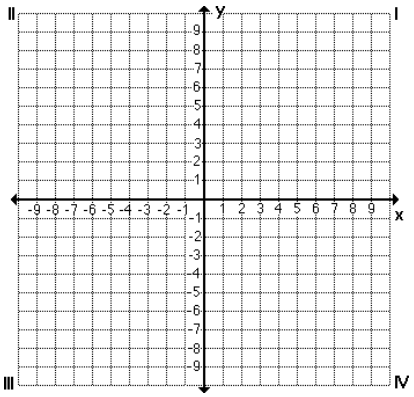
Name_____

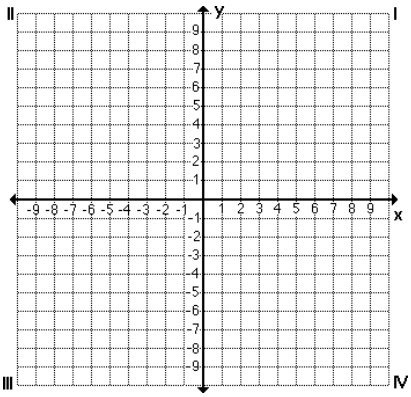
Precalculus Unit 14: 14.2 - Ellipses

Review of Parabolas: Put the equation into standard form if necessary, find the vertex, focus, directrix, and axis, and graph the parabola on the provided graph.

1. $(y-5)^2 = 16(x+4)$



2. $x^2 - 2x + 8y + 9 = 0$



Use the provided information to write the standard equation for the following ellipses.

3. Vertices: $(-3,-5),(-3,-15)$
   Foci: $(-3,-7),(-3,-13)$

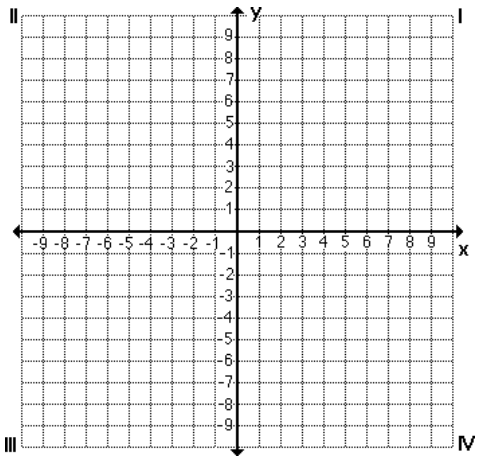
4. Vertices: $(15,8),(5,8)$
   Foci: $(14,8),(6,8)$

5. $121x^2 + 4y^2 + 40y - 384 = 0$

6. $14x^2 + 3y^2 - 56x + 18y - 337 = 0$

Identify the center, vertices, co-vertices, and foci, find the eccentricity, and sketch the graph.

7. $\frac{(x-1)^2}{16} + \frac{y^2}{49}$



8. $16x^2 + y^2 - 32x + 4y + 4 = 0$