Algebra 2 Conics Review Name_____ Period_____

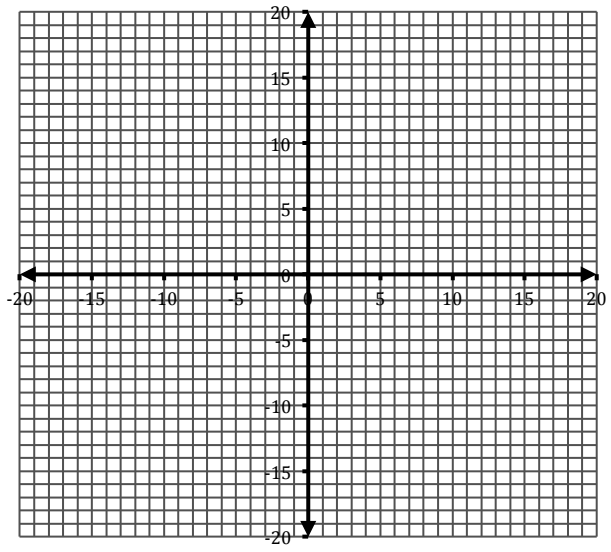
1. A circle has a diameter with endpoints at (-4,-7) and (8,9).
   A. Find the center and radius of the circle.

   B. Find the equation of the line tangent to the circle at point (-4,-7).

   C. Write the equation of the circle.

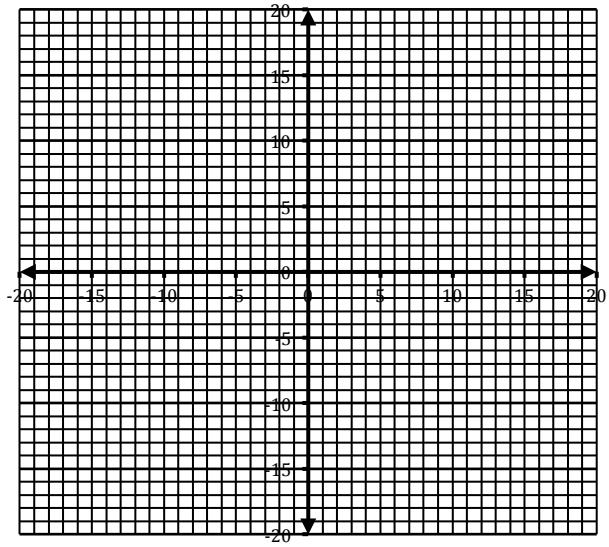
2. Given $y = \frac{1}{8}x^2$. Write the coordinates for the vertex and the focus.

3. Graph and label the center, vertices, and co-vertices of $\frac{(x)^2}{36} + \frac{(y-2)^2}{100} = 1$.



4. Write an equation in standard form for the Ellipse with vertices at (-5, 1) and (-5, -5) and co-vertices at (-7, -2) and (-3, -2).

5. Graph $x + 1 = -\frac{1}{16}(y-2)^2$. Then, write the equation of the axis of symmetry and directrix.



6. Write the equation of the hyperbola with a center at (-4,2), vertex at (-4,7), and co-vertex at (0,2).

7. Graph and label the center, vertices, and co-vertices of $\frac{(y+1)^2}{36} - \frac{(x)^2}{49} = 1$. Also identify the equation of the asymptotes.