

Name: _____

Date: _____

Learning Goal 3.3

Convert standard form of the quadratic equation to vertex form by completing the square.

In your groups, model the following **Perfect Square Trinomials** using algebra tiles:

Trinomial Form:	$f(x) = x^2 + 6x + 9$	$g(x) = x^2 + 2x + 1$
Picture:		
Factored Form:		

What do you notice about the shape that is created?

In your groups, create **Perfect Square Trinomials** using algebra tiles:

Trinomial Form:	$f(x) = x^2 + 4x + \underline{\quad}$	$f(x) = x^2 + 8x + \underline{\quad}$
Picture:		
Factored Form:		

How can you relate the linear term (the x term) to the constant term (the stand alone number)?

ie. Recall standard form ($f(x) = ax^2 + bx + c$). Can you determine a way to find c from b ?

Try some more – with or without algebra tiles.

Trinomial Form:	$f(x) = x^2 + 14x + \underline{\hspace{2cm}}$	$g(x) = x^2 + 10x + \underline{\hspace{2cm}}$
Work:		
Factored Form:		
Trinomial Form:	$f(x) = x^2 - 12x + \underline{\hspace{2cm}}$	$g(x) = x^2 + 5x + \underline{\hspace{2cm}}$
Work:		
Factored Form:		