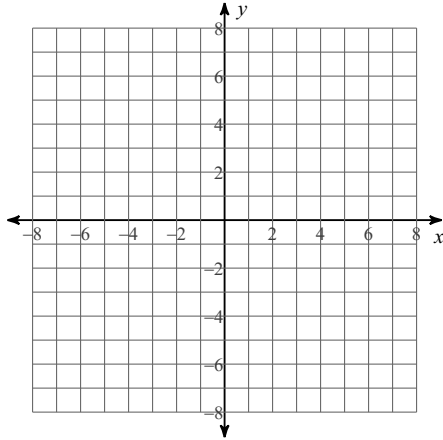


Practice Test 10.1-10.4

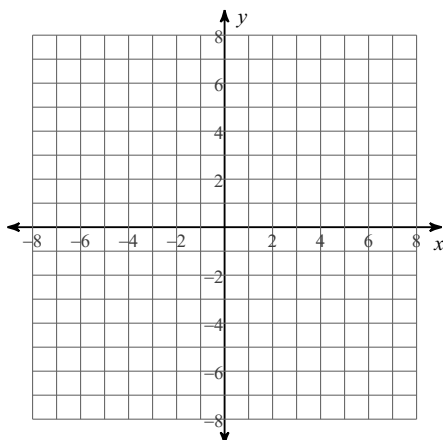
Date _____ Period ____ Score _____

Identify the center and radius of each. Then sketch the graph.

1) $(x + 1)^2 + (y + 2)^2 = 23$

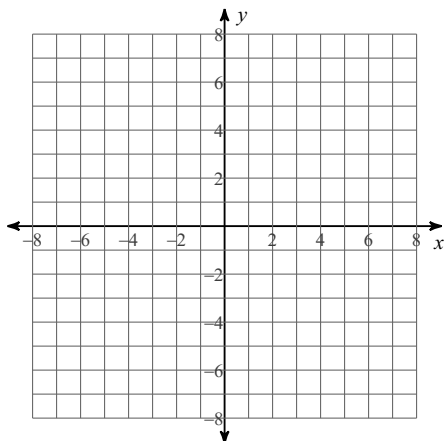
**Identify the vertex, focus, and directrix of each. Then sketch the graph.**

2) $3(y - 1) = (x - 6)^2$



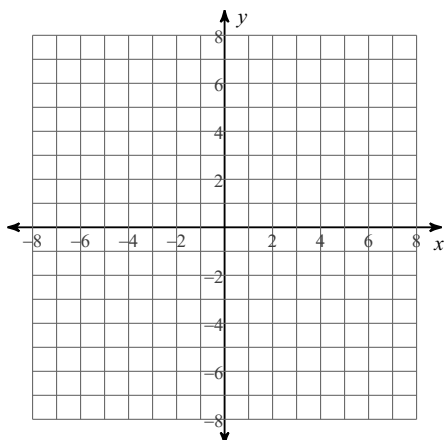
Identify the center, vertices, foci, and eccentricity of each. Then sketch the graph.

$$3) (x + 4)^2 + \frac{y^2}{36} = 1$$



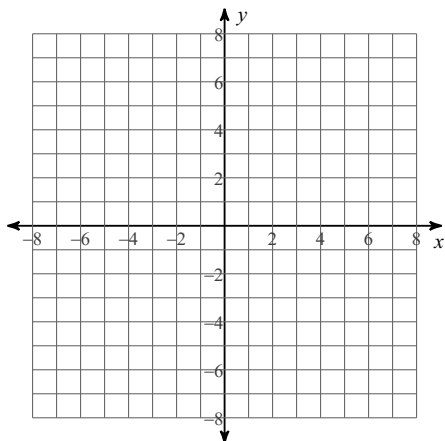
Identify the vertices, foci, and asymptotes of each. Then sketch the graph.

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

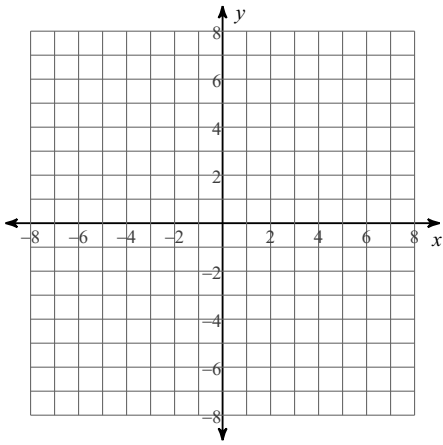


Graph each equation.

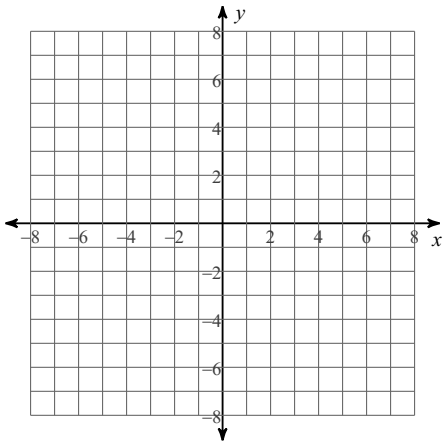
$$5) x^2 + 2x + 3y - 8 = 0$$



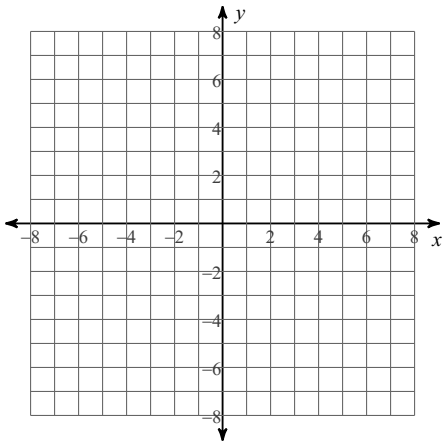
6) $x^2 + y^2 - 6x - 6y + 14 = 0$



7) $9x^2 + 49y^2 - 294y = 0$



8) $x^2 - 16y^2 - 2x - 15 = 0$



Use the information provided to write the standard form equation of the circle.

9) Center: $(-5, -8)$
 Radius: 7

Use the information provided to write the standard form equation of the ellipse.

10) Vertices: $(-4, 19), (-4, -9)$
Foci: $(-4, 5 + 7\sqrt{3}), (-4, 5 - 7\sqrt{3})$

Use the information provided to write the standard form equation of the parabola.

11) Vertex: $(4, 0)$, Focus: $(4, \frac{1}{8})$

Use the information provided to write the standard form equation of the hyperbola.

12) Vertices: $(9, 1), (1, 1)$
Foci: $(5 + 4\sqrt{5}, 1), (5 - 4\sqrt{5}, 1)$

Identify the vertex of the parabola.

13) $-11x^2 - 132x + y - 406 = 0$

Identify the center and radius of the circle.

14) $x^2 + y^2 - 20x - 18y + 120 = 0$

Identify the center, vertices, foci, and eccentricity of the ellipse.

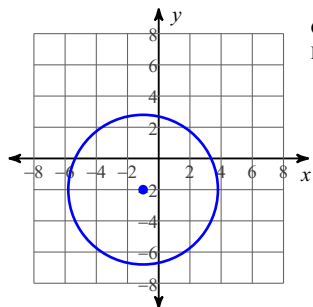
15) $x^2 + 4y^2 + 4x - 8y - 92 = 0$

Identify the vertices, foci, and asymptotes of the hyperbola.

16) $x^2 - 25y^2 - 14x - 100y - 151 = 0$

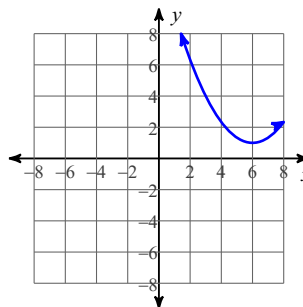
Answers to Practice Test 10.1-10.4 (ID: 1)

1)



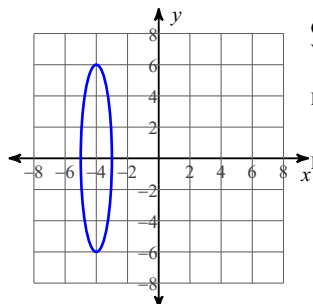
Center: $(-1, -2)$
Radius: $\sqrt{23}$

2)



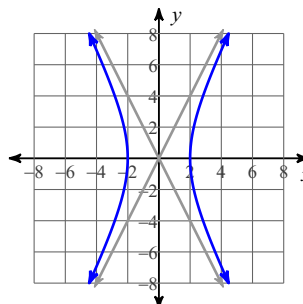
Vertex: $(6, 1)$
Focus: $(6, \frac{7}{4})$
Directrix: $y = \frac{1}{4}$

3)



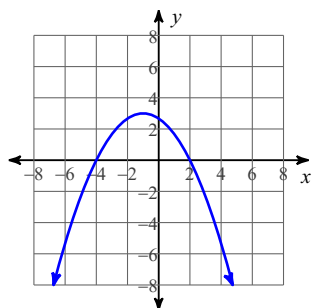
Center: $(-4, 0)$
Vertices: $(-4, 6)$
 $(-4, -6)$
Foci: $(-4, \sqrt{35})$
 $(-4, -\sqrt{35})$
Eccentricity: $\frac{\sqrt{35}}{6} \approx 0.986$

4)

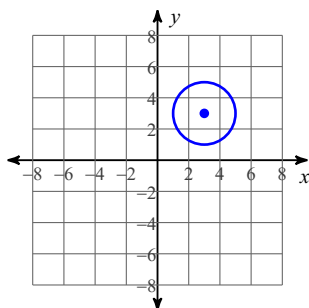


Vertices: $(2, 0)$
 $(-2, 0)$
Foci: $(2\sqrt{5}, 0)$
 $(-2\sqrt{5}, 0)$
Asym.: $y = 2x$
 $y = -2x$

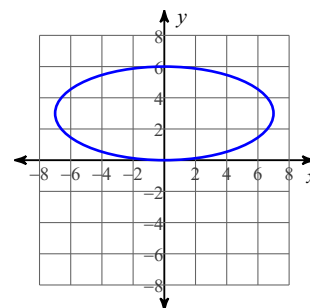
5)



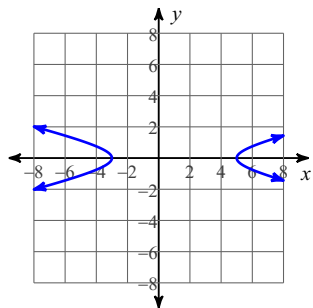
6)



7)



8)



9) $(x + 5)^2 + (y + 8)^2 = 49$

10) $\frac{(x + 4)^2}{49} + \frac{(y - 5)^2}{196} = 1$

11) $\frac{1}{2}y = (x - 4)^2$

12) $\frac{(x - 5)^2}{16} - \frac{(y - 1)^2}{64} = 1$

13) $(-6, 10)$

14) Center: $(10, 9)$
Radius: $\sqrt{61}$

15) Center: $(-2, 1)$
Vertices: $(8, 1), (-12, 1)$

16) Foci: $(7 + 2\sqrt{26}, -2), (7 - 2\sqrt{26}, -2)$

Asym.: $y = \frac{1}{5}x - \frac{17}{5}$

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