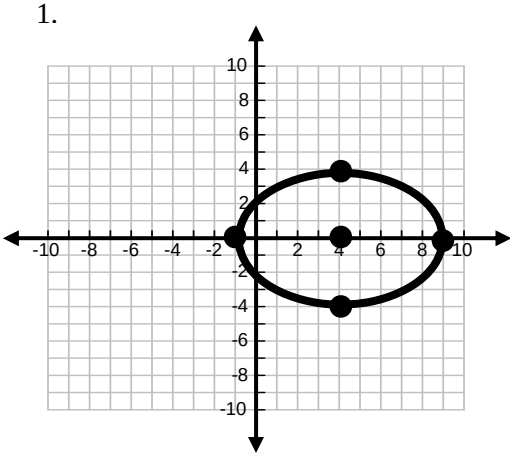
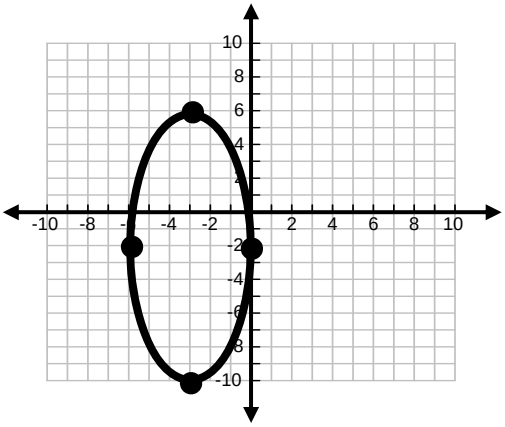
Integrated Algebra 2 **Ellipse Worksheet** **Name** _____

Given the following graphs, write the equation of the conic section.

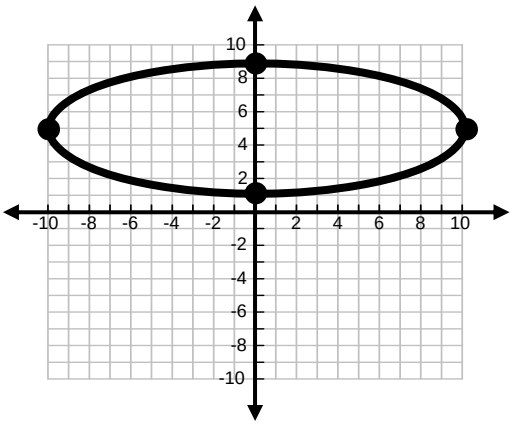
1.



2.



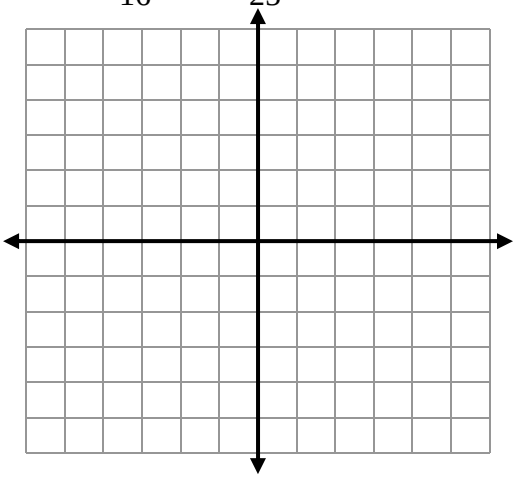
3.



_____ _____ _____

Graph each ellipse. Include the foci.

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



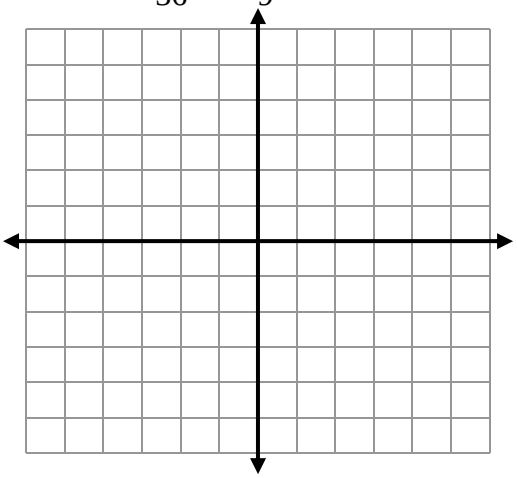
center: _____

vertices: _____

co-vertices: _____

foci: _____

5. $\frac{(x-1)^2}{36}+\frac{y^2}{9}=1$



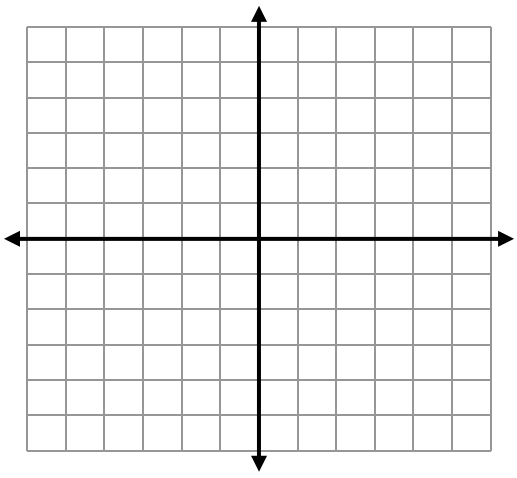
center: _____

vertices: _____

co-vertices: _____

foci: _____

6. $\frac{x^2}{36}+\frac{(y+1)^2}{25}=1$



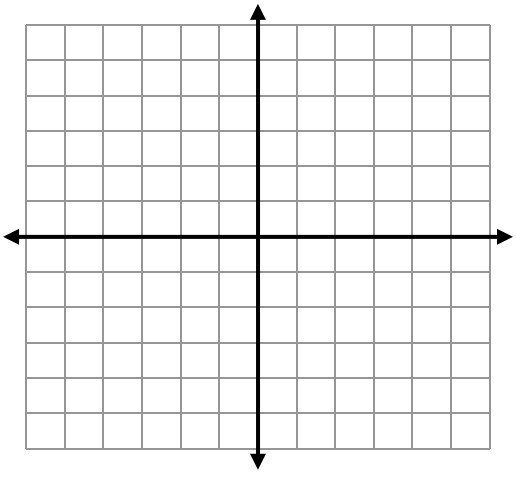
center: _____

vertices: _____

co-vertices: _____

foci: _____

7. $\frac{(x+1)^2}{16}+\frac{(y-2)^2}{39}=1$



center: _____

vertices: _____

co-vertices: _____

foci: _____

Write the standard equation for each ellipse. Write the coordinates of the vertices, co-vertices and foci.

8. $25x^2 + 9y^2 = 225$

Equation _____

vertices:_____ co-vertices:_____ foci:_____

9. $49x^2 + y^2 = 49$

Equation _____

vertices:_____ co-vertices:_____ foci:_____

10. $4x^2 + y^2 - 8x + 4y = 8$

Equation _____

vertices:_____ co-vertices:_____ foci:_____

11. $x^2 + 4y^2 - 18x - 8y = -81$

Equation _____

vertices:_____ co-vertices:_____ foci:_____

12. $9x^2 + 4y^2 - 144x - 8y = -544$

Equation _____

vertices:_____ co-vertices:_____ foci:_____

Write the standard equation for each ellipse with the given characteristics.

13. Vertices (0, 5), (0, -5), Co-vertices (3, 0), (-3, 0) _____

14. Vertices (7, 4), (-1, 4), Co-vertices (3, 6), (3, 2) _____

15. Vertices (-5, 0), (-5, -8), Foci (-5, -2), (-5, -6) _____