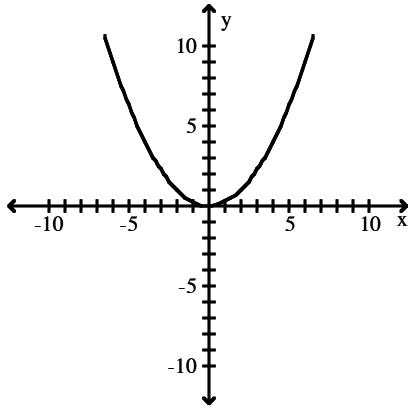


Match the given equation with one of the graphs.

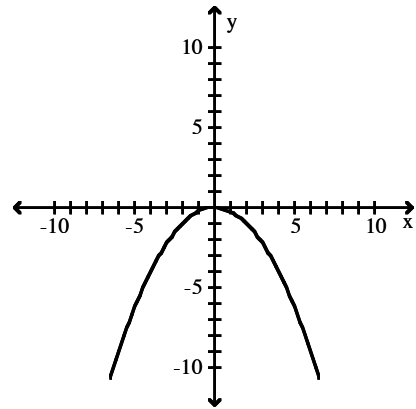
1) $y^2 = -4x$

1) _____

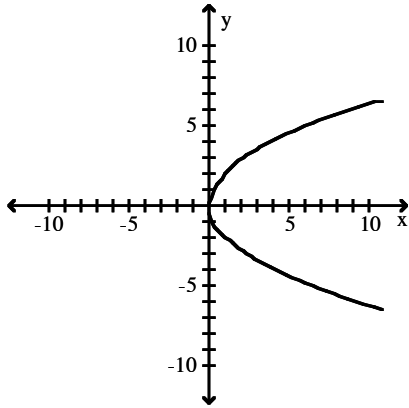
A)



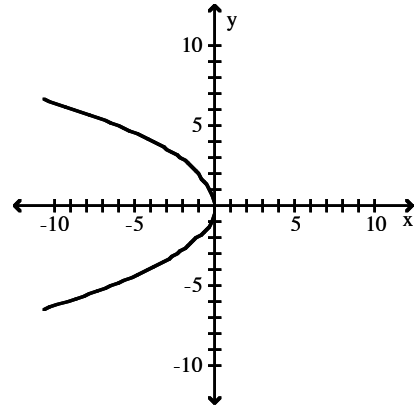
B)



C)

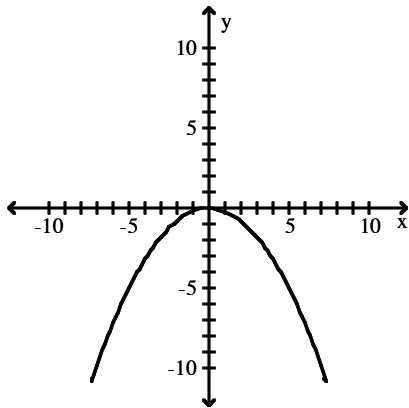


D)

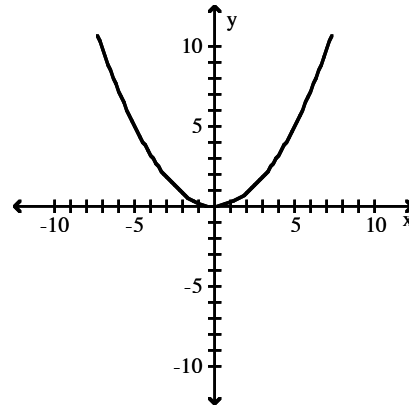


2) $y^2 = -5x$

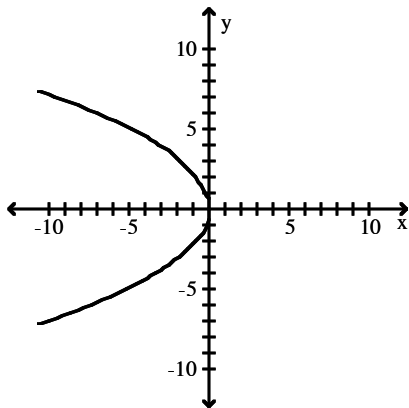
A)



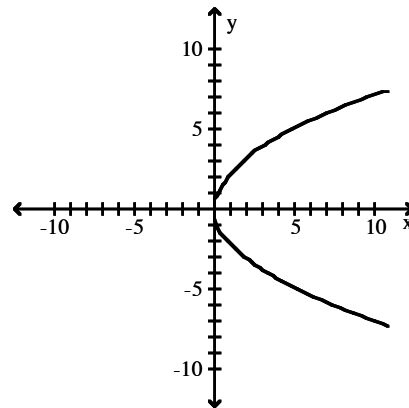
B)



C)



D)

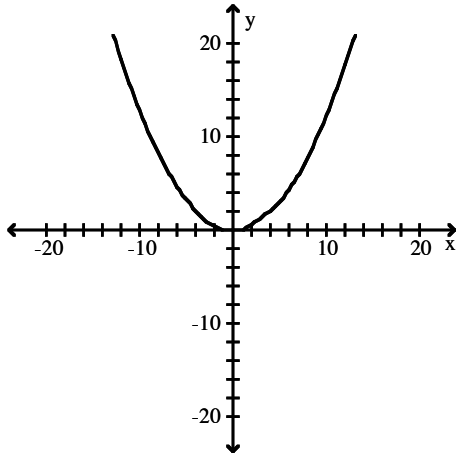


2) _____

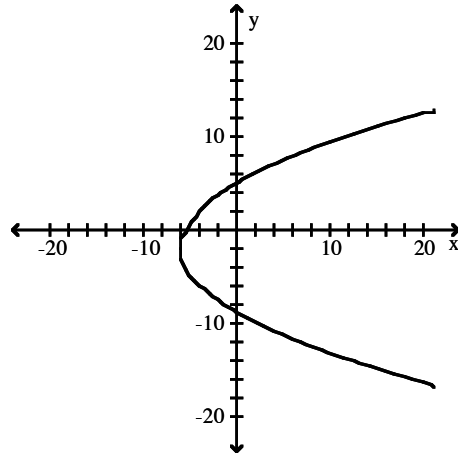
3) $(y + 2)^2 = 8(x + 6)$

3) _____

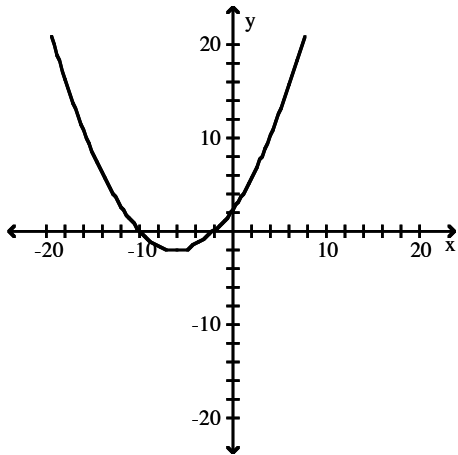
A)



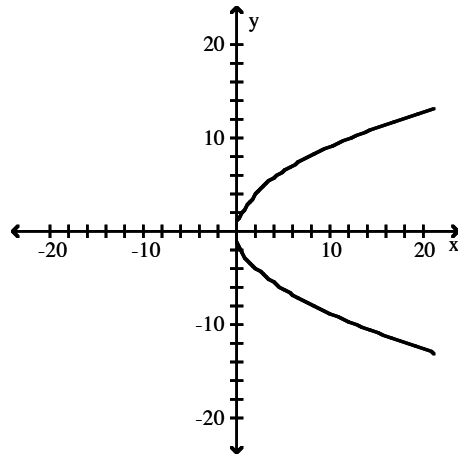
B)



C)



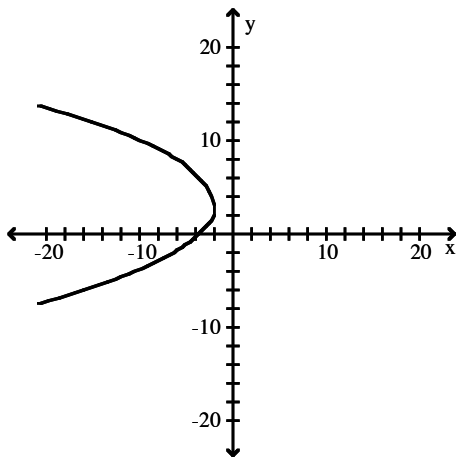
D)



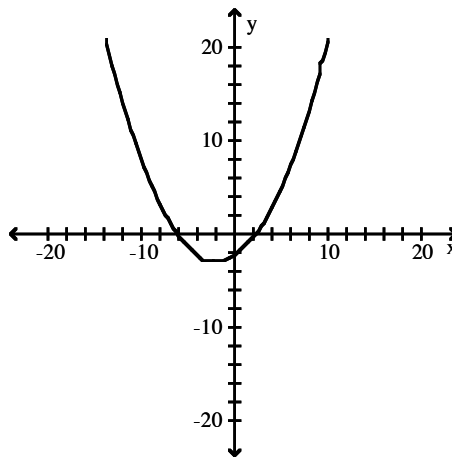
4) $(y - 3)^2 = -6(x + 2)$

4) _____

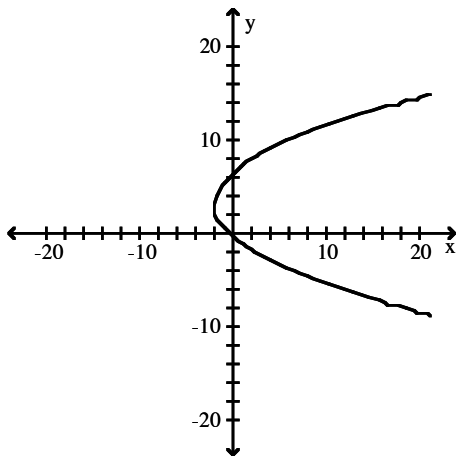
A)



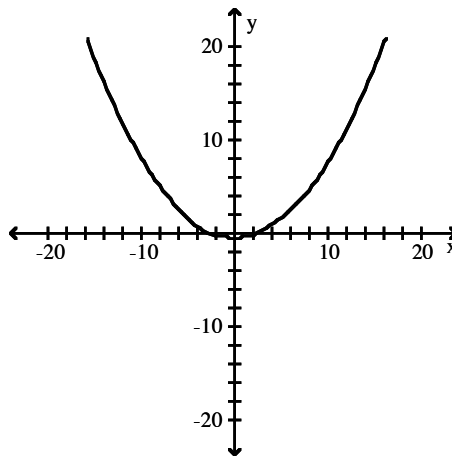
B)



C)



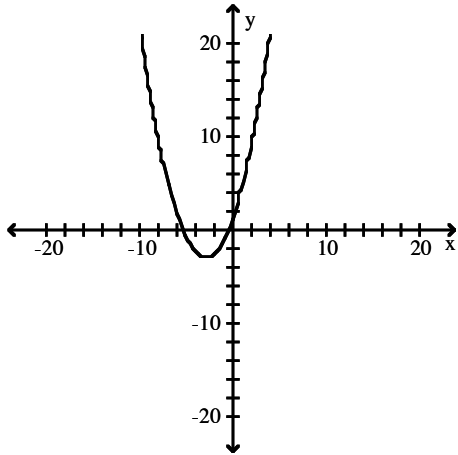
D)



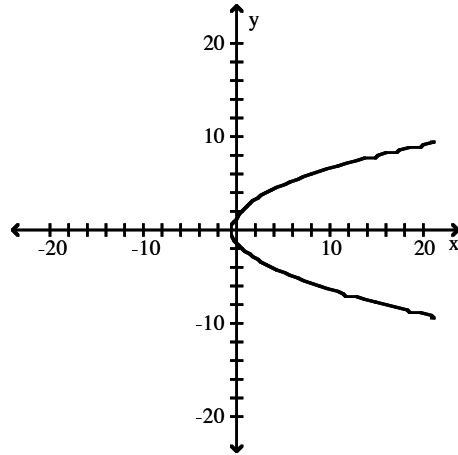
5) $3y^2 - 12x - 6 = 0$

5) _____

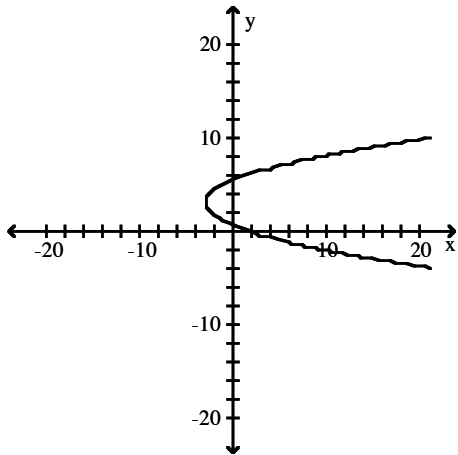
A)



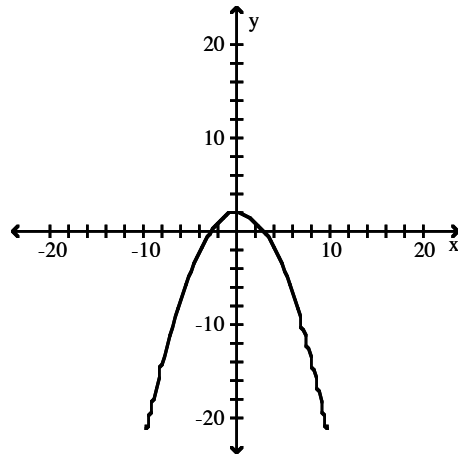
B)



C)



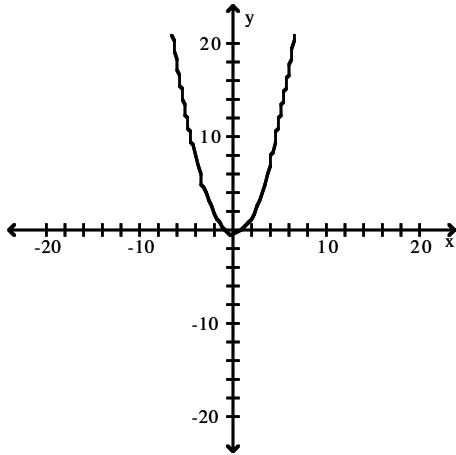
D)



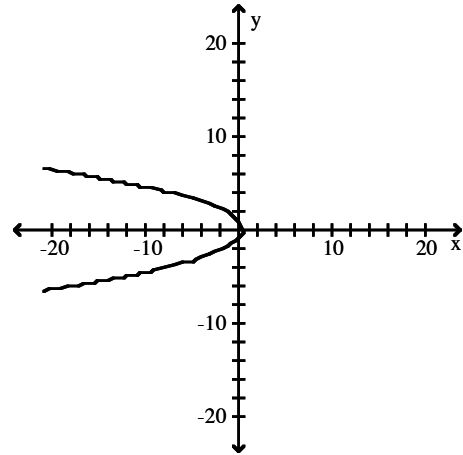
6) $(x+4)^2 = 2(y+1)$

6) _____

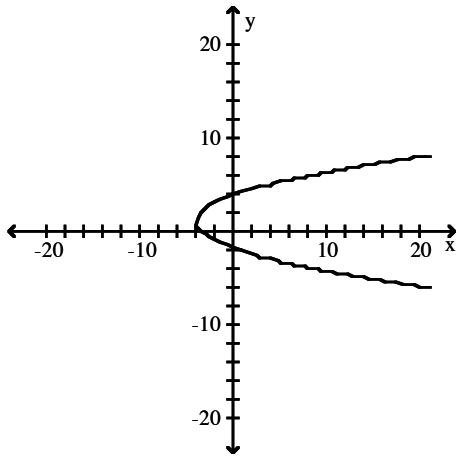
A)



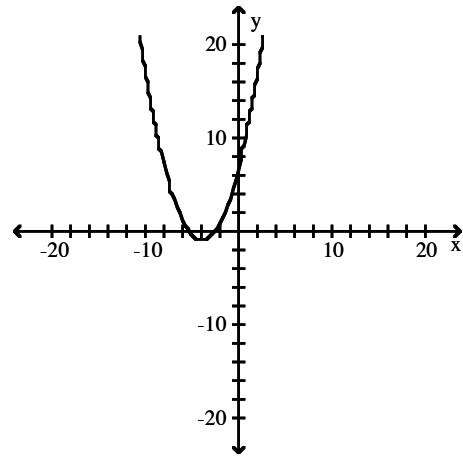
B)



C)



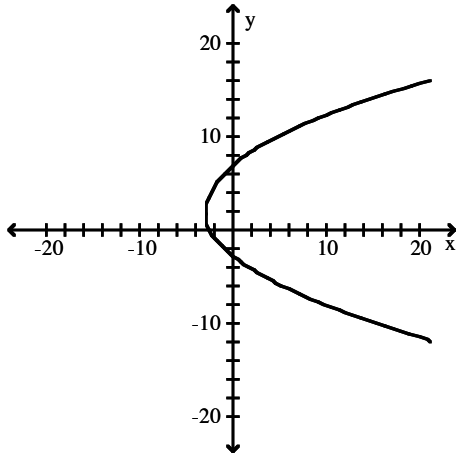
D)



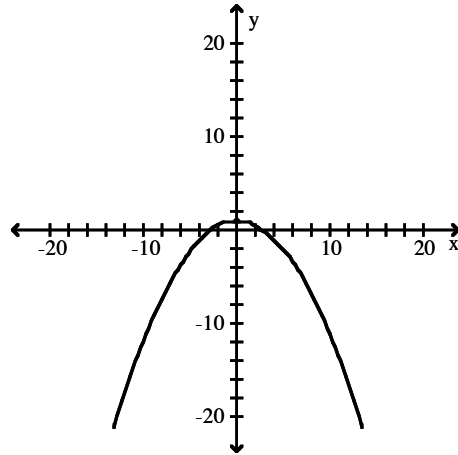
7) $2x^2 + 16y = 16$

7) _____

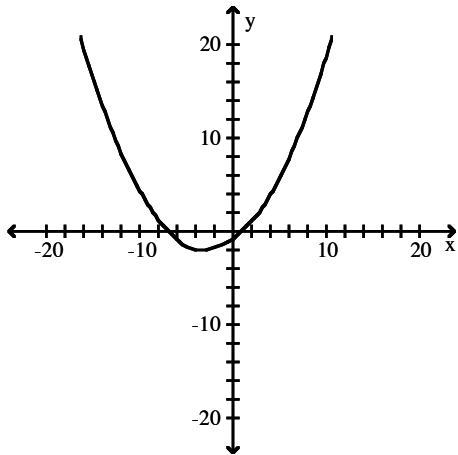
A)



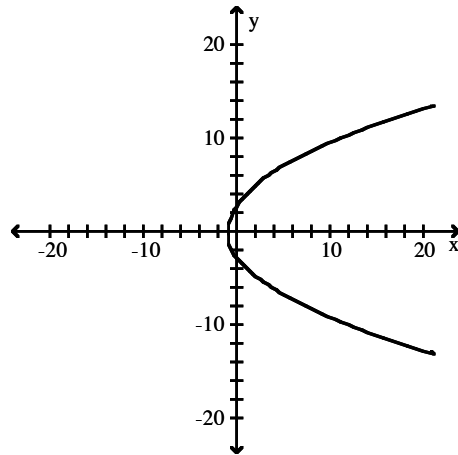
B)



C)



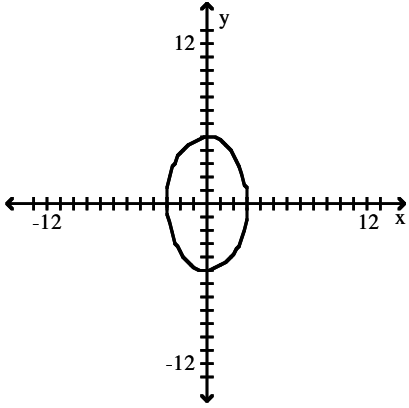
D)



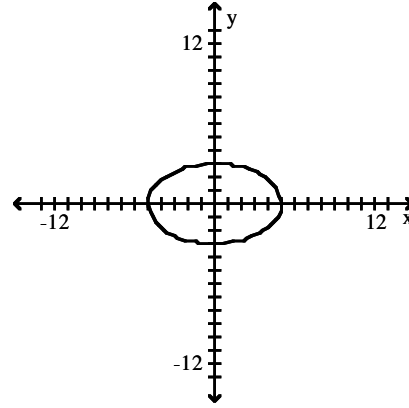
8) $36x^2 + 25y^2 = 900$

8) _____

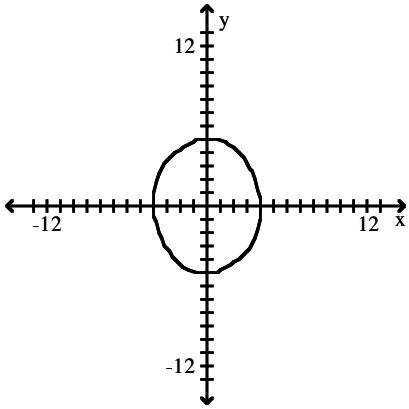
A)



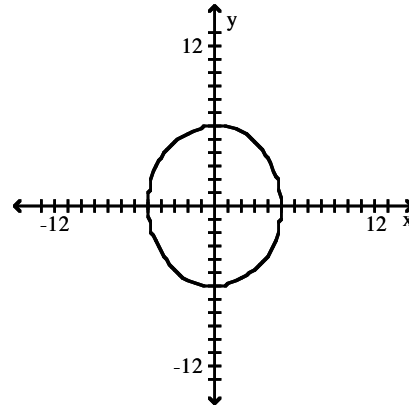
B)



C)



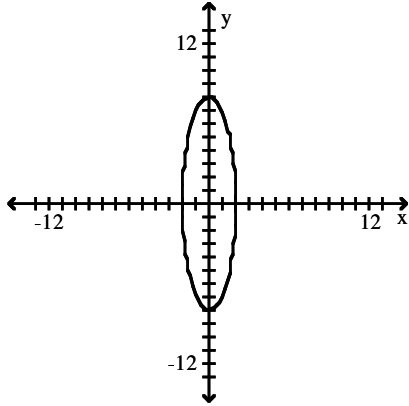
D)



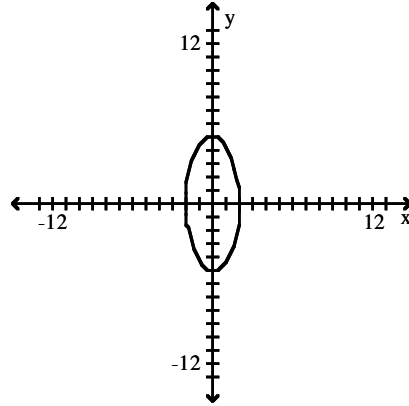
9) $64x^2 + 4y^2 = 256$

9) _____

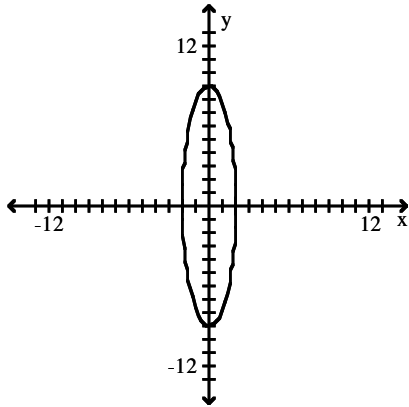
A)



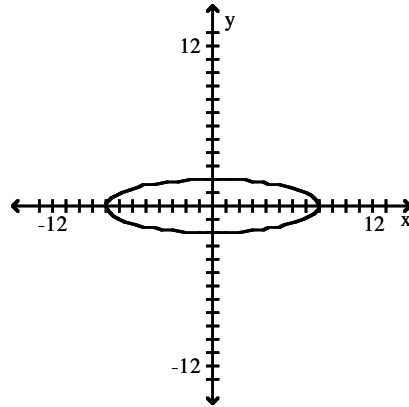
B)



C)



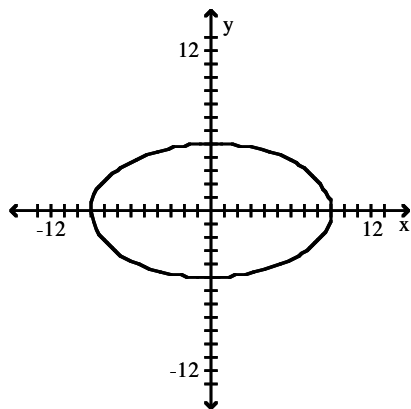
D)



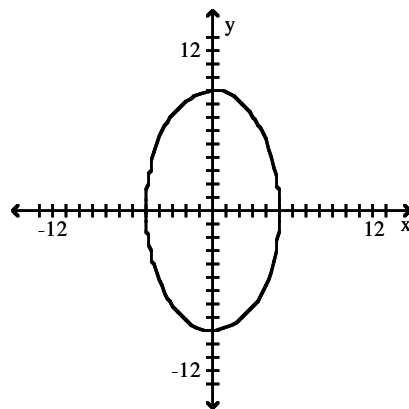
10) $100x^2 + 25y^2 = 2500$

10) _____

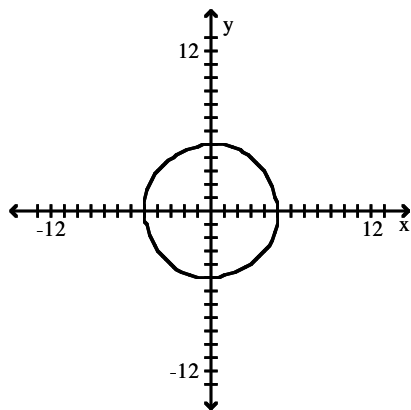
A)



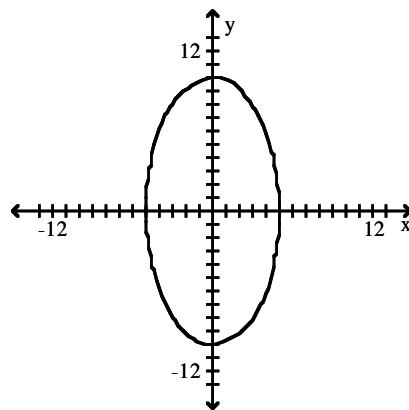
B)



C)



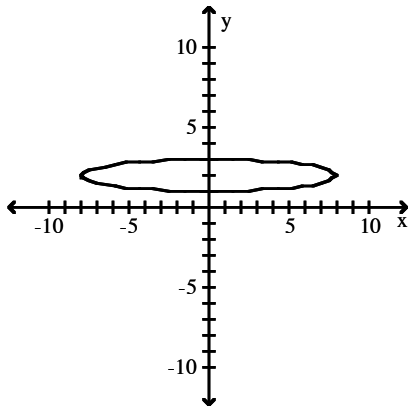
D)



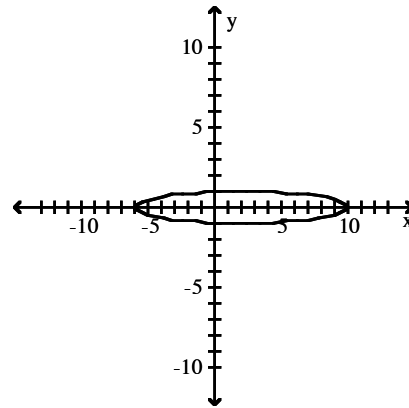
11) $64x^2 + y^2 - 256x + 192 = 0$

11) _____

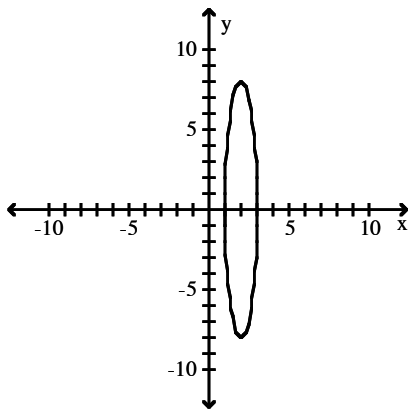
A)



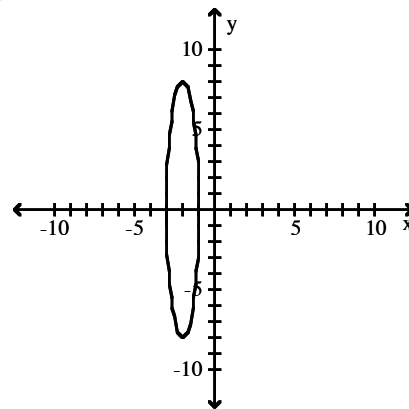
B)



C)



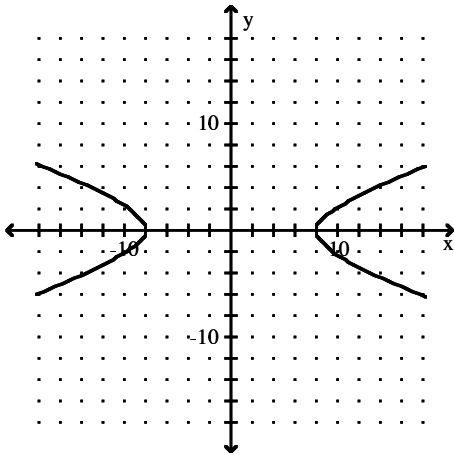
D)



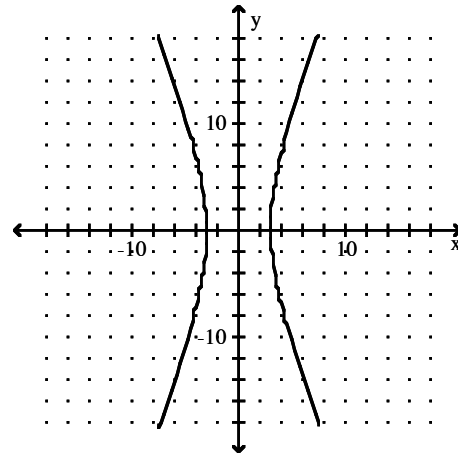
$$12) \frac{x^2}{9} - \frac{y^2}{64} = 1$$

12) _____

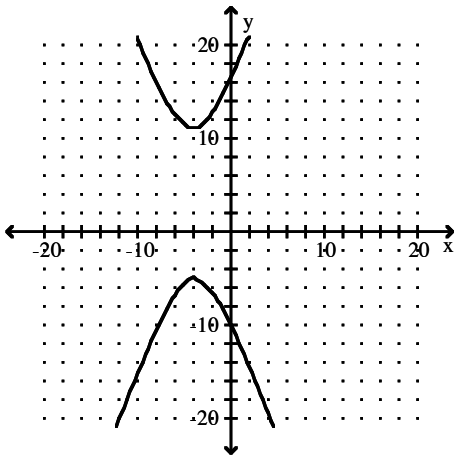
A)



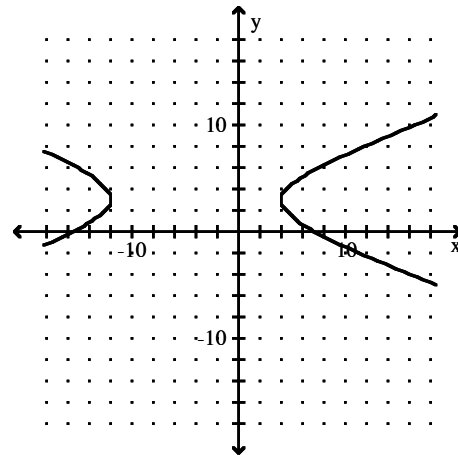
B)



C)



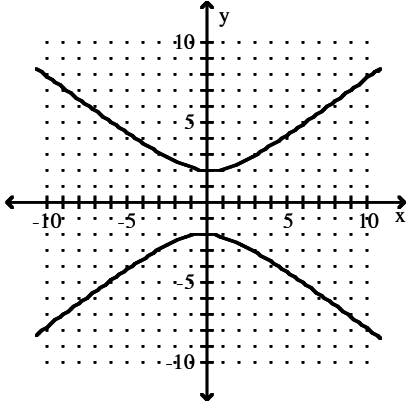
D)



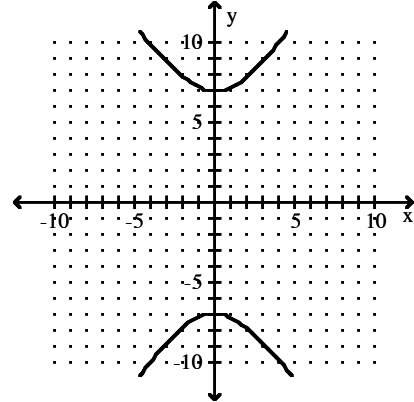
$$13) \frac{y^2}{16} - \frac{x^2}{49} = 1$$

13) _____

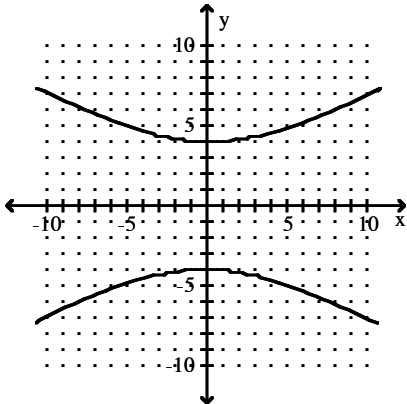
A)



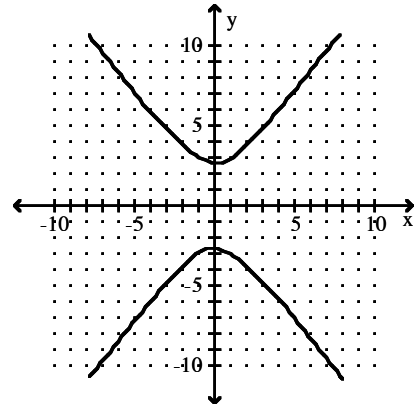
B)



C)



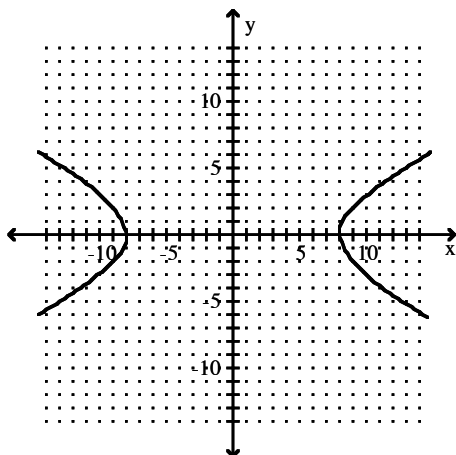
D)



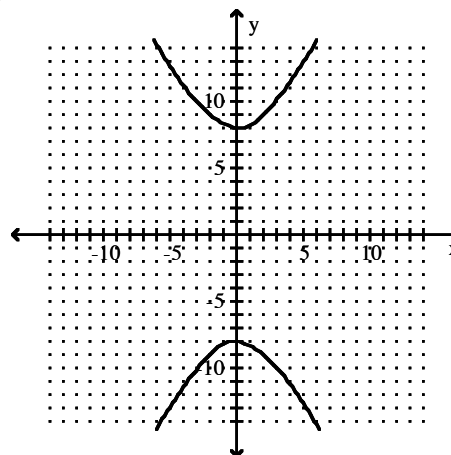
14) $y^2 - 4x^2 = 64$

14) _____

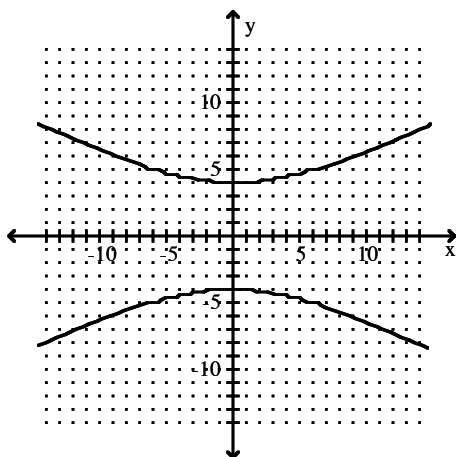
A)



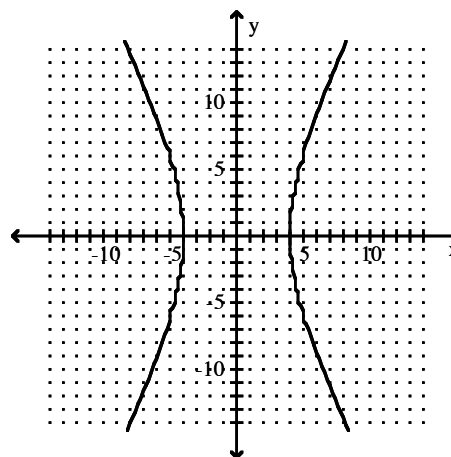
B)



C)



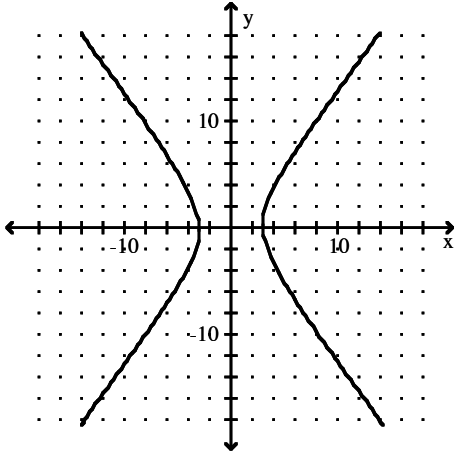
D)



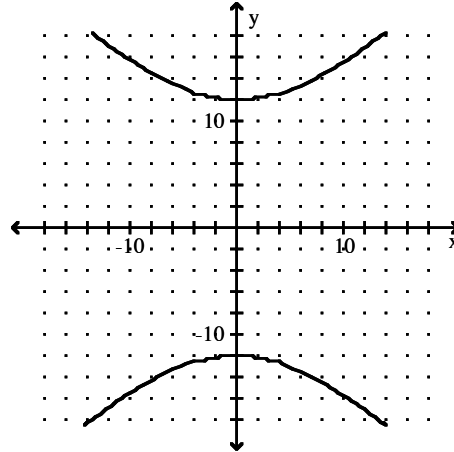
15) $16x^2 - 9y^2 = 144$

15) _____

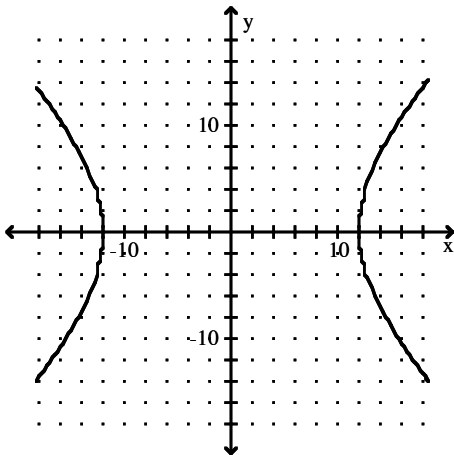
A)



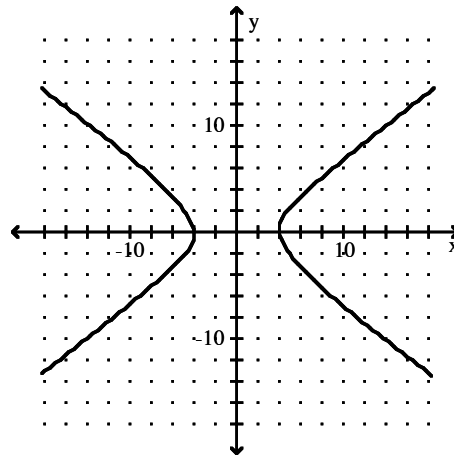
B)



C)



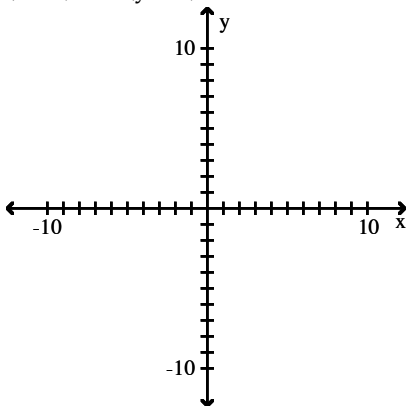
D)



Draw the graph of the equation.

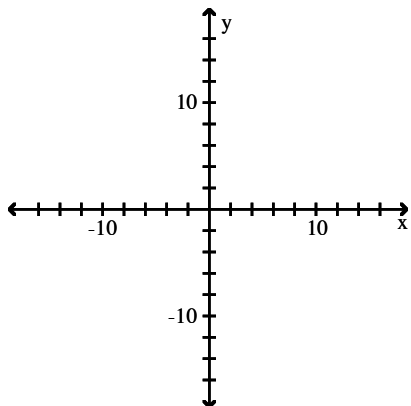
16) $(x+2)^2 = 2(y-4)$

16) _____



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

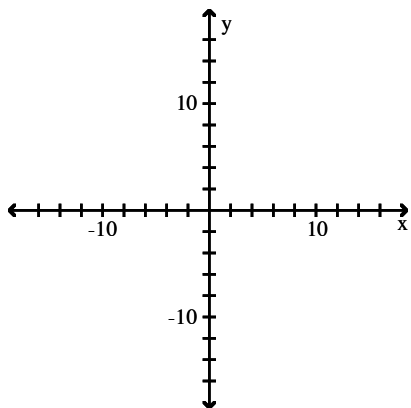
17) _____



Draw the graph of the equation. Label two points on the graph, the focus, the directrix.

18) $(y - 7)^2 = 6(x + 1)$

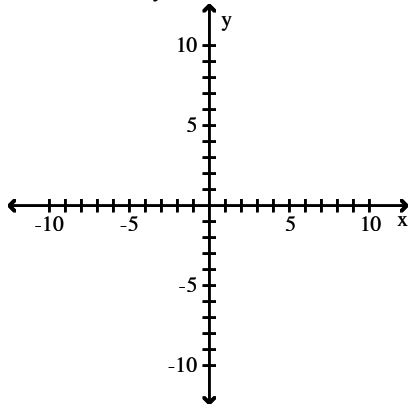
18) _____



Draw the graph of the equation. label the vertex, focus and directrix.

19) $(x - 2)^2 = -5(y - 1)$

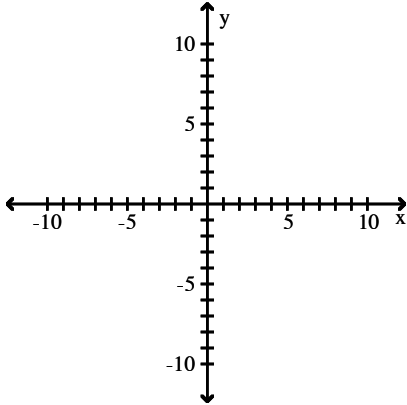
19) _____



Draw the graph of the equation.

20) $x = y^2 + 3y + 4$

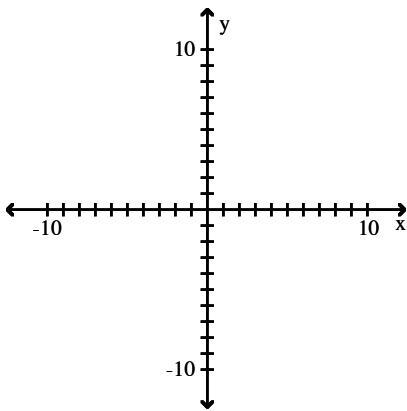
20) _____



Draw the graph of the equation. Label at least two points on the graph including the vertex, and focus.

21) $x^2 + y - 7 = 0$

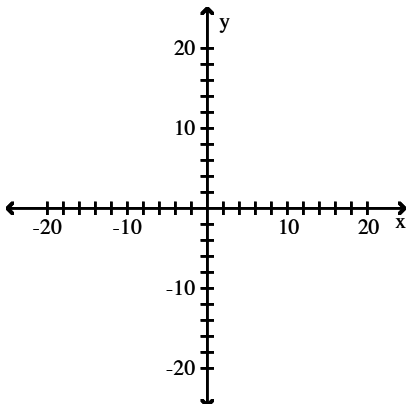
21) _____



Draw the graph of the equation. Label the vertex, focus, directrix.

22) $x^2 - 16y - 8x = 0$

22) _____



Find an equation of a parabola satisfying the given conditions.

23) Vertex (0, 0), focus (0, -4)

23) _____

24) Focus (0, 2), directrix $y = -2$

24) _____

25) Focus $\left(0, \frac{3}{4}\right)$, directrix $y = -\frac{3}{4}$

25) _____

26) Focus $(0, -3\pi)$, directrix $y = 3\pi$

26) _____

27) Focus $(-2, -3)$, directrix $y = 13$

27) _____

28) Focus $(-5, 9)$, directrix $x = 1$

28) _____

29) Focus $(-8, 9)$, directrix $y = -1$

29) _____

Find an equation of an ellipse satisfying the given conditions.

30) Foci at $(-5, 0)$, $(5, 0)$; vertices at $(-8, 0)$, $(8, 0)$

30) _____

31) Foci at $(-4, 0)$ and $(4, 0)$; length of major axis: 14

31) _____

32) Vertices: $(-13, 0)$ and $(13, 0)$; length of minor axis: 16

32) _____

33) Foci: $(-2, 1)$ and $(-2, -5)$; length of major axis: 10

33) _____

34) Foci: $(-2, 2)$ and $(-2, -4)$; length of major axis: 10

34) _____

Find the asymptotes of the hyperbola.

35) $\frac{x^2}{400} - \frac{y^2}{225} = 1$

35) _____

36) $4y^2 - 25x^2 = 100$

36) _____

37) $64y^2 - 9x^2 = 576$

37) _____

38) $\frac{(x+3)^2}{16} - \frac{(y+2)^2}{9} = 1$

38) _____

39) $y^2 - x^2 - 14y + 12x - 3 = 0$

39) _____

40) $y^2 - x^2 - 4y + 8x - 37 = 0$

40) _____

Find the center and the radius of the circle.

41) $x^2 + y^2 + 10x + 6y + 34 = 49$

41) _____

42) $x^2 + y^2 - 16x - 14y = 0$

42) _____

43) $y^2 + 20y + 100 = 6x - x^2 - 5$

43) _____

44) $x^2 + y^2 + 3x - 3y - 118 = 0$

44) _____

Find the center of the ellipse.

45) $16(x - 5)^2 + 25(y - 3)^2 = 400$

45) _____

46) $16(x - 1)^2 + 36(y + 2)^2 = 576$

46) _____

47) $9x^2 + y^2 - 144x + 567 = 0$

47) _____

Find the center of the hyperbola.

48) $\frac{y^2}{49} - \frac{x^2}{36} = 1$

48) _____

49) $16y^2 - 4x^2 = 64$

49) _____

50) $16(x + 3)^2 - 4(y + 6)^2 = 64$

50) _____

51) $7x^2 - y^2 - 70x + 10y - 193 = 0$

51) _____

Find the equation of the hyperbola satisfying the given conditions.

52) Vertices at (5, 0) and (-5, 0); foci at (9, 0) and (-9, 0)

52) _____

53) Center at (0, 0); focus at (0, $\sqrt{13}$); vertex at (0, 3)

53) _____

54) Vertices at (-10, 0) and (10, 0); focus at ($\sqrt{149}$, 0)

54) _____

55) Vertices at (0, 6) and (0, -6); asymptotes $y = \frac{3}{4}x$ and $y = -\frac{3}{4}x$

55) _____

56) Asymptotes $y = \frac{5}{11}x$, $y = -\frac{5}{11}x$; one vertex (11, 0)

56) _____

57) Foci at (-13, 0) and (13, 0); asymptote $y = -\frac{12}{5}x$

57) _____

Find the equation of the parabola with the given properties.

58) Vertex: (-3, 1); horizontal axis of symmetry; containing the point (5, -1)

58) _____

Find the foci of the ellipse.

59) $\frac{(x - 4)^2}{225} + \frac{(y - 3)^2}{81} = 1$

59) _____

Find the foci of the ellipse. Give exact answers, no decimal approximations.

$$60) \frac{(x-2)^2}{16} + \frac{(y+3)^2}{9} = 1$$

60) _____

Find the foci of the ellipse.

$$61) 49x^2 + y^2 - 294x + 392 = 0$$

61) _____

Find the foci of the given hyperbola.

$$62) \frac{x^2}{4} - \frac{y^2}{5} = 1$$

62) _____

$$63) 36x^2 - y^2 = 36$$

63) _____

Find the foci of the given hyperbola. Give exact values, no decimal approximations.

$$64) 25x^2 - y^2 = 25$$

64) _____

Find the foci of the given hyperbola.

$$65) y^2 - x^2 - 10y + 8x - 7 = 0$$

65) _____

Find the focus and directrix of the parabola.

$$66) x = 10y^2$$

66) _____

$$67) x = 9y^2$$

67) _____

$$68) y^2 = 32x$$

68) _____

$$69) x^2 + 20y = 0$$

69) _____

$$70) x^2 + 8y = 0$$

70) _____

Find the vertex, the focus, and the directrix of the parabola.

$$71) (x+4)^2 = -20(y-3)$$

71) _____

$$72) (y-1)^2 = 12(x+3)$$

72) _____

$$73) (y+3)^2 = 4(x-2)$$

73) _____

$$74) x^2 + 10x + 8y + 57 = 0$$

74) _____

$$75) x^2 + 8x - 8y + 24 = 0$$

75) _____

$$76) y = x^2 + 8x + 17$$

76) _____

Find the vertices and the foci of the given ellipse.

$$77) \frac{x^2}{81} + \frac{y^2}{9} = 1$$

77) _____

$$78) \frac{x^2}{81} + \frac{y^2}{16} = 1$$

78) _____

$$79) \frac{x^2}{36} + \frac{y^2}{49} = 1$$

79) _____

$$80) 16x^2 + 9y^2 = 144$$

80) _____

Find the vertices of the ellipse.

$$81) \frac{(x+1)^2}{256} + \frac{(y+2)^2}{400} = 1$$

81) _____

$$82) \frac{(x+2)^2}{16} + \frac{(y-3)^2}{9} = 1$$

82) _____

$$83) 16x^2 - 128x + 25y^2 - 250y + 481 = 0$$

83) _____

$$84) 9x^2 - 72x + 25y^2 - 200y + 319 = 0$$

84) _____

$$85) 16x^2 + y^2 - 192x + 560 = 0$$

85) _____

Find the vertices of the hyperbola.

$$86) \frac{y^2}{16} - \frac{x^2}{4} = 1$$

86) _____

$$87) 4(y+6)^2 - 25(x+1)^2 = 100$$

87) _____

$$88) 16(y-2)^2 - 25(x-6)^2 = 400$$

88) _____

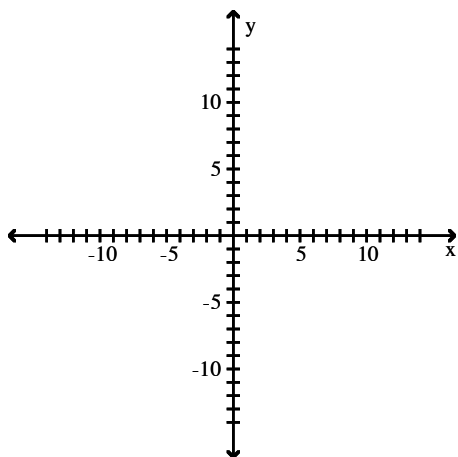
$$89) 16x^2 - 4y^2 + 32x - 32y - 112 = 0$$

89) _____

Graph the circle. label 4 points on the circle.

$$90) x^2 + y^2 - 6x + 12y = -41$$

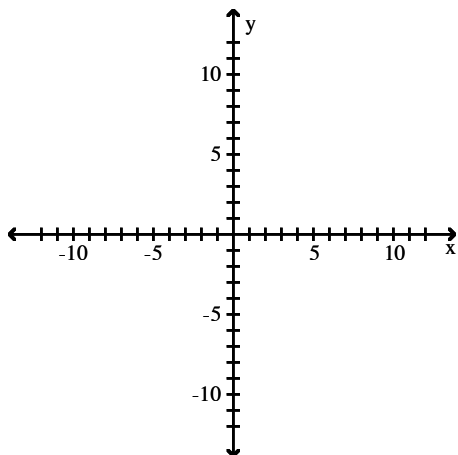
90) _____



Graph the circle. label four points on the circle.

$$91) x^2 + y^2 - 8x = -6y - 16$$

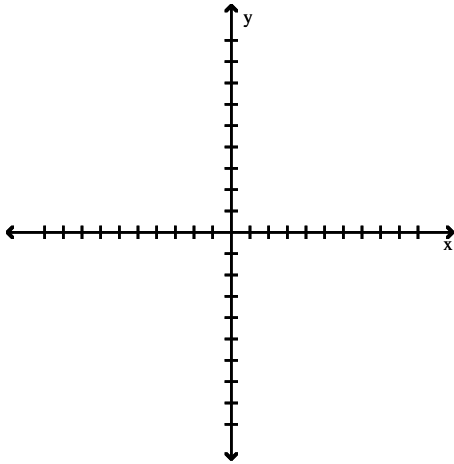
91) _____



Graph the ellipse. Label the vertices, center and foci.

$$92) \frac{x^2}{36} + \frac{y^2}{25} = 1$$

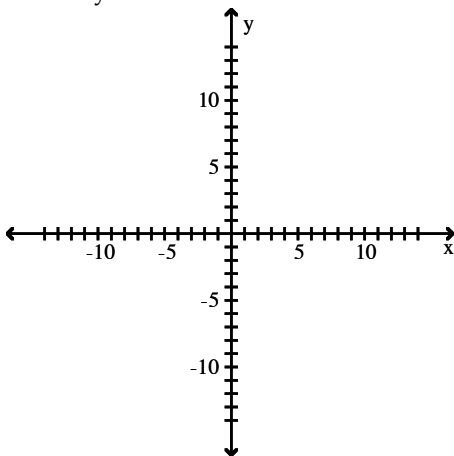
92) _____



Graph the ellipse. Label the vertices, center and foci.

$$93) 9x^2 + 36y^2 = 324$$

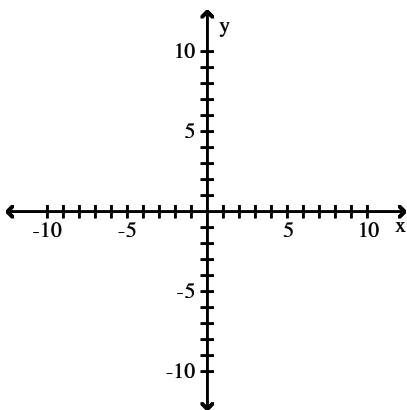
93) _____



Graph the ellipse. Label the vertices and center.

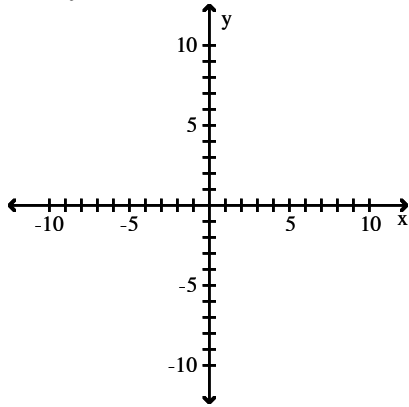
$$94) \frac{(x-1)^2}{9} + \frac{(y+1)^2}{4} = 1$$

94) _____



95) $9x^2 + y^2 - 72x + 135 = 0$

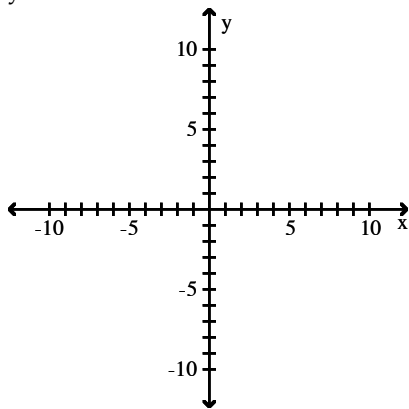
95) _____



Graph the parabola and its vertex, focus, and directrix.

96) $y^2 = 16x$

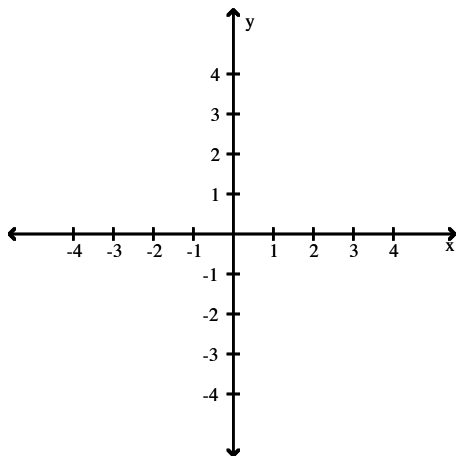
96) _____



Graph the parabola. Label the vertex, focus and directrix.

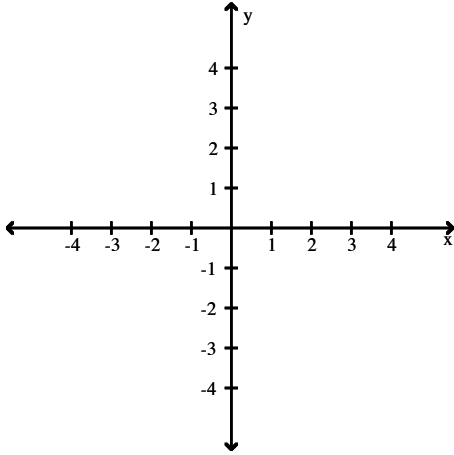
97) $y^2 = -12x$

97) _____



98) $y^2 - 6x = 0$

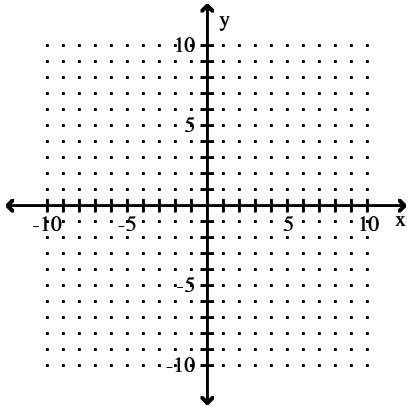
98) _____



Graph. Label the center, vertices, foci.

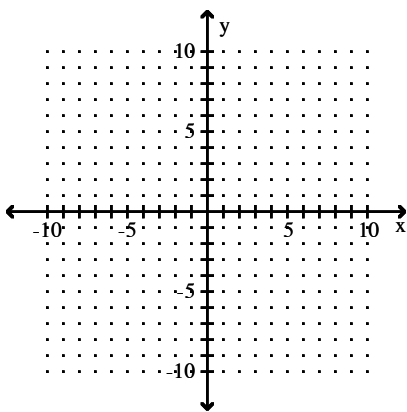
99) $\frac{y^2}{49} - \frac{x^2}{36} = 1$

99) _____



100) $\frac{x^2}{36} - \frac{y^2}{25} = 1$

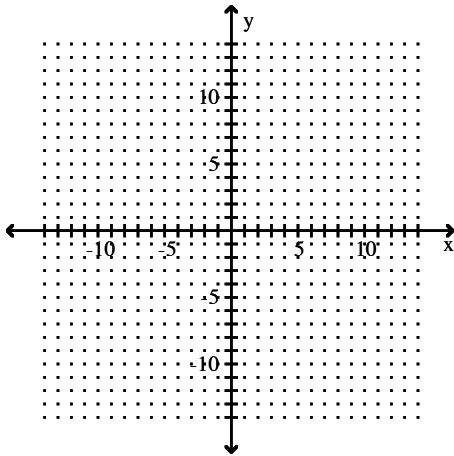
100) _____



Graph. Label the vertices, center, foci.

$$101) y^2 - 4x^2 = 4$$

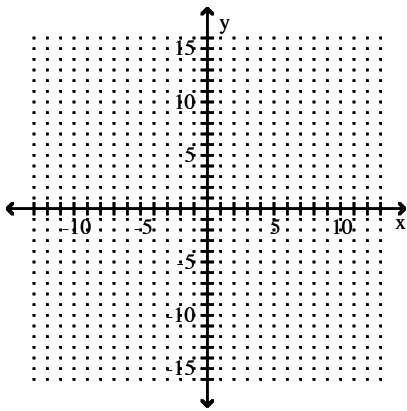
101) _____



Graph. Label the center, vertices, foci.

$$102) \frac{(x+2)^2}{36} - \frac{(y-1)^2}{25} = 1$$

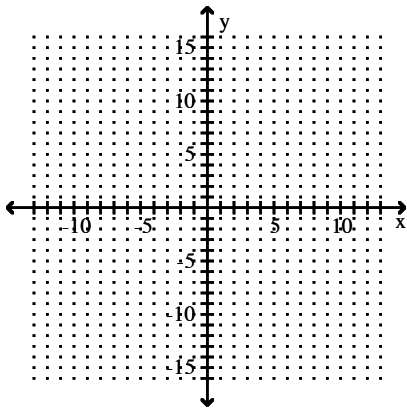
102) _____



Graph. Label the center, vertices, foci.

$$103) \frac{(y+4)^2}{36} - \frac{(x-2)^2}{9} = 1$$

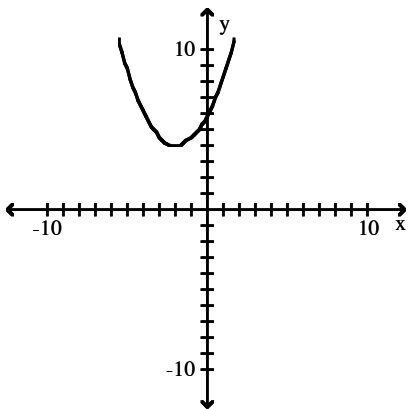
103) _____



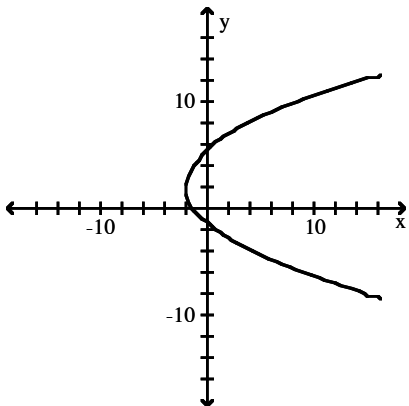
Answer Key

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- 1) D
- 2) C
- 3) B
- 4) A
- 5) B
- 6) D
- 7) B
- 8) D
- 9) A
- 10) D
- 11) C
- 12) B
- 13) C
- 14) B
- 15) A
- 16)



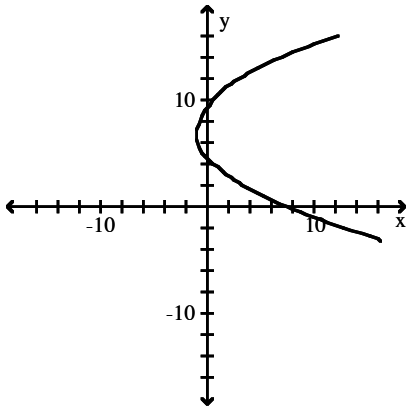
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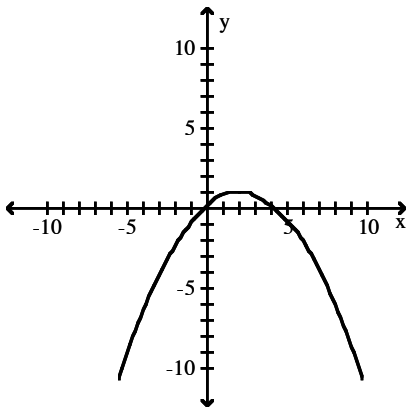
Answer Key

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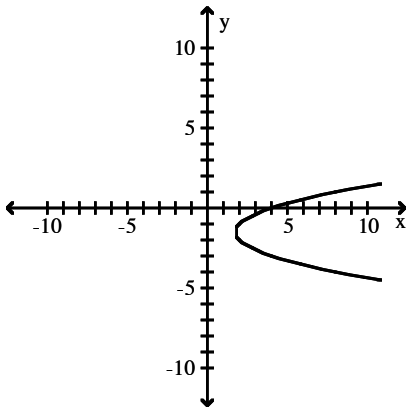
18)



19)



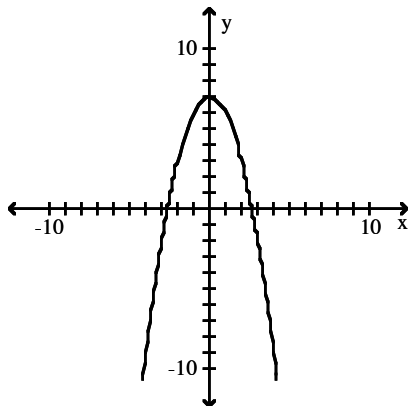
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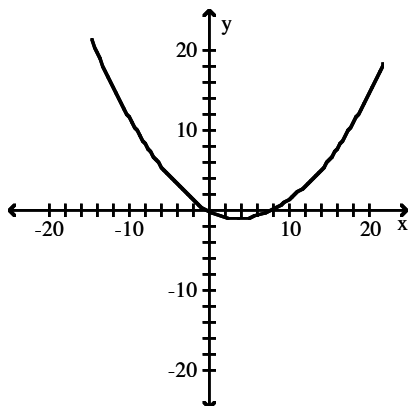
Answer Key

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21)



22)



23) $x^2 = -16y$

24) $x^2 = 8y$

25) $x^2 = 3y$

26) $x^2 = -12\pi y$

27) $(x + 2)^2 = -32(y - 5)$

28) $(y - 9)^2 = -12(x + 2)$

29) $(x + 8)^2 = 20(y - 4)$

30) $\frac{x^2}{64} + \frac{y^2}{39} = 1$

31) $\frac{x^2}{49} + \frac{y^2}{33} = 1$

32) $\frac{x^2}{169} + \frac{y^2}{64} = 1$

33) $\frac{(y + 2)^2}{25} + \frac{(x + 2)^2}{16} = 1$

34) $\frac{(y + 1)^2}{25} + \frac{(x + 2)^2}{16} = 1$

35) $y = \frac{3}{4}x, y = -\frac{3}{4}x$

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$$36) y = \frac{5}{2}x \text{ and } y = -\frac{5}{2}x$$

$$37) y = \frac{3}{8}x \text{ and } y = -\frac{3}{8}x$$

$$38) y + 2 = \frac{3}{4}(x + 3), y + 2 = -\frac{3}{4}(x + 3)$$

$$39) y - 7 = x - 6, y - 7 = -(x - 6)$$

$$40) y - 2 = x - 4, y - 2 = -(x - 4)$$

$$41) (-5, -3); r = 7$$

$$42) (8, 7); r = \sqrt{113}$$

$$43) (3, -10); r = 2$$

$$44) \left(-\frac{3}{2}, \frac{3}{2}\right), r = \frac{7\sqrt{10}}{2}$$

$$45) (5, 3)$$

$$46) (1, -2)$$

$$47) (8, 0)$$

$$48) (0, 0)$$

$$49) (0, 0)$$

$$50) (-3, -6)$$

$$51) (5, 5)$$

$$52) \frac{x^2}{25} - \frac{y^2}{56} = 1$$

$$53) \frac{y^2}{9} - \frac{x^2}{4} = 1$$

$$54) \frac{x^2}{100} - \frac{y^2}{49} = 1$$

$$55) \frac{y^2}{36} - \frac{x^2}{64} = 1$$

$$56) \frac{x^2}{121} - \frac{y^2}{25} = 1$$

$$57) \frac{x^2}{25} - \frac{y^2}{144} = 1$$

$$58) \frac{1}{2}(x + 3) = (y - 1)^2$$

$$59) (-8, 3), (16, 3)$$

$$60) (2 + \sqrt{7}, -3), (2 - \sqrt{7}, -3)$$

$$61) (3, 4\sqrt{3}), (3, -4\sqrt{3})$$

$$62) (3, 0), (-3, 0)$$

$$63) (\sqrt{37}, 0), (-\sqrt{37}, 0)$$

$$64) (\sqrt{26}, 0), (-\sqrt{26}, 0)$$

Answer Key

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65) $(4, 5 + 4\sqrt{2}), (4, 5 - 4\sqrt{2})$

66) F: $\left(\frac{1}{40}, 0\right)$; D: $x = -\frac{1}{40}$

67) F: $\left(\frac{1}{36}, 0\right)$; D: $x = -\frac{1}{36}$

68) F: $(8, 0)$; D: $x = -8$

69) F: $(0, -5)$; D: $y = 5$

70) F: $(0, -2)$; D: $y = 2$

71) V: $(-4, 3)$; F: $(-4, -2)$; D: $y = 8$

72) V: $(-3, 1)$; F: $(0, 1)$; D: $x = -6$

73) V: $(2, -3)$; F: $(3, -3)$; D: $x = 1$

74) V: $(5, -4)$; F: $(-5, -6)$; D: $y = -2$

75) V: $(4, 1)$; F: $(-4, 3)$; D: $y = -1$

76) V: $(-4, 1)$; F: $\left(-4, 1\frac{1}{4}\right)$; D: $y = \frac{3}{4}$

77) V: $(-9, 0), (9, 0)$;

F: $(-6\sqrt{2}, 0), (6\sqrt{2}, 0)$

78) V: $(-9, 0), (9, 0)$;

F: $(-\sqrt{65}, 0), (\sqrt{65}, 0)$

79) V: $(0, -7), (0, 7)$;

F: $(0, -\sqrt{13})$ and $(0, \sqrt{13})$

80) V: $(0, -4), (0, 4)$;

F: $(0, -\sqrt{7}), (0, \sqrt{7})$

81) $(-1, -22), (-1, 18)$

82) $(-6, 3), (2, 3)$

83) $(-1, 5), (9, 5)$

84) $(-1, 4), (9, 4)$

85) $(6, 4), (6, -4)$

86) $(0, 4), (0, -4)$

87) $(-1, -1)$ and $(-1, -11)$

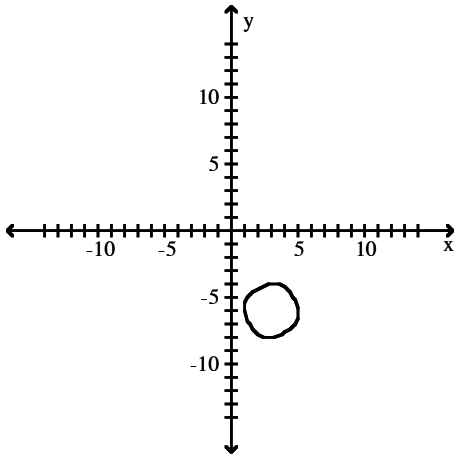
88) $(6, 7)$ and $(6, -3)$

89) $(-3, -4)$ and $(1, -4)$

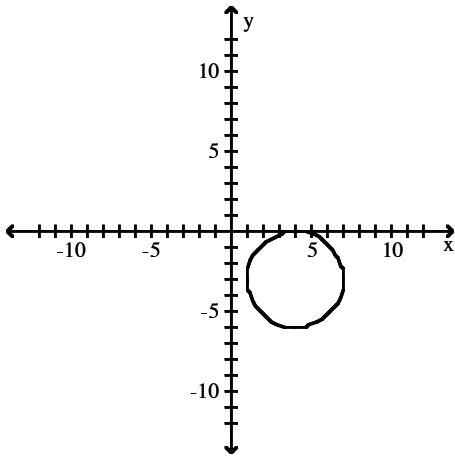
Answer Key

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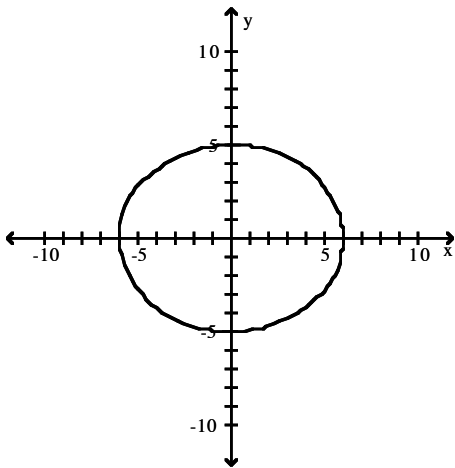
90)



91)



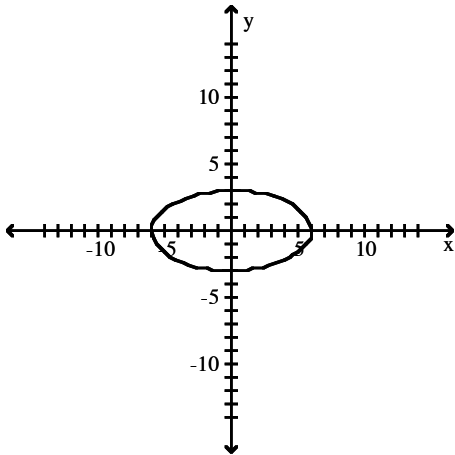
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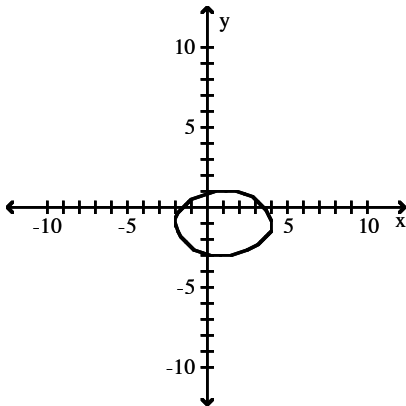
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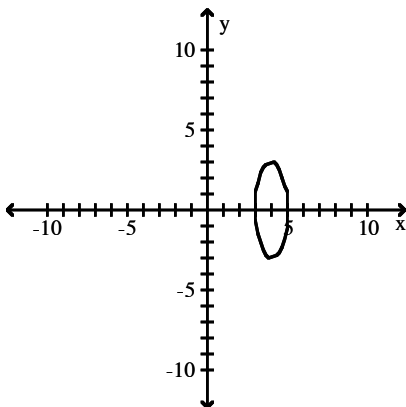
93)



94)



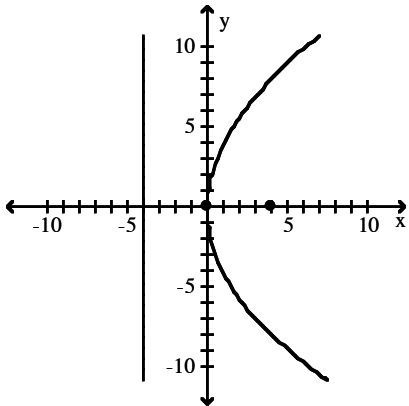
95)



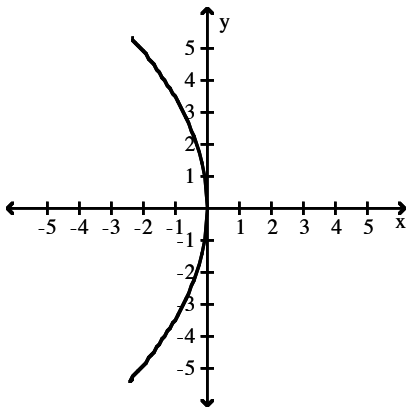
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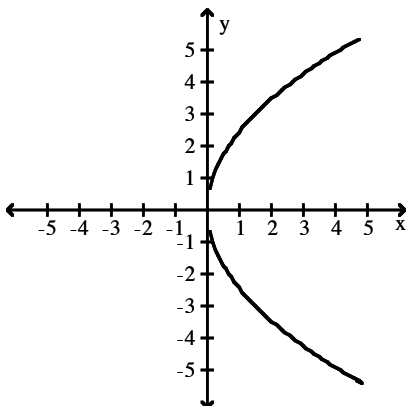
96)



97)



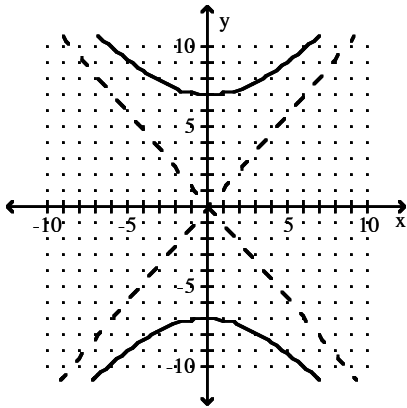
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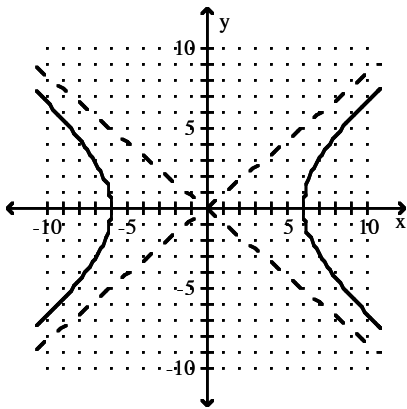
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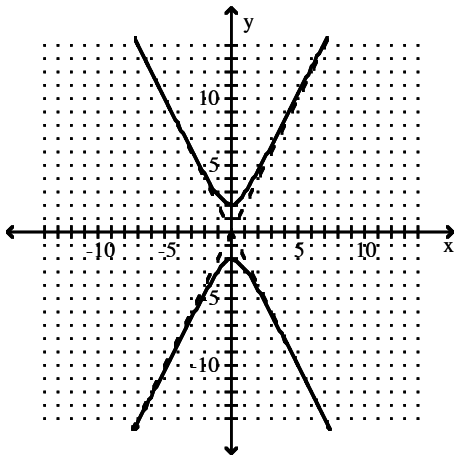
99)



100)



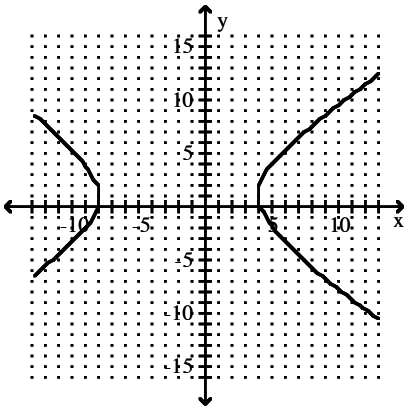
101)



Answer Key

Testname: 260CH10P

102)



103)

