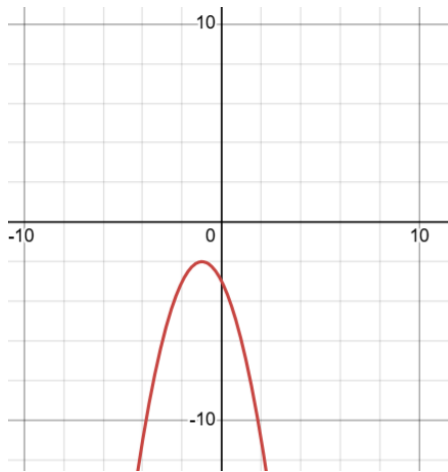


CONIC SECTIONS SAMPLE RESPONSE

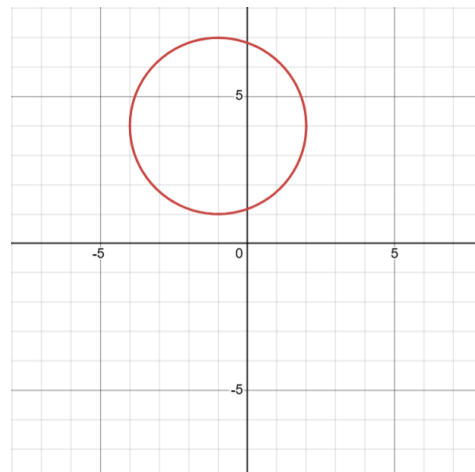
1. $y = -(x+1)^2 - 2$

Vertex is **(-1, -2)**; It opens **Down**.



2. $(x+1)^2 + (y-4)^2 = 9$

center is **(-1, 4)**; radius is **3**



3. $\frac{x^2}{4} + \frac{y^2}{9} = 1$

Center is **(0, 0)**

The major axis is parallel to the **y**-axis

The length of the major axis is **6**.

The length of the minor axis is **4**.

4. $\frac{x^2}{9} - \frac{y^2}{16} = 1$

center is **(0, 0)**

Asymptotes are $y = \frac{4}{3}x$ & $y = -\frac{4}{3}x$

Vertices are **(3, 0)** & **(-3, 0)**

