

Graphing Ellipses with Center (h,k) Equation of an Ellipse with center (h,k) h gives the x -coordinate of the center k gives the y -coordinate of the center

$$\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$$

 a gives the distance traveled in x -direction to get vertices or co-vertices b gives the distance traveled in y -direction to get vertices or co-verticesEquation of an Ellipse with center (h,k)

$$\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$$

Given the equation of an ellipse, label h , k , a and b .

$$\frac{(x - 3)^2}{16} + \frac{(y - 5)^2}{25} = 1$$

$$\frac{(x + 4)^2}{64} + \frac{(y + 1)^2}{4} = 1$$

$$\frac{(x - 6)^2}{9} + \frac{y^2}{49} = 1$$

Graph the following ellipse

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

Center

Horizontal/ Vertical

Major Axis Length

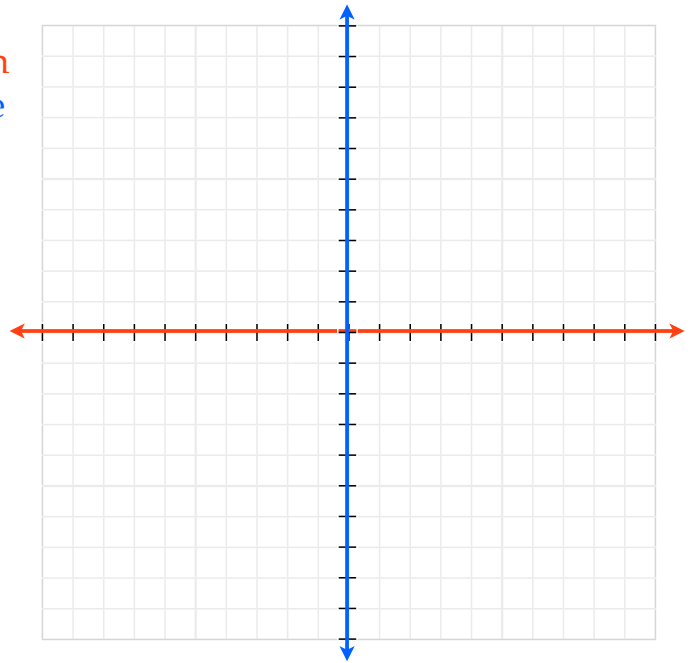
Minor Axis Length

Vertices

Co-Vertices

Foci

Domain
Range



Graph the following ellipse

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

Center

Horizontal/ Vertical

Major Axis Length

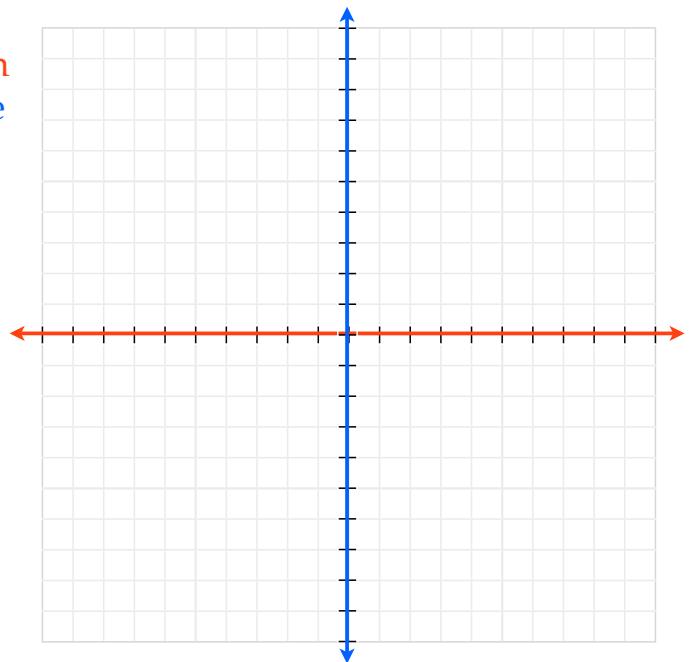
Minor Axis Length

Vertices

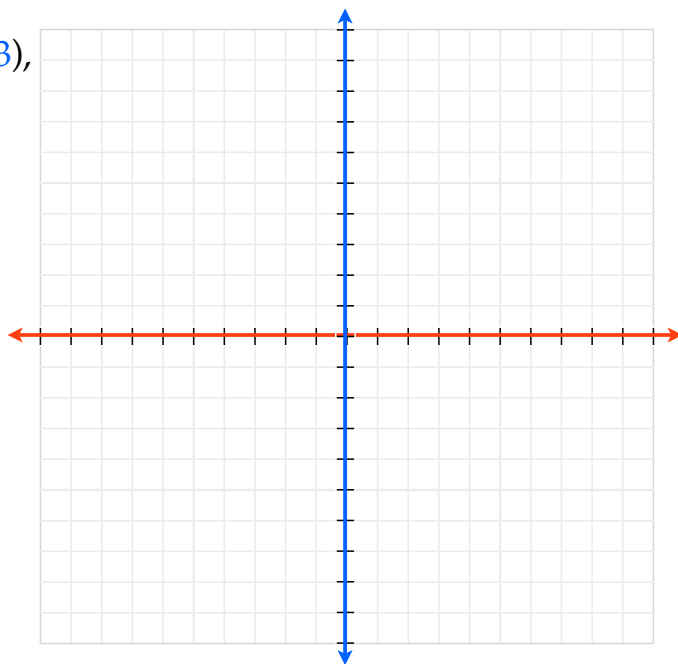
Co-Vertices

Foci

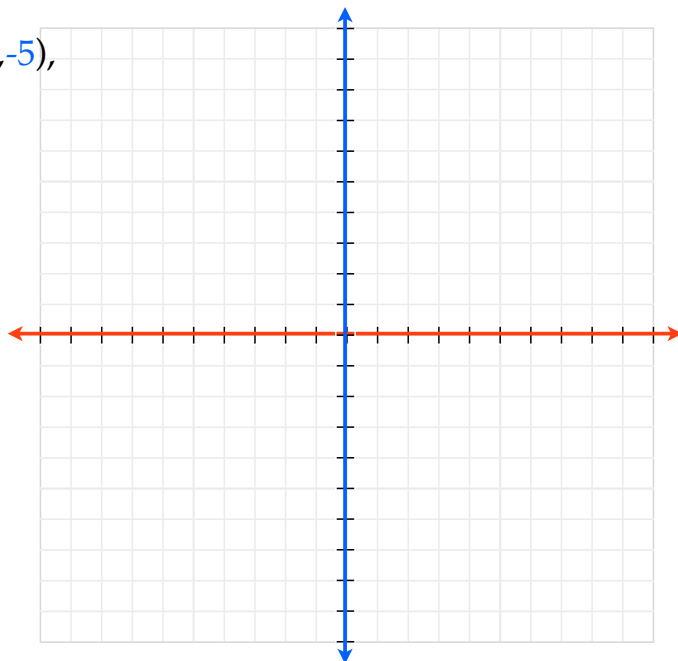
Domain
Range



Find the equation of an ellipse with center $(1,3)$, vertex at $(8,3)$ and co-vertex at $(1,-1)$



Find the equation of an ellipse with center $(-2,-5)$, vertex at $(-2,0)$ and focus at $(-2,-2)$



Equation of an **Ellipse** with center (h,k)

h gives the x -coordinate of the center

k gives the y -coordinate of the center

$$\frac{(x - h)^2}{a^2} + \frac{(y - k)^2}{b^2} = 1$$

a gives the distance traveled in x -direction
to get vertices or co-vertices

b gives the distance traveled in y -direction
to get vertices or co-vertices