

# Quadratic Equation Forms

	Vertex Form	Standard Form	Factored Form
What does it look like?	$y = a(x-h)^2 + k$	$y = ax^2 + bx + c$	$y = a(x-p)(x-q)$
What key feature does it reveal?	vertex $(h, k)$	y-intercept $(0, c)$	roots $(p, 0)$ and $(q, 0)$
Examples	$y = (x - 5)^2 + 4$ vertex: $(5, 4)$  $y = (x + 1)^2 - 2$ vertex: $(-1, -2)$	$y = x^2 + 6x - 7$ y-intercept: $(0, -7)$  $y = x^2 - 2x + 4$ y-intercept: $(0, 4)$	$y = (x + 5)(x + 2)$ Roots: $(-5, 0)$ $(-2, 0)$  $y = (x - 3)(x - 4)$ Roots: $(3, 0)$ $(4, 0)$