

Quadratic Eq's - Vertex to General

Vertex Form

General Form

$$y = a(x-h)^2 + k \Rightarrow y = ax^2 + bx + c$$

$$y = \frac{1}{2}(x-3)^2 - 4.5$$

$$y = \frac{1}{2}(x-3)(x-3) - 4.5$$

$$= \frac{1}{2}(x^2 - \underline{3x} - \underline{3x} + 9) - 4.5$$

$$= \frac{1}{2}x^2 - 3x$$