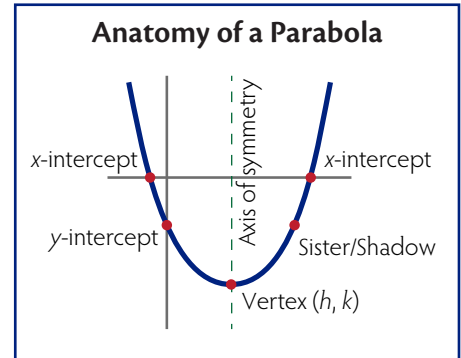


Quadratic Equation Forms

The items below are listed in the most efficient order for calculating them.

Standard / General Form: $y = Ax^2 + Bx + C$

- Axis of Symmetry** $x = \frac{-B}{2A}$
- Vertex (h, k)**
 - x-value (h): $h = \frac{-B}{2A}$ ← Same as the AoS value.
 - y-value (k): Plug x-value into equation
- x-intercepts** Set y equal to zero and solve for x
- y-intercept** (0, C) ← C is the constant from the equation
- Sister Point** (2h, y-intercept) ← h is the x-value of the axis of symmetry



Vertex / Standard Form: $y = A(x - h)^2 + k$

- Vertex** (h, k) ← From the equation
- Axis of Symmetry** Equation: $x = h$ ← h is the x-value of the vertex
- x-intercepts** Set y equal to zero and solve for x
- y-intercept** Set x to zero and evaluate for y.
- Sister Point** (2h, y-intercept) ← h is the x-value of the axis of symmetry

Factored / Intercept / Root Form: $y = A(x - x_1)(x - x_2)$

- Axis of Symmetry** Equation: $x = \frac{x_1 + x_2}{2}$
- Vertex**
 - x-value (h): $h = \frac{x_1 + x_2}{2}$ ← Same as the AoS value.
 - y-value (k): k = plug x-value into equation
- x-intercepts** (x₁, 0), (x₂, 0)
- y-intercept** Set x to zero and evaluate for y.
- Sister Point** (2h, y-intercept) ← h is the x-value of the axis of symmetry