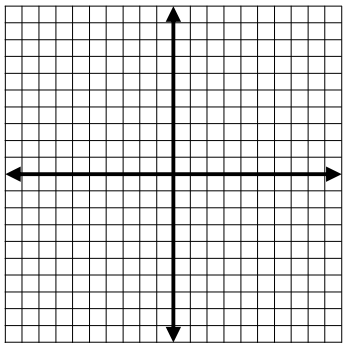
Precalculus Name _____

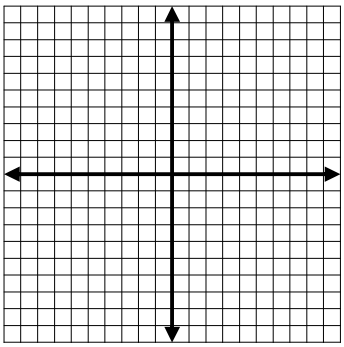
Conic Section Homework #2 - Ellipses

Directions: Graph the following ellipses using the principles of graph transformations that you have learned in class. Be sure to clearly mark the center of the ellipse and endpoints of the minor and major axes.

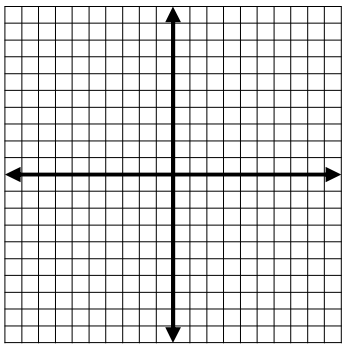
1. $\frac{x^2}{4}+\frac{y^2}{16}=1$



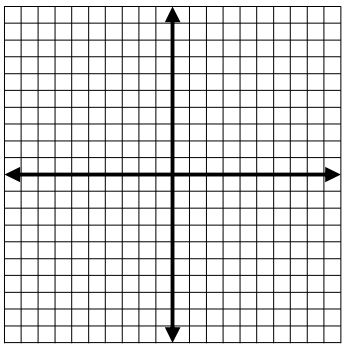
2. $\frac{x^2}{25}+\frac{y^2}{9}=1$



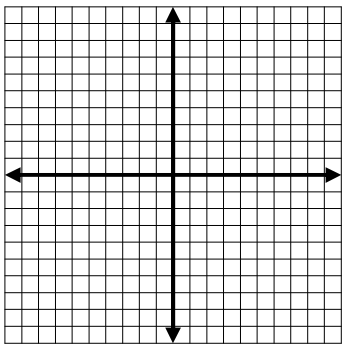
3. $\frac{(x-1)^2}{9}+\frac{y^2}{16}=1$



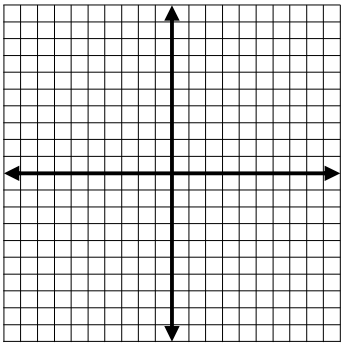
4. $\frac{x^2}{25}+\frac{(y+4)^2}{16}=1$



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



6. $\left(\frac{x+3}{2}\right)^2+\left(\frac{y-4}{7}\right)^2=1$



OVER!

7. Write the equation of an ellipse whose center is located at (0,0) and has a minor axis with length of 6 and major axis with length of 14.

8. Write the equation of an ellipse whose center is located at (-2,5) and who has one of the endpoints of the minor axis located at (-2 , 1) and who has one of the endpoints of the major axis located at (4 , 5).

9. Eliminate the parameter and write in general form for an ellipse.

$$x = 3 + 4\cos t;\ \ y = -1 + 6\sin t$$