ELLIPSES: Day 2

Warm-Up
Describe and correct the error in graphing the ellipse.
1. \( \frac{x^2}{4} + \frac{y^2}{16} = 1 \)
2. \( \frac{x^2}{2} + \frac{y^2}{3} = 1 \)

IN-CLASS NOTES:
In every ellipse there is a ______ and a ______ axis. The major axis is always ______ than the minor axis. The major axis joins the ______ and the minor axis joins the ______.

The foci of the ellipse lie on the ______ axis at a distance of \( c \) units from the center, where \( c^2 = \) ______

Label the major axis, minor axis, vertices, co-vertices and foci of the following ellipse on the graph.

1) \( \frac{x^2}{9} + \frac{y^2}{25} = 1 \)
2) \( \frac{(x-2)^2}{36} + \frac{(y-4)^2}{16} = 1 \)
Find the center, vertices, co-vertices and foci of the following ellipses and graph.

3) \( \frac{x^2}{49} + \frac{(y+2)^2}{4} = 1 \)

Center: 
Vertices: 
Co-Vertices: 
Foci: 

4) \( \frac{(x-2)^2}{4} + \frac{(y-3)^2}{36} = 1 \)

Center: 
Vertices: 
Co-Vertices: 
Foci: 

5) \( \frac{(x+1)^2}{25} + \frac{(y-4)^2}{9} = 1 \)

Center: 
Vertices: 
Co-Vertices: 
Foci: 

6) \( \frac{(x-3)^2}{16} + \frac{y^2}{64} = 1 \)

Center: 
Vertices: 
Co-Vertices: 
Foci: