Quadratic Equations:

	Standard Form:	Vertex Form:	Intercept Form:
Equation:	$y = ax^2 + bx + c$	$y = a(x - h)^2 + k$	$y = a(x - p)(x - q)$
Vertex:	$\left[\dfrac{-b}{2a}, f\left(\dfrac{-b}{2a}\right)\right]$	(h, k)	$\left[\dfrac{p+q}{2}, f\left(\dfrac{p+q}{2}\right)\right]$
Axis of Symmetry:	$x = -\dfrac{b}{2a}$	$x = h$	$x = \dfrac{p+q}{2}$
Intercepts:	**Y-intercept:** $(0, c)$	**Y-int:** $(0, y)$ **X-Int:** $(x, 0)$	**X-intercepts:** $(p, 0)\ (q, 0)$
Sum of the Roots:	$S = -\dfrac{b}{a}$	$S = 2h$	$S = p + q$
Product - Roots:	$P = \dfrac{c}{a}$	$P = h^2 + \dfrac{k}{a}$	$P = p \cdot q$

Maximum: Equals the y-coordinate of the vertex when a is negative.

Minimum: Equals the y-coordinate of the vertex when a is positive.

The Quadratic Formula:

$$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

The Discriminant:

$b^2 - 4ac > 0$	2 Real Solutions
$b^2 - 4ac = 0$	1 Real Solution
$b^2 - 4ac < 0$	2 Imaginary Solutions