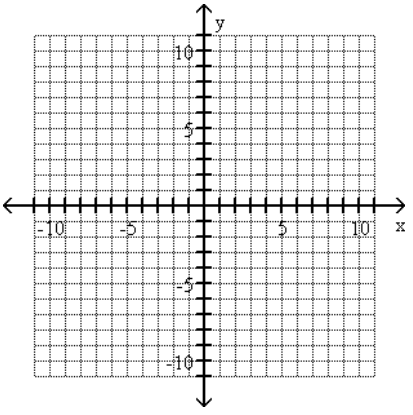
Chapter 9 Practice Test

Name_____

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

Graph the ellipse and label all of the important pieces.

1) $16x^2 + 9y^2 = 144$ 1) _____

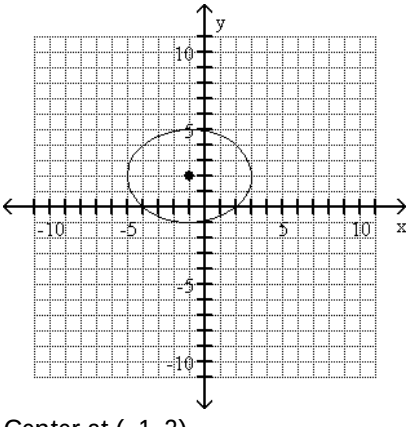


Convert the equation to the standard form for a hyperbola by completing the square on x and y.

2) $4x^2 - 16y^2 + 16x - 64y - 112 = 0$ 2) _____

Find the standard form of the equation of the ellipse and give the location of its foci.

3) 3) _____



Center at (-1, 2)

Find the standard form of the equation of the ellipse satisfying the given conditions.

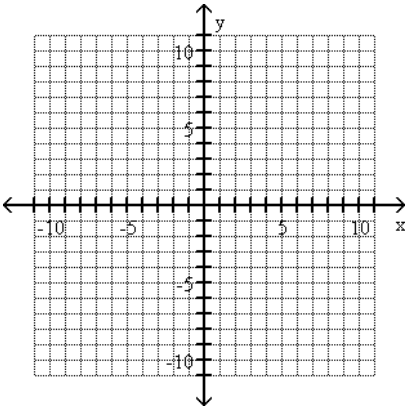
4) Endpoints of major axis: (-1, -8) and (-1, 2); endpoints of minor axis: (-4, -3) and (2, -3); 4) _____

5) Major axis horizontal with length 18; length of minor axis = 10; center (0, 0) 5) _____

6) Foci: (-6, 0), (6, 0); x-intercepts: -8 and 8 6) _____

Graph the ellipse. Label all of the important pieces.

7) $\frac{(x - 2)^2}{16} + \frac{(y + 1)^2}{4} = 1$ 7) _____



Find the standard form of the equation of the hyperbola satisfying the given conditions.

8) Endpoints of transverse axis: (0, -8), (0, 8); asymptote: $y = \frac{4}{9}x$ 8) _____

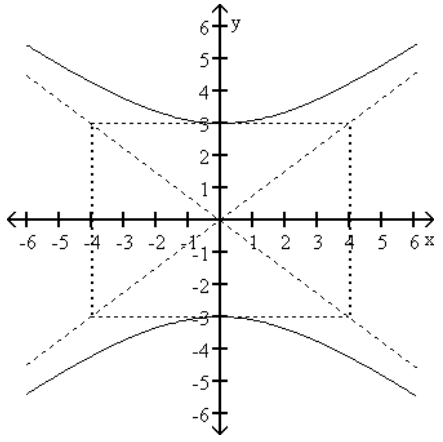
9) Foci: (-10, 0), (10, 0); vertices: (-6, 0), (6, 0) 9) _____

10) Center: (4, 6); Focus: (1, 6); Vertex: (3, 6) 10) _____

Convert the equation to the standard form for a hyperbola by completing the square on x and y.

11) $y^2 - 4x^2 - 4y + 8x - 4 = 0$ 11) _____

Find the standard form of the equation of the hyperbola.

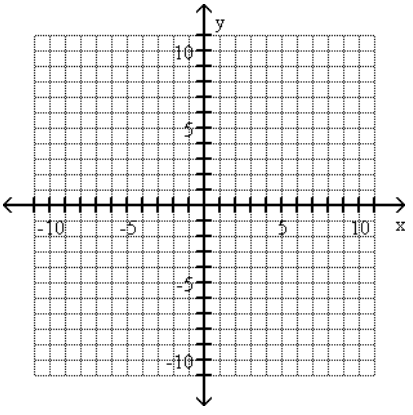
12) 

12) _____

Find center, vertices, covertices, foci and asymptotes and graph the hyperbola.

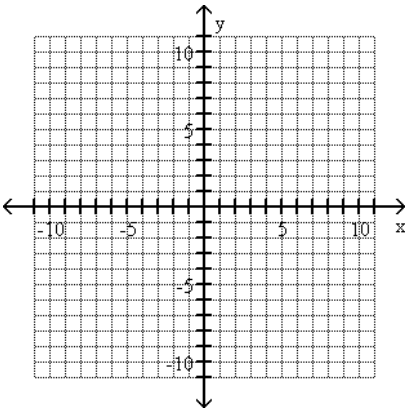
13) $9x^2 - 4y^2 = 36$

13) _____



Find the center, vertices, covertices, foci and asymptotes to graph the hyperbola.

14) $\frac{(y + 1)^2}{9} - \frac{(x - 2)^2}{16} = 1$ 14) _____



Convert the equation to the standard form for a parabola by completing the square on x or y as appropriate.

15) $x^2 - 4x + 3y - 5 = 0$ 15) _____

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

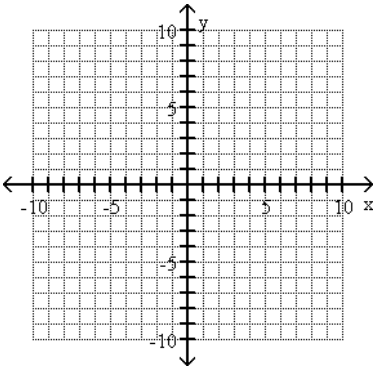
16) $x^2 = 40y$ 16) _____

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

17) $(x - 2)^2 = 4(y + 1)$ 17) _____

Graph the parabola.

18) $y^2 = 5x$ 18) _____

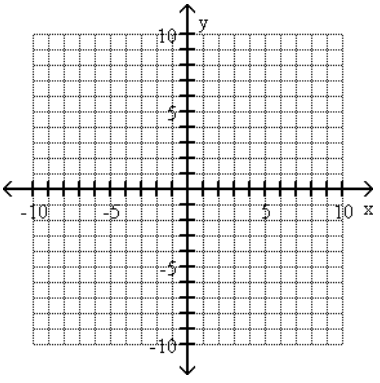


Find the standard form of the equation of the parabola using the information given.

19) Focus: (3, 7); Directrix: y = -3 19) _____

Graph the parabola with the given equation.

20) $(y + 2)^2 = -8(x + 1)$ 20) _____



Identify the equation without completing the square.

21) $2x^2 - 2x + y + 4 = 0$ 21) _____

22) $2x^2 + 4y^2 + 8x + 4y = 0$ 22) _____

23) $4x^2 - 4y^2 + 5x + 4y + 3 = 0$ 23) _____

24) $5x^2 - 6y^2 + 2x - 3y - 5 = 0$ 24) _____

25) $2y^2 - 3x + 2y = 0$ 25) _____