Target 1: I CAN write the equations of conic sections given critical information.

1. Write the equation for each of the following.

   a. A parabola with focus (–4, –9) and directrix $x = 6$

   b. A circle with endpoints of the diameter (–7, –3) and (–5, 5).

   c. An ellipse with center (–1, 2), focus (–3, 2), and vertex (–5, 2).

   d. An ellipse with foci (2, 3) and (2, 7) and minor axis of length 6.

   e. A hyperbola with vertices (2, 9) and (2, 3), and foci (2, 10) and (2, 2).

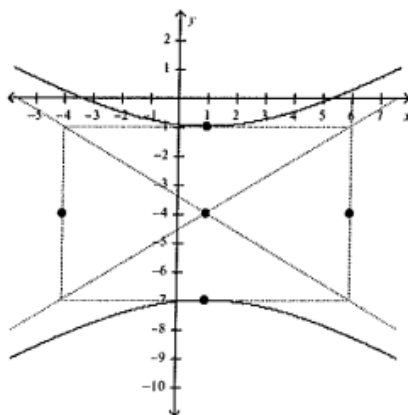*Target 2:* I CAN write the equations of conic sections given their graphs.

2. Write the equation of the conic section, given the graph:
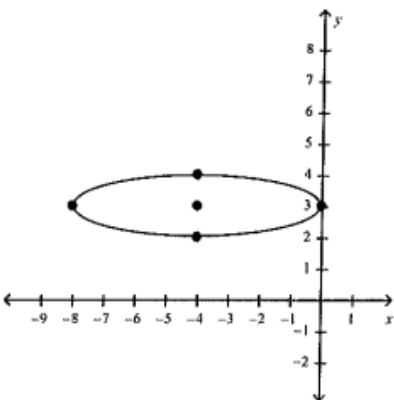
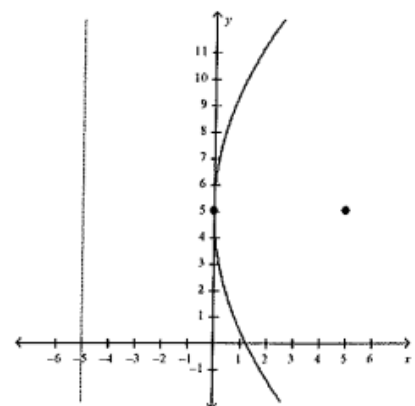a.   b.   c.

Target 3: I CAN graph conic sections.

3. Give the critical info, according to the conic

a. $(y-1)^2 - \frac{(x-3)^2}{4} = 1$

Left/Right   Up/Down   Center: _____   TA length: _____   CA length: _____

Vertices: _____   Covertices: _____

Foci: _____   Asymptotes: _____

b. $\frac{(x-3)^2}{4} + (y-\boldsymbol{8})^2 = 1$

Horizontal   Vertical   Center: _____   Maj. Axis length: _____   Min. Axis length: _____

Vertices: _____   Covertices: _____

Foci: _____

c. $(y-4)^2 = -20(x+1)$

Opens: _____   Focal width: _____   Vertex: _____   Focus: _____

Points on focal width: _____   Directrix: _____   Axis of Symmetry: _____

d. $x^2 + y^2 + 4x + 12y + 36 = 0$

Standard Form: _____

Center; _____   Radius: _____