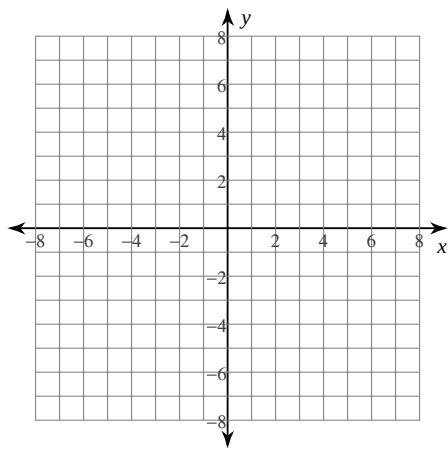


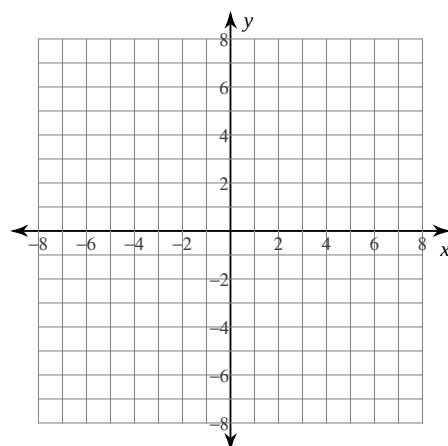
Identifying and Graphing Conic Sections Given the Standard Equation

Classify each conic section and sketch its graph. For parabolas, identify the vertex. For circles, identify the center and radius. For ellipses and hyperbolas identify the center and vertices.

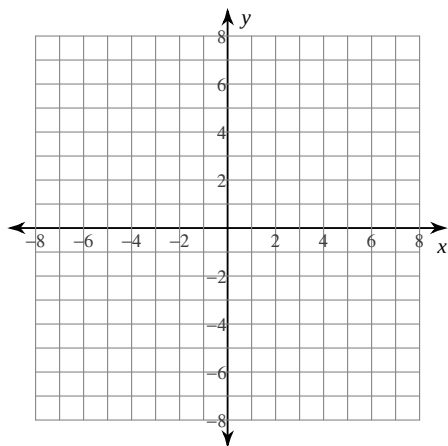
1) $(x - 3)^2 + (y - 2)^2 = 11$



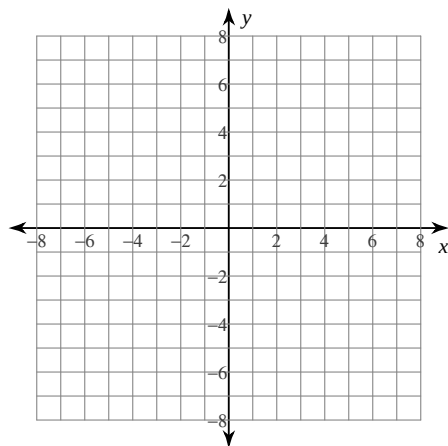
2) $\frac{x^2}{49} + (y + 1)^2 = 1$



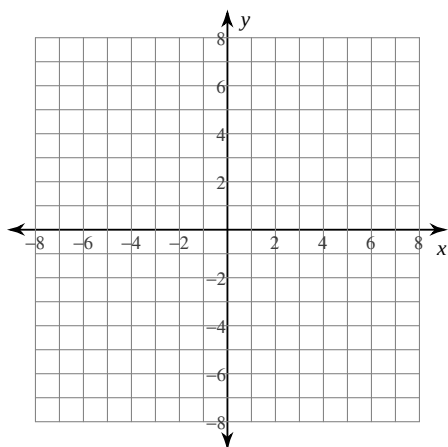
3) $(x - 2)^2 + (y - 4)^2 = 4$



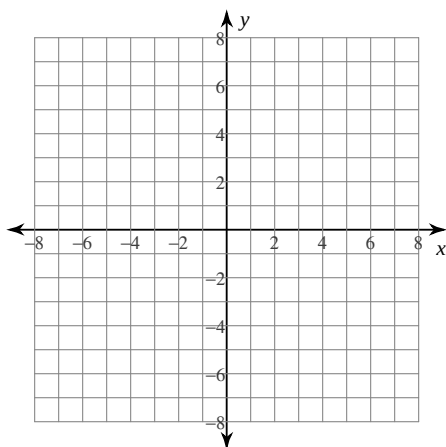
4) $x = (y - 5)^2 - 4$



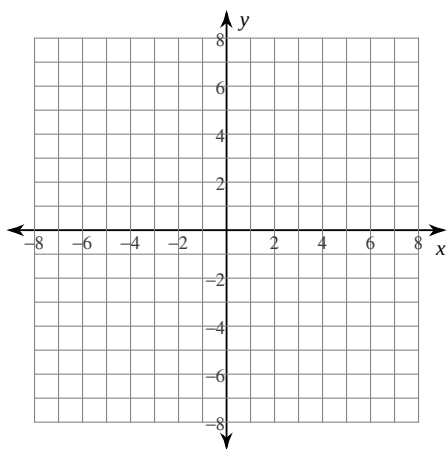
$$5) \frac{x^2}{25} - \frac{y^2}{25} = 1$$



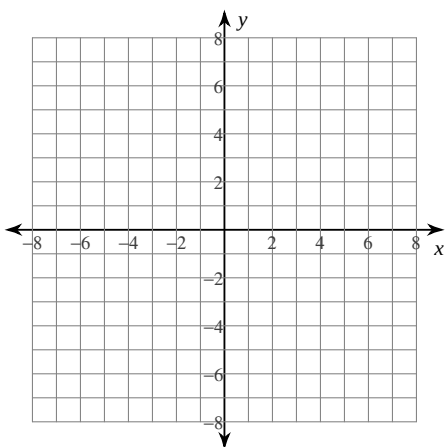
$$6) \frac{x^2}{25} - (y-4)^2 = 1$$



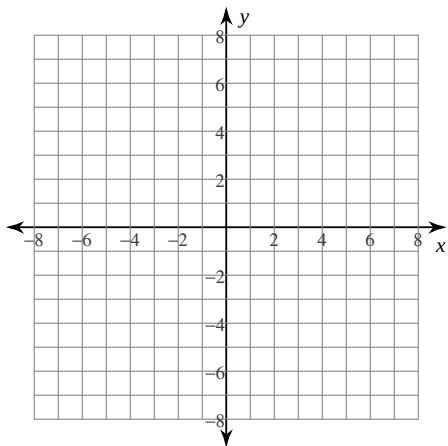
$$7) (x-4)^2 + \frac{(y+1)^2}{16} = 1$$



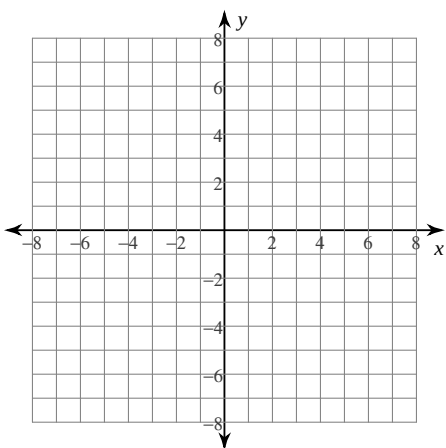
$$8) x^2 + (y+2)^2 = 25$$



$$9) x = -7(y+4)^2 - 5$$

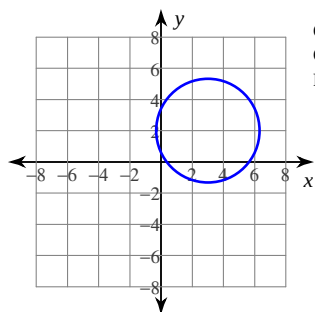


$$10) y = -\frac{1}{2}(x-1)^2 + 1$$



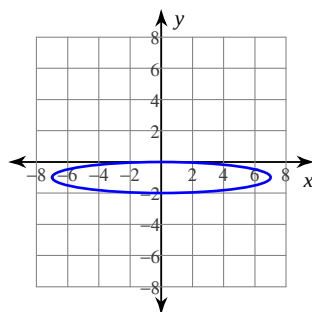
Answers to Identifying and Graphing Conic Sections Given the Standard Equation

1)



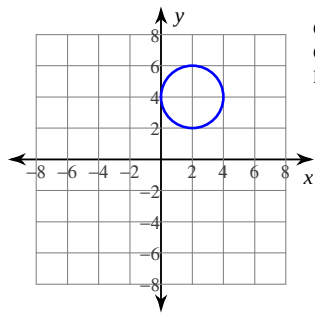
Circle
Center: $(3, 2)$
Radius: $\sqrt{11}$

2)



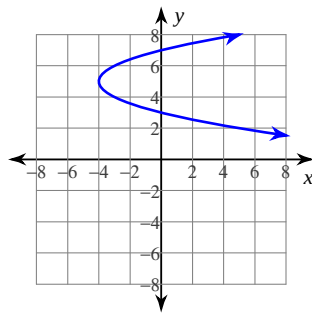
Ellipse
Center: $(0, -1)$
Vertices: $(7, -1)$, $(-7, -1)$

3)



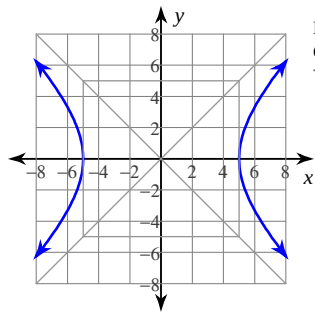
Circle
Center: $(2, 4)$
Radius: 2

4)



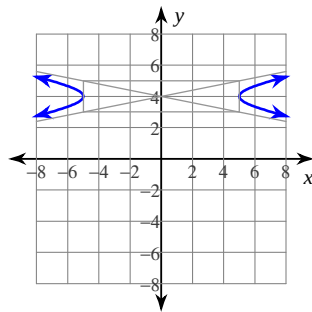
Parabola
Vertex: $(-4, 5)$

5)



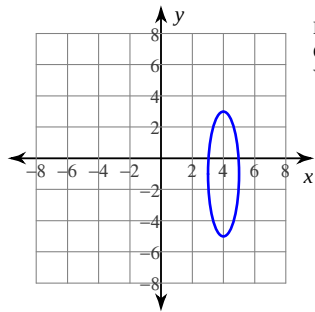
Hyperbola
Center: $(0, 0)$
Vertices: $(5, 0)$, $(-5, 0)$

6)



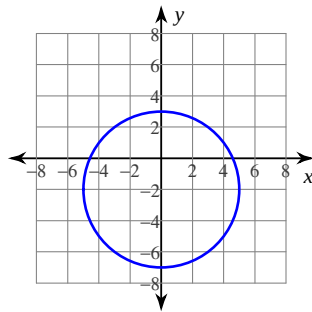
Hyperbola
Center: $(0, 4)$
Vertices: $(5, 4)$, $(-5, 4)$

7)



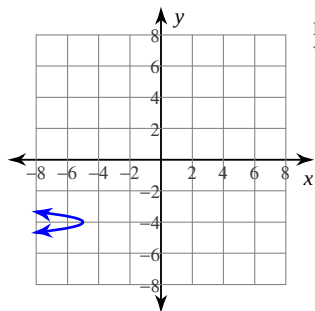
Ellipse
Center: $(4, -1)$
Vertices: $(4, 3)$, $(4, -5)$

8)



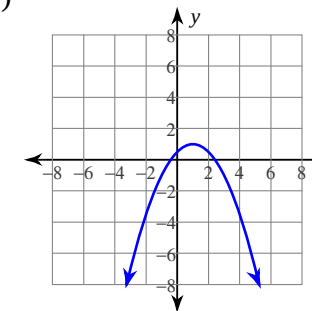
Circle
Center: $(0, -2)$
Radius: 5

9)



Parabola
Vertex: $(-5, -4)$

10)



Parabola
Vertex: $(1, 1)$