

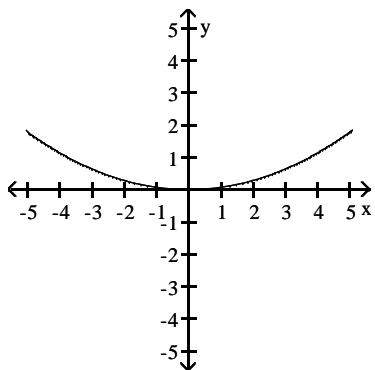
Name _____

Match the equation to its graph.

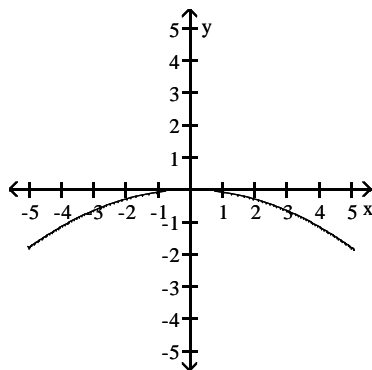
1) $y^2 = -14x$

1) _____

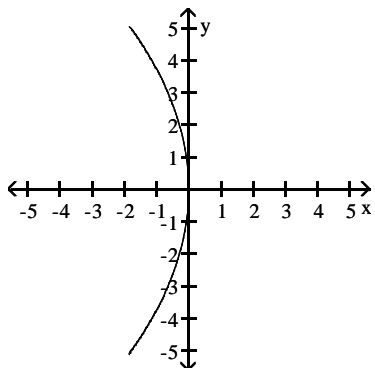
A)



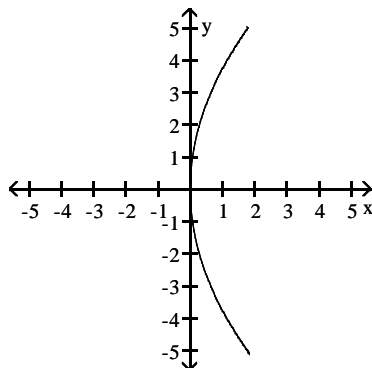
B)



C)



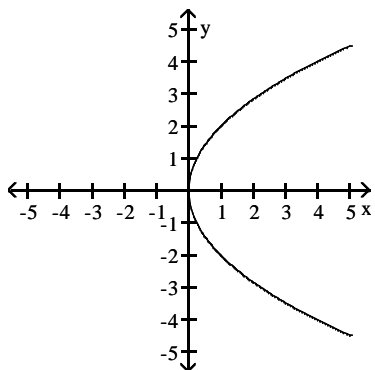
D)



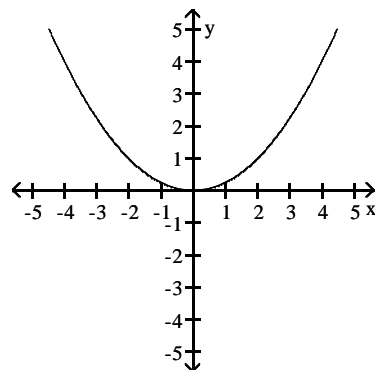
2) $x^2 = -4y$

2) _____

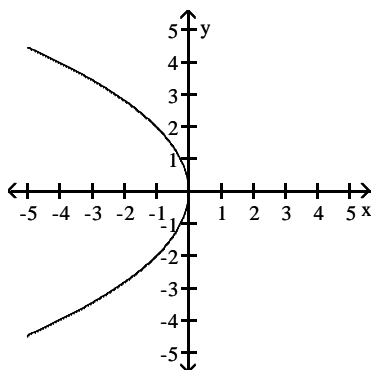
A)



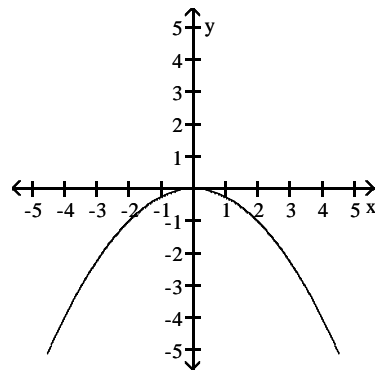
B)



C)



D)



Find an equation of the parabola described.

3) Focus at (0, 9); directrix the line $y = -9$

3) _____

4) Focus at (5, 0); vertex at (0, 0)

4) _____

Find an equation of the parabola described and state the two points that define the latus rectum.

5) Focus at $(0, 2)$; directrix the line $y = -2$

5) _____

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

6) $x^2 = 8y$

6) _____

Graph the equation.

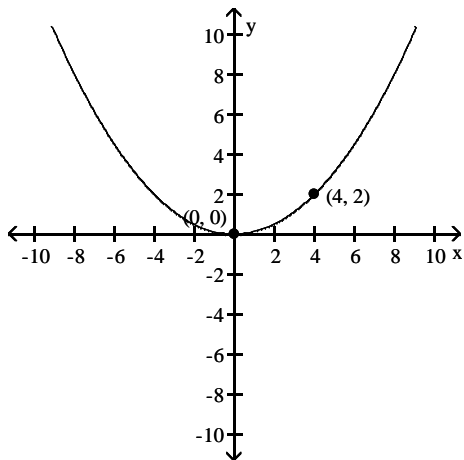
7) $y^2 = -6x$

7) _____

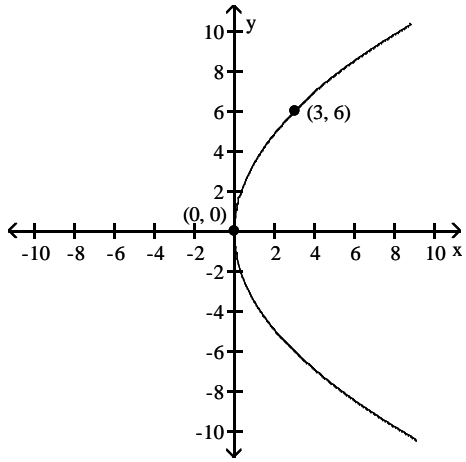
Write an equation for the parabola.

8)

8) _____



9)



9) _____

Find an equation for the parabola described.

10) Vertex at (8, 6); focus at (3, 6)

10) _____

11) Vertex at (8, 7); focus at (8, 3)

11) _____

Find the vertex, focus, and directrix of the parabola with the given equation.

12) $(y + 2)^2 = 12(x - 4)$

12) _____

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

13) _____

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

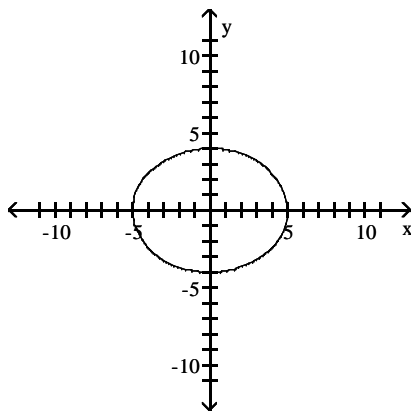
14) $(x - 2)^2 = -8(y + 3)$

14) _____

Match the graph to its equation.

15)

15) _____



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

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

C) $\frac{x^2}{25} - \frac{y^2}{16} = 1$

D) $\frac{y^2}{16} - \frac{x^2}{25} = 1$

Find the center, foci, and vertices of the ellipse.

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

16) _____

Find an equation for the ellipse described.

17) Center at $(0, 0)$; focus at $(7, 0)$; vertex at $(8, 0)$

17) _____

18) Center at $(0, 0)$; focus at $(-6, 0)$; vertex at $(7, 0)$

18) _____

19) Center at $(0, 0)$; focus at $(0, 2)$; vertex at $(0, -3)$

19) _____

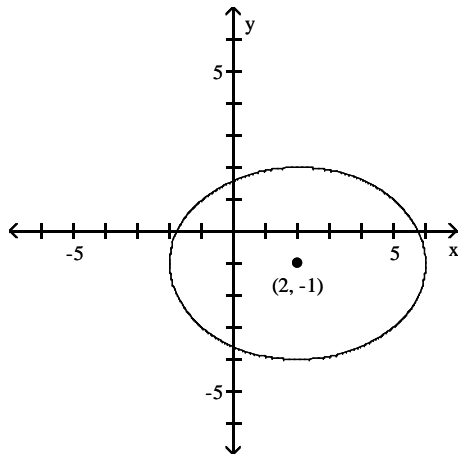
Graph the ellipse and locate the foci.

20) $16x^2 + 9y^2 = 144$

20) _____

Write an equation for the graph.

21)



21) _____

Find the center, foci, and vertices of the ellipse.

22) $\frac{(x+2)^2}{36} + \frac{(y-3)^2}{16} = 1$

22) _____

23) $3x^2 + 4y^2 - 36x + 32y + 160 = 0$

23) _____

Graph the equation.

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

24) _____

25) $16(x + 2)^2 + 4(y - 2)^2 = 64$

25) _____

Find an equation for the ellipse described. Graph the equation.

26) Vertices at $(5, -4)$ and $(5, 8)$; length of minor axis is 6

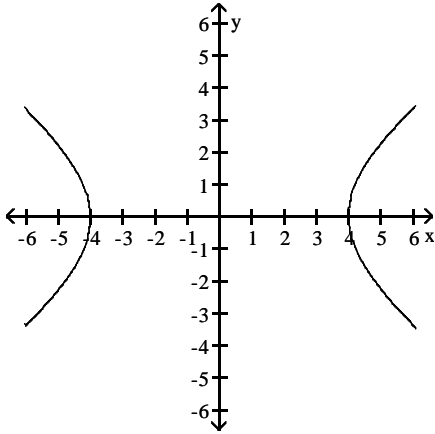
26) _____

Match the equation to the graph.

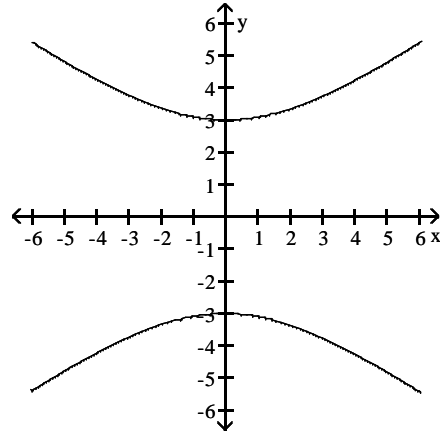
27) $\frac{x^2}{16} - \frac{y^2}{9} = 1$

27) _____

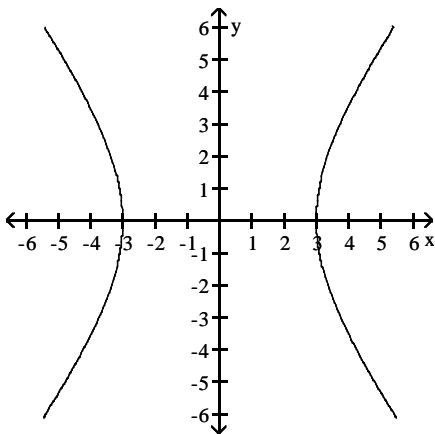
A)



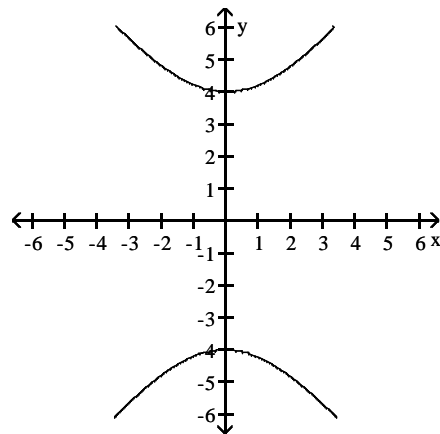
B)



C)



D)



Find an equation for the hyperbola described.

28) Vertices at $(\pm 2, 0)$; foci at $(\pm 8, 0)$

28) _____

Find an equation for the hyperbola described. Graph the equation.

29) Center at (0, 0); vertex at (0, 7); focus at (0, $\sqrt{85}$)

29) _____

Find the center, transverse axis, vertices, and foci.

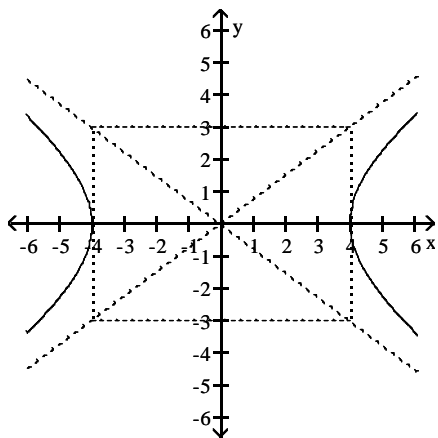
30) $\frac{x^2}{49} - \frac{y^2}{144} = 1$

30) _____

Write an equation for the hyperbola.

31)

31) _____



Graph the hyperbola.

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

32) _____

33) $16x^2 - 9y^2 = 144$

33) _____

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

34) _____

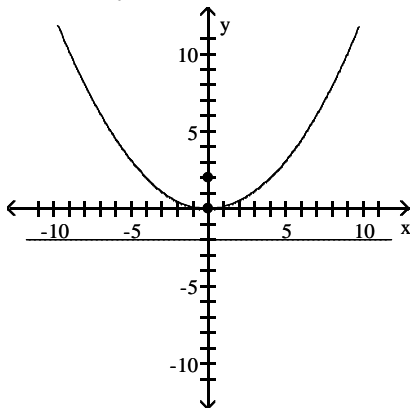
35) $(y-3)^2 - 9(x+1)^2 = 9$

35) _____

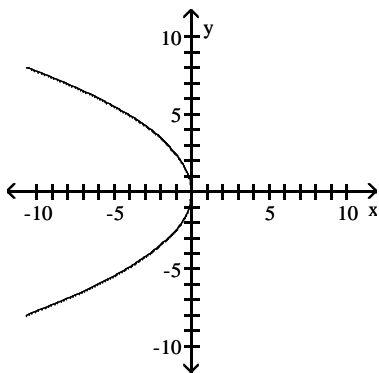
Answer Key

Testname: 13SPR_CH10_MATH2_HW_7

- 1) C
- 2) D
- 3) $x^2 = 36y$
- 4) $y^2 = 20x$
- 5) $x^2 = 8y$; latus rectum: (4, 2) and (-4, 2)
- 6) vertex: (0, 0)
focus: (0, 2)
directrix: $y = -2$

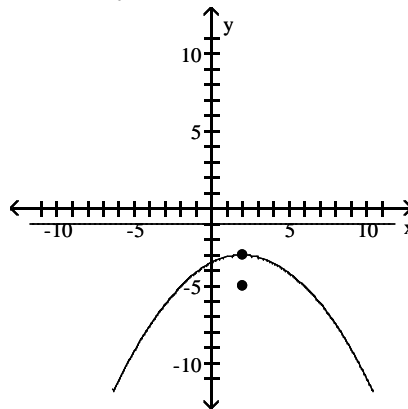


7)

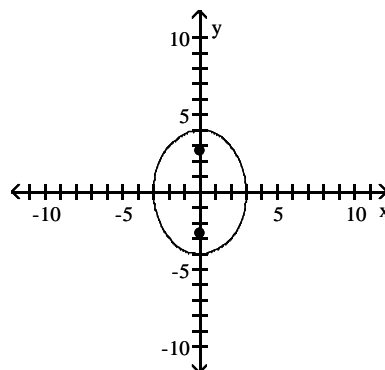


- 8) $x^2 = 8y$
- 9) $y^2 = 12x$
- 10) $(y - 6)^2 = -20(x - 8)$
- 11) $(x - 8)^2 = -16(y - 7)$
- 12) vertex: (4, -2)
focus: (7, -2)
directrix: $x = 1$
- 13) vertex: (-3, 2)
focus: (-3, 6)
directrix: $y = -2$

- 14) vertex: (2, -3)
focus: (2, -5)
directrix: $y = -1$



- 15) A
- 16) center at (0, 0)
foci at $(-\sqrt{13}, 0)$ and $(\sqrt{13}, 0)$
vertices at (-7, 0), (7, 0)
- 17) $\frac{x^2}{64} + \frac{y^2}{15} = 1$
- 18) $\frac{x^2}{49} + \frac{y^2}{13} = 1$
- 19) $\frac{x^2}{5} + \frac{y^2}{9} = 1$
- 20) foci at $(0, \sqrt{7})$ and $(0, -\sqrt{7})$

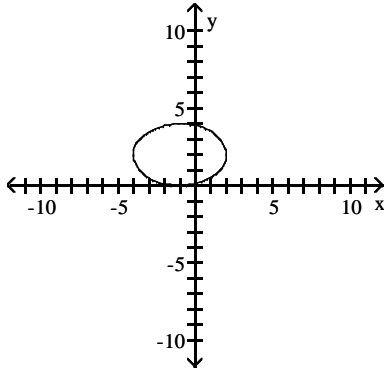


- 21) $\frac{(x - 2)^2}{16} + \frac{(y + 1)^2}{9} = 1$
- 22) center at (-2, 3)
foci at $(-2 + 2\sqrt{5}, 3)$, $(-2 - 2\sqrt{5}, 3)$
vertices at (-8, 3), (4, 3)
- 23) $\frac{(x - 6)^2}{4} + \frac{(y + 4)^2}{3} = 1$
center: (6, -4); foci: (7, -4), (5, -4); vertices: (8, -4), (4, -4)

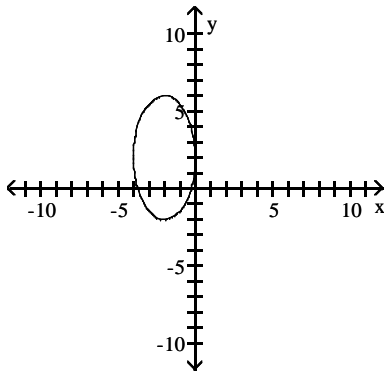
Answer Key

Testname: 13SPR_CH10_MATH2_HW_7

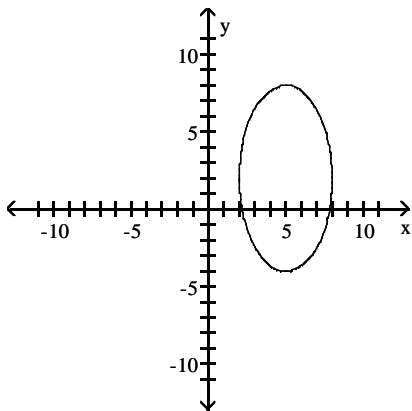
24)



25)



26)

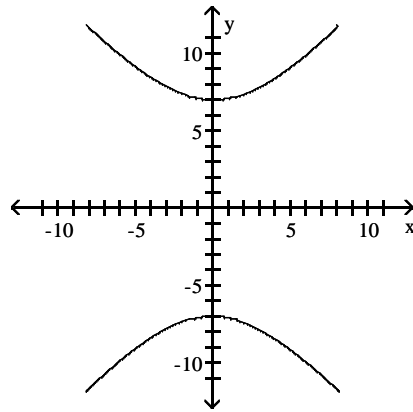


$$\frac{(x - 5)^2}{9} + \frac{(y - 2)^2}{36} = 1$$

27) A

$$28) \frac{x^2}{4} - \frac{y^2}{60} = 1$$

$$29) \frac{y^2}{49} - \frac{x^2}{36} = 1$$



30) center at (0, 0)

transverse axis is x-axis

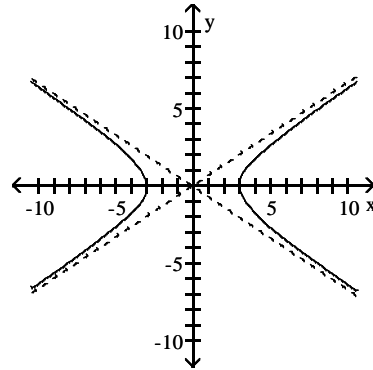
vertices at (-7, 0) and (7, 0)

foci at $(-\sqrt{193}, 0)$ and $(\sqrt{193}, 0)$

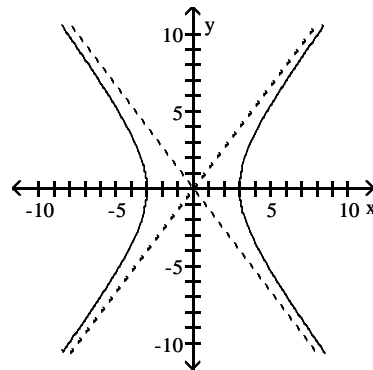
asymptotes of $y = -\frac{12}{7}$ and $y = \frac{12}{7}$

$$31) \frac{x^2}{16} - \frac{y^2}{9} = 1$$

32)



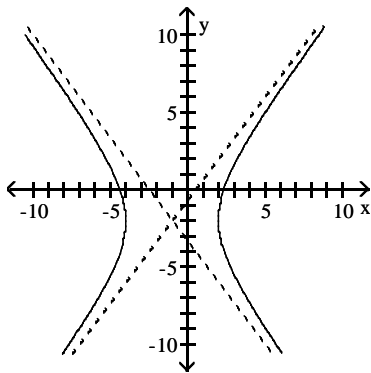
33)



Answer Key

Testname: 13SPR_CH10_MATH2_HW_7

34)



35)

