

## Perfect Square Trinomial Discovery Activity

1) Use algebra tiles to factor  $x^2 + 6x + 9$ . What kind of a rectangle were you able to make?

2) Use algebra tiles to factor  $x^2 - 4x + 4$ . What kind of a rectangle were you able to make?

3) Create two of your own trinomials which will make squares just as you did above.

4) Consider the expression  $x^2 + bx + c$ . What is the relationship between  $b$  and  $c$  that allows you to make a square, rather than a generic rectangle?

5) Consider the expression  $x^2 + bx + c$  again. Can  $b$  be positive or negative? Can  $c$  be positive or negative? Explain.

6) Circle all of the following which will factor into perfect square trinomials. Then write the factorization for them.

$$x^2 - 10x + 25$$

$$x^2 + 6x + 10$$

$$x^2 + 2x + 1$$

$$x^2 + 12x + 36$$

$$x^2 - 16x + 64$$

$$x^2 + 8x - 16$$

7) Factor  $a^2 + 2ab + b^2$ .