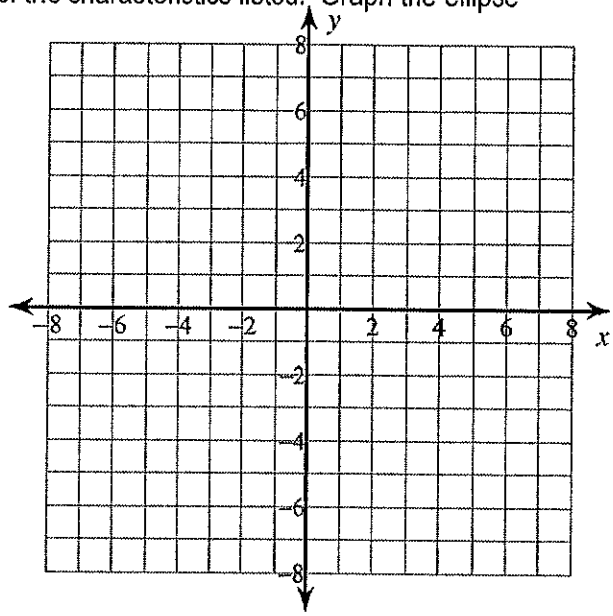
Worksheet 10.2

1. State the equation of the ellipse in standard form and label the characteristics listed. Graph the ellipse and label everything.

   $100x^2 + 9y^2 - 900 = 0$



Equation: _____

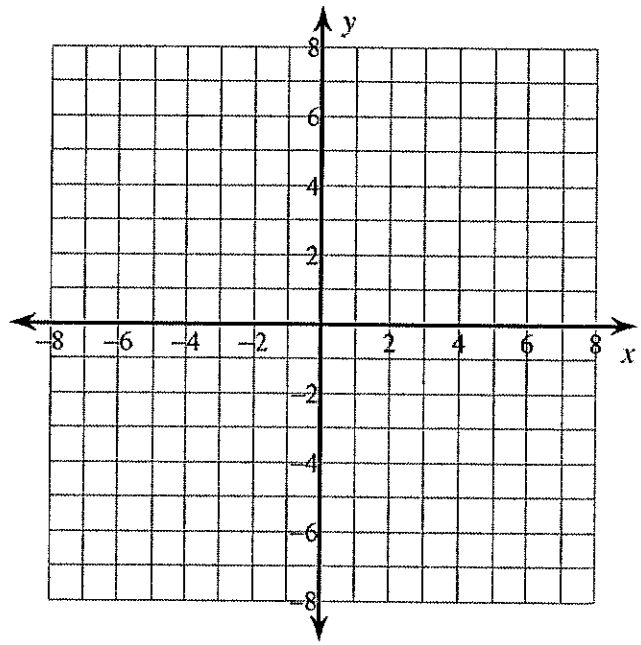
Major vertices: _____

Minor vertices: _____

Foci: _____

2. State the equation of the ellipse in standard form and label the characteristics listed. Graph the ellipse and label everything.

$$\frac{(x-1)^2}{25} + \frac{(y+3)^2}{4} = 1$$



Equation: _____

Major vertices: _____

Minor vertices: _____

Foci: _____

Name: _____ # ____

3. Write an equation for the ellipse: The endpoints of the major axis are at (-11,5) and (7,5). The endpoints of the minor axis are at (-2,9) and (-2,1)

4. Write the equation of an ellipse: with a center (3, –2), passing through (–4, –2), (10, –2), (3, 1), and (3, – 5).

5. Write the equation of an ellipse: with center at (2, 5) with the longer axis of length 12 and parallel to the *x*–axis, shorter axis of length 10

6. Write an equation of an ellipse for the given foci $(0, \pm 8)$ and endpoints of $(\pm 4, 0)$