B) yes

      C) no; the graph is the point (-4, 3)

      D) no; the graph is nonexistent

    Answer: B

Find the center and radius of the circle.

79) $x^2 + y^2 + 4x - 16y - 13 = 0$

      A) center: (8, -2); radius: 9

      B) center: (2, -8); radius: 81

      C) center: (-8, 2); radius: 81

      D) center: (-2, 8); radius: 9

    Answer: D

80) $x^2 + y^2 - 2x + 10y - 55 = 0$

      A) center: (1, -5); radius: 9

      B) center: (-1, 5); radius: 81

      C) center: (5, -1); radius: 81

      D) center: (-5, 1); radius: 9

    Answer: A

81) $x^2 + y^2 + 16x + 6y + 24 = 0$

      A) center: (-8, -3); radius: 7

      B) center: (3, 8); radius: 49

      C) center: (8, 3); radius: 49

      D) center: (-3, -8); radius: 7

    Answer: A

82) $5x^2 + 5y^2 + 20x - 30y - 60 = 0$ A)
center: (-2, 3), radius: 5

      B) center: (2, -3), radius: 25

      C) center: (-3, 2), radius: 25

      D) center: (3, -2), radius: 5

    Answer: A

Find the center-radius form of the circle described or graphed.

83) a circle having a diameter with endpoints (3, -4) and (3, 4)

    A) $(x - 3)^2 + y^2 = 16$ B)

    $(x + 4)^2 + y^2 = 9$ C) (x

    $- 3)^2 + y^2 = 4$

    D) $x^2 + (y + 4)^2 = 9$

    Answer: A

84) a circle having a diameter with endpoints (-2, 3) and (8, -5)

A) $x^2 + (y + 1)^2 = 25$ B)
$(x - 3)^2 + y^2 = 16$

C) $(x - 3)^2 + (y + 1)^2 = 41$ D)
$(x + 1)^2 + (y - 3)^2 = 41$

Answer: C

85) a circle having a diameter with endpoints (4, -6) and (-6, -5)

A) $\left(x - 1\right)^2 + \left(y + \dfrac{11}{2}\right)^2 = 5$

B) $\left(x + 1\right)^2 + \left(y + \dfrac{11}{2}\right)^2 = \dfrac{101}{4}$

C) $\left(x - 1\right)^2 + \left(y - \dfrac{11}{2}\right)^2 = 125$

D) $\left(x - 5\right)^2 + \left(y + \dfrac{1}{2}\right)^2 = 101$

Answer: B

86) 86)
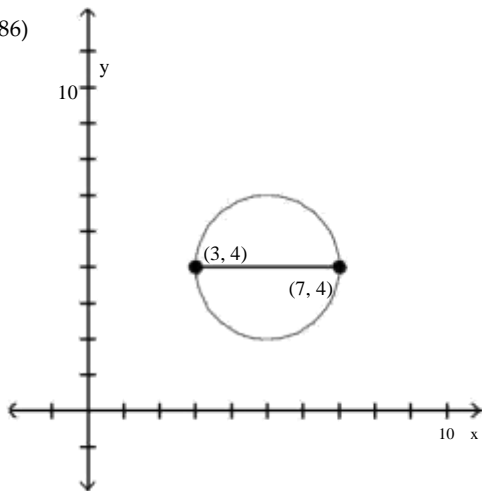
A) $(x + 5)^2 + (y + 4)^2 = 4$ B)
$(x - 5)^2 + (y - 4)^2 = 4$ C) $(x + 5)^2 + (y + 4)^2 = 2$

D) $(x - 5)^2 + (y - 4)^2 = 2$

Answer: B

87) 87)
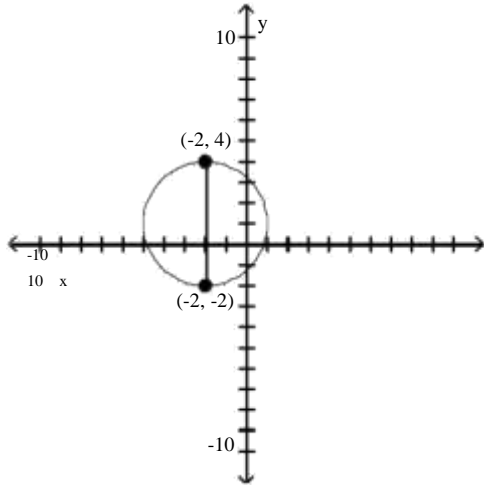
A) $(x + 2)^2 + (y - 1)^2 = 3$ B)

$(x - 2)^2 + (y + 1)^2 = 3$ C) $(x$

$+ 2)^2 + (y - 1)^2 = 9$

D) $(x - 2)^2 + (y + 1)^2 = 9$

Answer: C

Solve the problem.

88) Suppose that receiving stations X, Y, and Z are located on a coordinate plane at the points (0, 9),   (-12, 17), and (-8, -7) respectively. The epicenter of an earthquake is determined to be 5 units from X, 15 units from Y, and 13 units from Z. Where on the coordinate plane is the epicenter located?

A) at (-2, 5)

B) at (-2, 4)

C) at (-3, 5)

D) at (-4, 7)

Answer: C

89) The locations of three receiving stations and the distances to the epicenter of an earthquake are contained in the following three equations: $(x + 5)^2 + (y + 3)^2 = 4$, $(x + 7)^2 + (y + 5)^2 = 4$, $(x - 1)^2 + (y + 13)^2 = 100$. Determine the location of the epicenter.

A) at (-5, -5)

B) at (-4, -6)

C) at (-4, -5)

D) at (-6, -3)

Answer: A

90) Find the center-radius form of the equation of a circle with center (5, 7) and tangent to the x-axis. A)

$(x + 5)^2 + (y + 7)^2 = 49$

B) $(x - 5)^2 + (y - 7)^2 = 25$ C)

$(x - 5)^2 + (y - 7)^2 = 49$

D) $(x + 5)^2 + (y + 7)^2 = 25$

Answer: C

91) Find the equation of a circle with center at (-6, 2), passing through the point (-3, 6). Write it in center-radius form.

A) $(x - 6)^2 + (y + 2)^2 = 25$

B) $(x + 6)^2 + (y - 2)^2 = 25$ C)

$(x + 6)^2 + (y - 2)^2 = 5$

D) $(x - 6)^2 + (y + 2)^2 = 5$

Answer: B

92) Find all points (x, y) with x = y that are 5 units from (9, 2).

A) (5, 5) and (6, 6)

B) (-5, -5) and (-6, -6)

C) (5, 5) and (-6, -6)

D) (-5, -5) and (6, 6)

Answer: A

93) Find all values of y such that the distance between (2, y) and (-10, 3) is 13.   A)

-8, 2

B) -2, 8

C) -8, -2

D) 2, 8

Answer: B

94) A circle has a diameter with endpoints (-2, 1) and (18, 17). Find the coordinates of the center. A)

(16, 18)

B) (38, 33)

C) (8, 9)

D) (-12, -7)

Answer: C

95) A circle has a diameter with endpoints (-2, 1) and (22, 11). Find the radius. A)

13 $\sqrt{}$

B) 13

C) $\sqrt{}$

26 D)

26

Answer: B

96) Find the center-radius form of the equation of the circle having a diameter with endpoints (-5, 1) and (3, 7).   A)

$(x - 1)^2 + (y + 4)^2 = 5$

B) $(x + 3)^2 + (y - 7)^2 = 10$ C)

$(x + 1)^2 + (y - 4)^2 = 25$

D) $(x - 3)^2 + (y + 7)^2 = 100$

Answer: C

Decide   whether   the relation   defines   a function. 97) {(1, -4), (2, -2), (6, 7), (8, -7), (11 -1)}   A) Function

B) Not a function

Answer: A

98) {(-5, 1), (-3, -6), (3, -2), (3, 3)}
    A) Function
    B) Not a function
Answer: B

99) {(-8, 2), (-8, 8), (1, 7), (3, 6), (8, 4)}
    A) Not a function
    B) Function
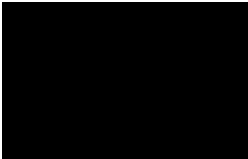Answer: A

100) {(-5, 4), (-2, -8), (-1, 8), (7, -2)}
    A) Function
    B) Not a function
Answer: A
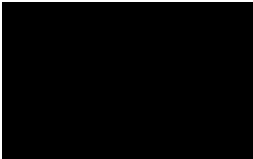
101)

    A) Function
    B) Not a function
Answer: A

102)

    A) Function
    B) Not a function
Answer: B

103)

    A) Function
    B) Not a function
Answer:
B

104)   Student Test
Score

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

A) Function
B) Not a function

Answer: A

105)   Student Test
Score

Name	Test Score
Bob L.	85
Susan H.	83
Jim H.	85
Bruce B.	96

A) Not a function

B) Function

Answer: B

106) Annual New Telemarketing Companies

Year	Number
1995	75
1996	150
1997	225
1998	235
1999	375

A) Function

B) Not a function

Answer: A

107)107)
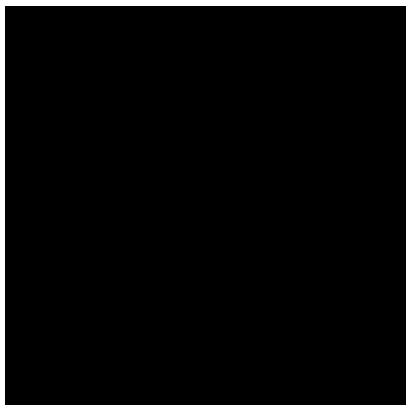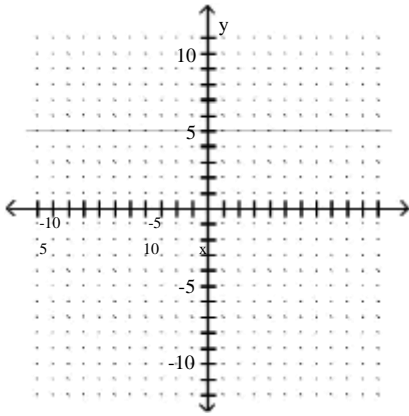

A) Function
B) Not a function

Answer: A
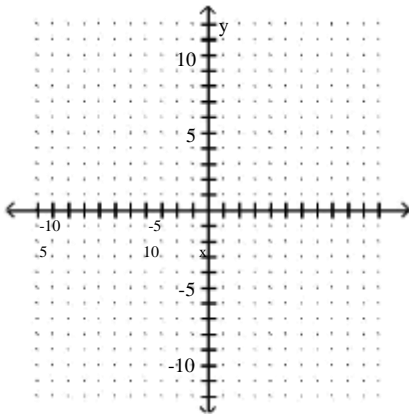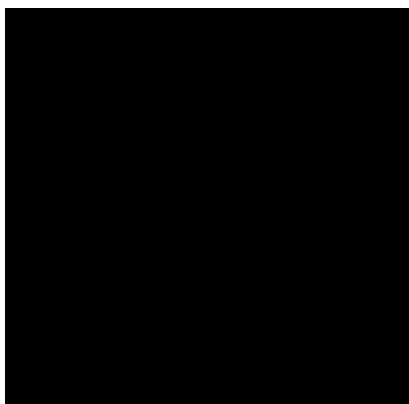
108)108)

A) Function
B) Not a function

Answer: A

109)109)

A) Not a function
B) Function

Answer: A

110)110)
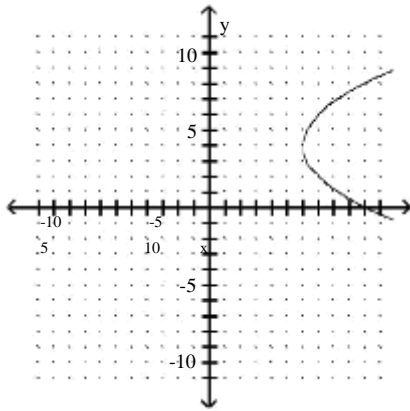

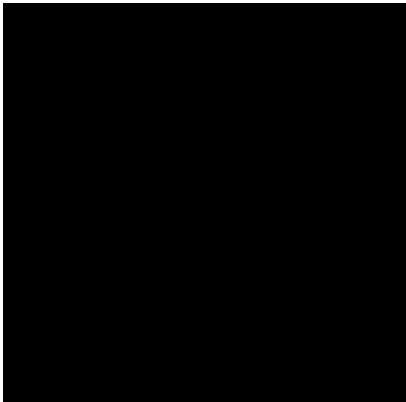A) Not a function
B) Function

Answer:
B

111)111)

   A) Function
   B) Not a function

Answer: B
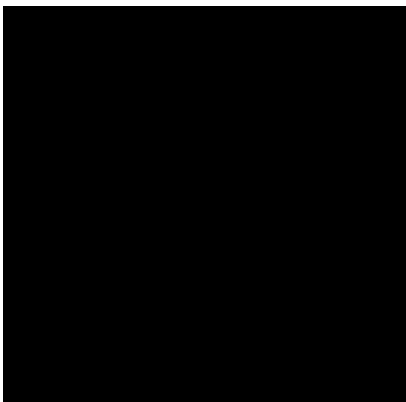
112)112)

   A) Function
   B) Not a function

Answer: B
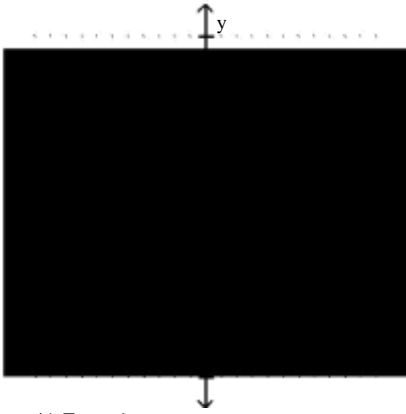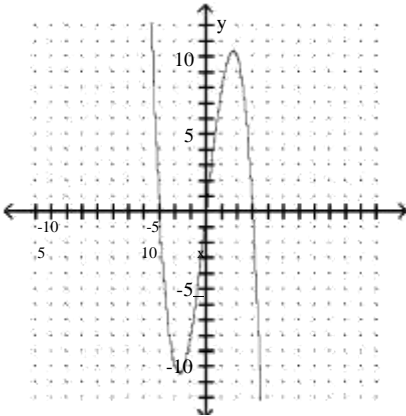
113)113)

   A) Function
   B) Not a function

Answer: A
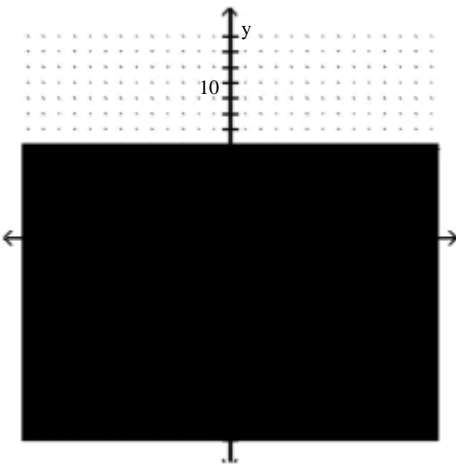
114)114)

A) Function
B) Not a function

Answer: A

115)115)

A) Not a function
B) Function

Answer: B

116)116)

A) Not a function
B) Function

Answer: A

Give the domain and range of the relation

117) {(3, 7), (-2, -9), (-6, -4), (5, 0)}
   A) domain: {-9, -6, -4, -2}; range: {3, 5, 7}
   B) domain: {3, 5, 7}; range: {-9, -6, -4, -2}
   C) domain: {-6, -2, 3, 5}; range: {-9, -4, 0, 7}
   D) domain: {-9, -4, 0, 7}; range: {-6, -2, 3, 5}

   Answer: C

118) {(3, 7), (-1, -8), (-7, -4), (5, -8)}
   A) domain: {-8, -4, 7}; range: {-7, -1, 3, 5}
   B) domain: {3, 5, 7}; range: {-8, -7, -4, -1}
   C) domain: {-8, -7, -4, -1}; range: {3, 5, 7}
   D) domain: {-7, -1, 3, 5}; range: {-8, -4, 7}

   Answer: D

119) {(2, 2), (-1, -1), (-6, -6), (5, 5)}
   A) domain: {-6, -1}; range: {2, 5}
   B) None of these
   C) domain: {-6, -1, 2, 5}; range: {-6, -1, 2, 5}
   D) domain: {2, 5}; range: {-6, -1}

   Answer: C
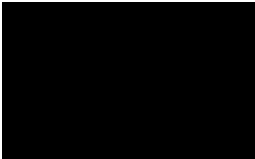
120)

   A) domain: {5, 8, 13}; range: {4, 7, 12}
   B) None of these
   C) domain: {4, 5, 7}; range: {8, 12, 13}
   D) domain: {4, 7, 12}; range: {5, 8, 13}

   Answer: D

121)

   A) domain: {5, 13}; range: {4, 7, 12}
   B) domain: {4, 7, 12}; range: {5, 13}
   C) None of these
   D) domain: {4, 5, 7}; range: {12, 13}

   Answer: B

122)

   A) domain: {5, 8, 13}; range: {4, 7, 12}
   B) domain: {4, 12}; range: {5, 13}
   C) None of these
   D) domain: {4, 7, 12}; range: {5, 8, 13}

Answer: D

123)

   A) domain: {4, 7, 12};   range: {5, 8, 13}
   B) domain: {4, 8, 12}; range: {5, 7, 13}
   C) None of these
   D) domain: {5, 8, 13}; range: {4, 7, 12}

Answer: A
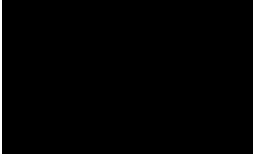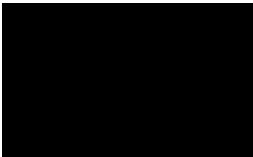
124)

   A) domain: {5, 8, 13};   range: {4, 7, 12}
   B) domain: {4, 8, 12};   range: {5, 7, 13}
   C) None of these
   D) domain: {4, 7, 12}; range: {5, 8, 13}

Answer: A

125) Annual New Telemarketing   Companies

Year	Number
1995	56
1996	112
1997	187
1998	178
1999	318

   A) None of these
   B) domain: {1995, 1996, 1997, 1998, 1999};   range: {56, 112, 178, 187, 318}
   C) domain: {56, 112, 178, 187, 318};   range: {1995, 1996, 1997, 1998, 1999}
   D) domain: {Year}; range: {Number}

Answer: B