Name:_____ Date:_____

Graph Quadratic Functions

Standard Form

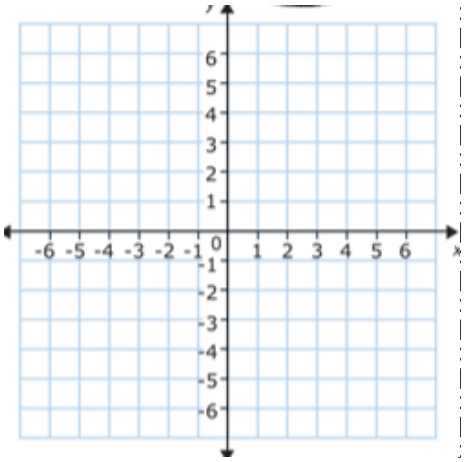
$$f(x) = y = ax^2 + bx + c$$

Example: $y = -x^2 + 2x + 3$

a =_____ b =_____ c=_____

Axis of Symmetry:_____

Axis of Symmetry: $x = -\frac{b}{2a}$



Vertex:_____

*If you know the axis of symmetry, substitute the x to find the y.

Y-intercept:_____

*The y intercept is when x = 0

Vertex Form

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

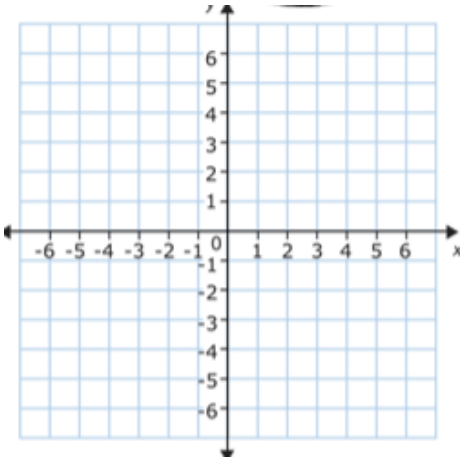
Example: $y = 2(x+3)^2 + 1$

Vertex: (h, k)

Axis of Symmetry:_____

*If you know the vertex, you have the axis.

Vertex:_____



Factored Form

$$f(x) = y = a(x-p)(x-q)$$

Example: $y = (x-4)(x-2)$

Zeros: $x = p$ & $x = q$

Zeros:_____

Axis of symmetry:_____ Vertex:_____

*Halfway between zeros