Conic Sections CS5: Ellipses

For the following ellipses, find the following:

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

h = _____, k = _____, a = _____, b = _____

Center _____

Foci _____

Length of Major Axis _____

Length of Minor Axis _____

2. $\frac{(y-3)^2}{100} + \frac{(x+2)^2}{36} = 1$

h = _____, k = _____, a = _____, b = _____

Center _____

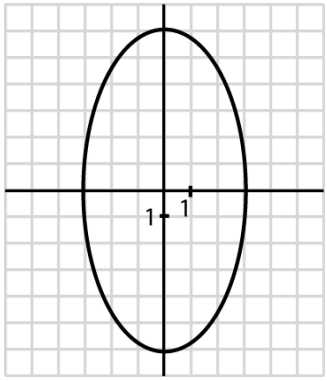
Foci _____

Length of Major Axis _____

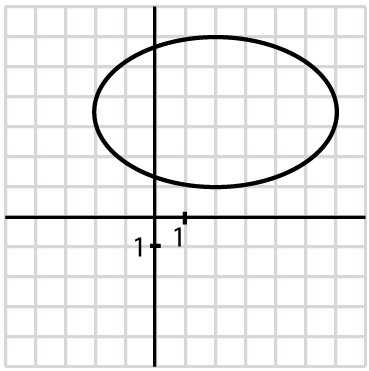
Length of Minor Axis _____

Write the equation of the hyperbola:

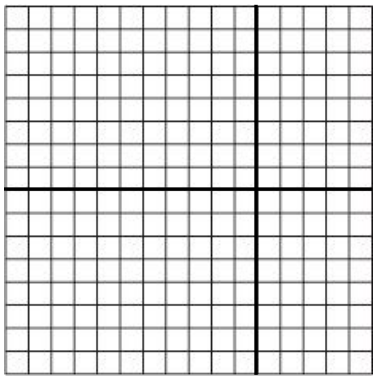
3.



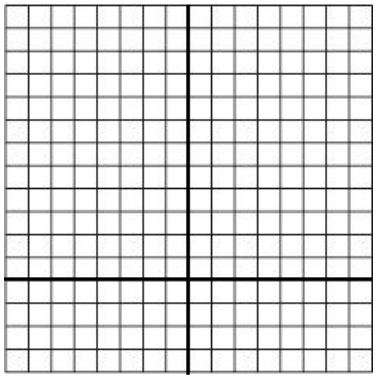
4.



Given the following properties, graph the ellipses and write th equation.



6. The endpoints of the major axis are (–9, 3) &(3, 3), and the endpoints of the minor axis are (–3, 2) & (–3, 4).



7. The center is at (–2, 5), the major axis is parallel to the y-axis and is 10 units long. The minor axis is 4 units long.