







**Step 3**  **Identifying the vertex of a parabola.**

1. Graph (x – 2)2 + 5. What is the coordinate point of the vertex?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Write a quadratic in vertex form that has a vertex of (- 3, -1).\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Complete the statement: The vertex is (\_\_\_, \_\_\_) from the equation (x – h)2 + k.
4. The tricky part about this is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Step 4 Let’s get ready to SOLVE by completing the square. Use .**

* Set quadratic equal to zero.
* Leave the A and B term on the left side of the equal sign.
* If needed, move the C term to the right side of the equal sign.
* Take half of B, square it, and add it to both sides of the equal sign.
* Why are we adding to BOTH sides of the equal sign?
* Write the trinomial as a binomial squared.
* Use the square root to start solving for x.

(You should get x = 0 and x = - 6)

**Step 5 Try these! Identify the vertex of each parabola by completing the square. Check with graph!**

1. b. c.

**Step 6**  **Try these! Solve each quadratic by completing the square. Check with graph!**

1. b. c.