Formulas for different Shapes:

Line: $y = mx + b$ m: slope, b = y-intercept

Parabola: $y = a(x-h)^2 + k$ $y=x^2$

X-value of Vertex ← h: Moves us Left/Right

Y-value of Vertex ← k: Moves us Up or Down

Circle: $(x-h)^2 + (y-k)^2 = r^2$

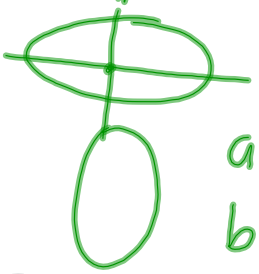
h = X coordinate for center of circle

k = Y coordinate for center of circle

r = radius

$x^2 + y^2 = 16$

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

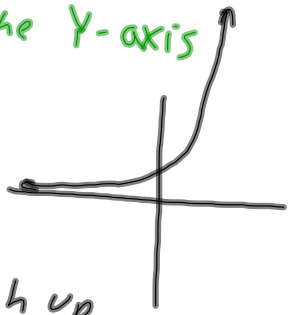


a = radius of the X-axis

b = radius of the Y-axis

Exponential Function:

$y = a(b^x) + c$



C = moves the graph up or down. Adjusts the location of the Asymptote.