

## 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  $a^2 + 2ab + b^2$ .