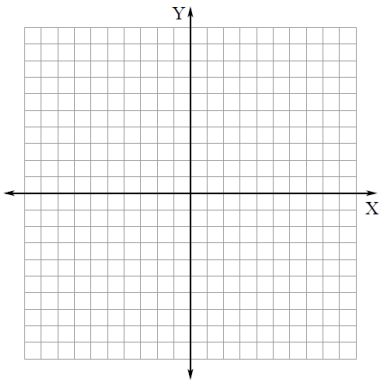
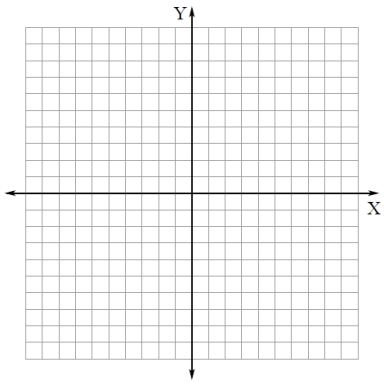
Algebra 2 **SHOW WORK** **Name_____**

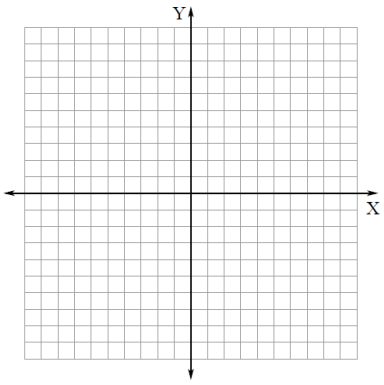
Circle/Ellipse Quiz

I: Graph each of the following circles

1.) $(x-1)^2 + (y+3)^2 = 9$ **2.) $x^2 + y^2 = 16$** **3.) $x^2 + y^2 - 10x + 8y + 16 = 0$**







Center: (,) **Center: (,)** **Center: (,)**

Radius: **Radius:** **Radius:**

II: Write the equation for each circle:

4.) center @ (-3, 5); r = 7

5.) center @ (-4, 0); r = 5

6.) Endpoints of diameter are at (11, 18) and (-13, -16)

III: Find and graph the following for each ellipse:

7.) $\frac{x^2}{39} + \frac{y^2}{64} = 1$

Center: (,)

Orientation:

Major axis length:

Minor axis length:

Foci: (,) & (,)

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

Center: (,)

Orientation:

Major axis length:

Minor axis length:

Foci: (,) & (,)

9.) $4x^2 + 9y^2 + 16x - 18y - 11 = 0$

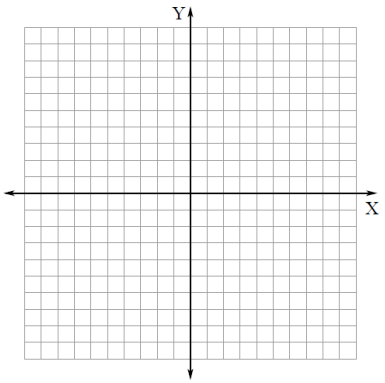
Center: (,)

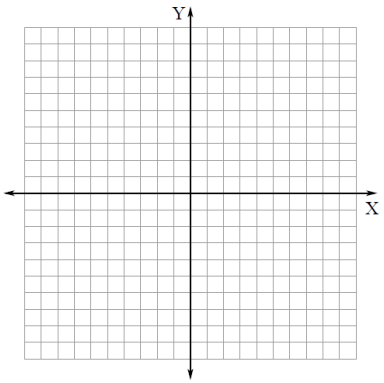
Orientation:

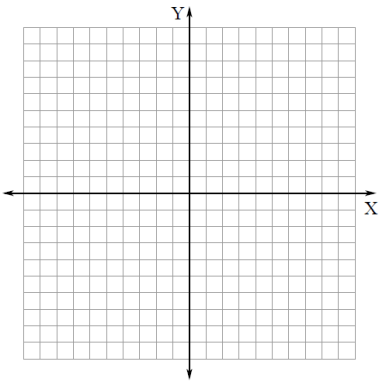
Major axis length:

Minor axis length:

Foci: (,) & (,)







10.) Write the equation of an ellipse with: major axis endpoints @ (2, 12) & (2, -4)
minor axis endpoints @ (4, 4) & (0, 4)

11.) What is the main difference between: $\frac{x^2}{25} + \frac{y^2}{25} = 1$ **&** $\frac{x^2}{25} + \frac{y^2}{36} = 1$ **EXPLAIN CLEARLY**

EXTRA CREDIT: Write the equation of an ellipse with: minor axis endpoints @ (0, 5) & (0, -5)
foci @ (12, 0) & (-12, 0)