

**(#1-3) For each expanded equation, write down the name of the shape and then put it into general form.**

1.  $25x^2 - 4y^2 + 200x - 8y + 796 = 0$

1. \_\_\_\_\_  
(Equation)

\_\_\_\_\_  
(Shape)

2.  $x^2 - 4x - 20y - 36 = 0$

2. \_\_\_\_\_  
(Equation)

\_\_\_\_\_  
(Shape)

3.  $-2y^2 + 12y - x - 25 = 0$

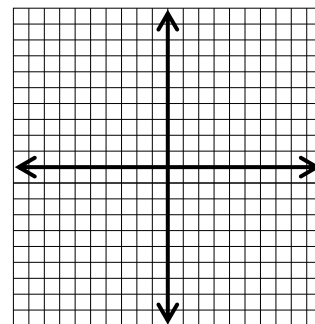
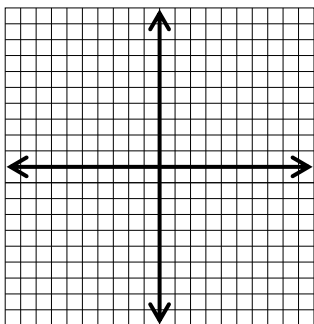
3. \_\_\_\_\_  
(Equation)

\_\_\_\_\_  
(Shape)

**(#4-7) Write an equation for each conic section described below. Use the graph to help you (if you need it!)**

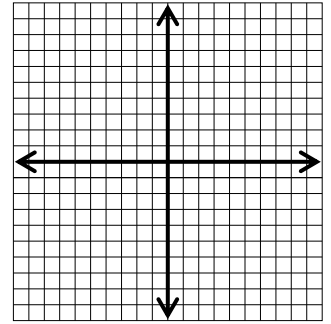
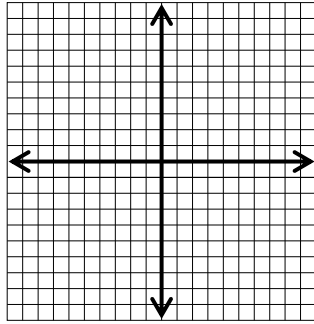
4. A parabola with a focus at  $(-2, -2)$  and a directrix of  $x = 6$

5. A hyperbola with transverse axis endpoints at  $(7, 7)$  and  $(7, -3)$  and slopes of asymptotes  $\pm \frac{5}{8}$



6. A hyperbola with a center of (0, -3), a vertex at (3, -3) and a focus at (4, -3)

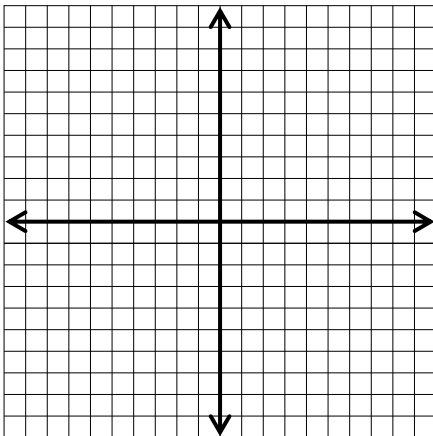
7. A parabola with a vertex at (-1, 10) and focus point at (-1, 12)



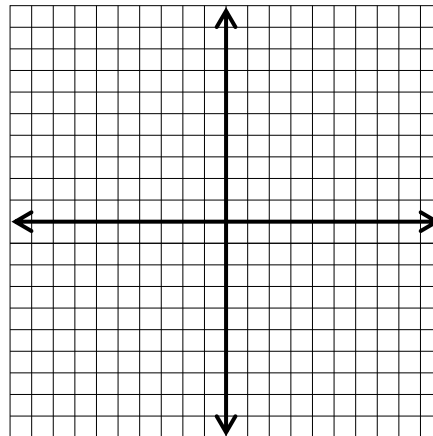
**(#8-9) Graph each parabola on the grid given. Identify the vertex, the focus and the equations of the directrix and axis of symmetry.**

8.  $(y - 2)^2 = -12(x - 6)$

9.  $10(y + 5) = (x - 1)^2$



Vertex: \_\_\_\_\_  
 Focus: \_\_\_\_\_  
 Directrix: \_\_\_\_\_  
 A of S: \_\_\_\_\_

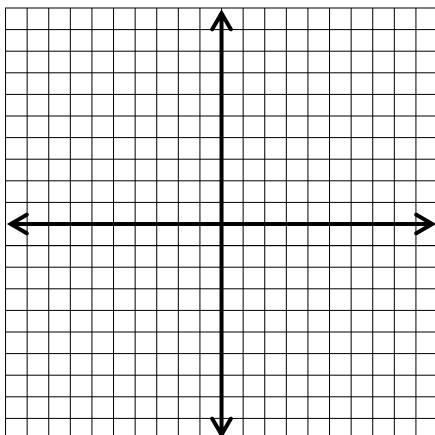


Vertex: \_\_\_\_\_  
 Focus: \_\_\_\_\_  
 Directrix: \_\_\_\_\_  
 A of S: \_\_\_\_\_

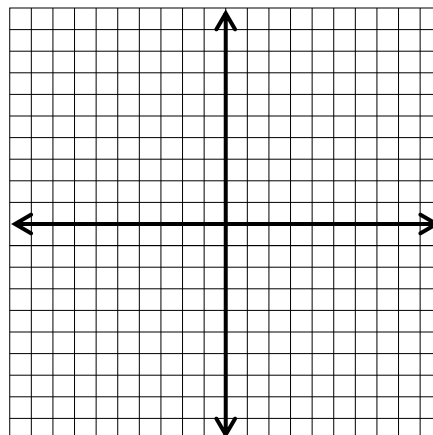
**(#10-11) Graph each hyperbola given and state the focus points and the slopes of the asymptotes.**

10.  $\left(\frac{x+2}{3}\right)^2 - \left(\frac{y-5}{2}\right)^2 = 1$

11.  $\left(\frac{y-1}{8}\right)^2 - \left(\frac{x+1}{6}\right)^2 = 1$



Center: \_\_\_\_\_  
 Foci: \_\_\_\_\_  
 \_\_\_\_\_  
 Slope of Asymptotes: \_\_\_\_\_



Center: \_\_\_\_\_  
 Foci: \_\_\_\_\_  
 \_\_\_\_\_  
 Slope of Asymptotes: \_\_\_\_\_