Quadratic Function

A relationship between two variable, that creates a parabola on a graph.

Quadratic Form

$$y = ax^2 + bx + c$$

$a =$ $b =$ $c =$

Vertex Form

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

$a =$ $h =$ $k =$

Quadratic Function

A relationship between two variable, that creates a parabola on a graph.

opens up

x-intercept
zeros

y-intercept

Vertex
minimum

Vertex
maximum

x-intercept
zeros

y-intercept

opens down

Quadratic Function

A relationship between two variable, that creates a parabola on a graph.

Quadratic Form
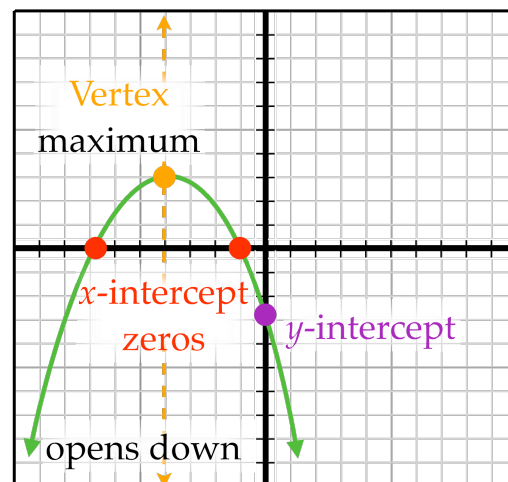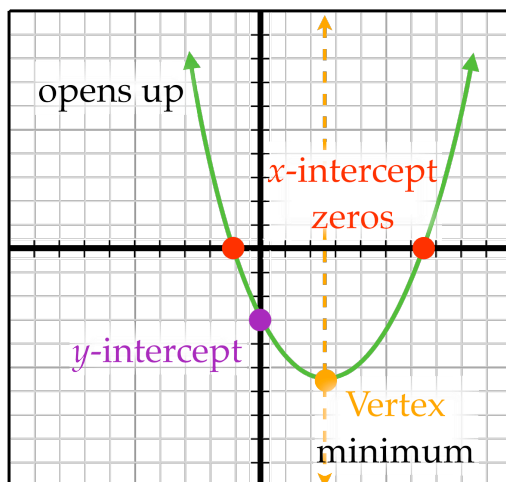
$$y = ax^2 + bx + c$$

$a = \qquad b = \qquad c =$

$a > 0$, opens up

$a < 0$, opens down

$a = 0$, becomes a line

Vertex: $\qquad$ y-intercept:

$$x = \frac{-b}{2a} \qquad y = f\left(\frac{-b}{2a}\right) \qquad (0,c)$$

Axis of Symmetry

Quadratic Function

A relationship between two variable, that creates a parabola on a graph.

Vertex Form

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

$a = \qquad h = \qquad k =$

Vertex: $\qquad$ Axis of Symmetry

$$(h,k) \qquad\qquad x = h$$

$a > 0$, opens up

$a < 0$, opens down

$a = 0$, becomes a line

Finding x and y intercepts of a quadratic.

$$y = x^2 + 6x + 5$$

To find y-intercept

set $x = 0$, solve for y

To find x-intercept, zeros

set $y = 0$, solve for x