

## Write in Vertex Form

$$y = x^2 + 4x + 9$$

$$y - 9 = x^2 + 4x$$

**Move the Constant**

$$y - 9 + 4 = x^2 + 4x + 4$$

**Complete the Square**

$$y - 5 = (x + 2)^2$$

**Factor**

$$y = (x + 2)^2 + 5$$

**Move k**

$$(-2, 5)$$

**Identify the Vertex**