

## General Form

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

Finding  $h$

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

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

$$= ax^2 - 2axh + ah^2 + k$$

## Vertex Form

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

vertex:  $(h, k)$

$$-2ah = b$$

$$h = -\frac{b}{2a}$$