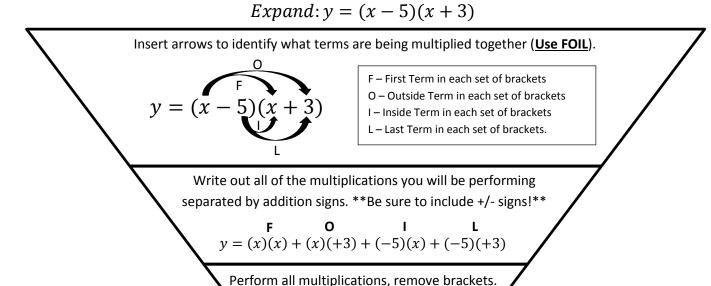
## Quadratic Relations: Day 2 Converting from Factored Form to Standard Form

Previously, we learned how to convert  $\underline{\text{factored form}}$  quadratic equations into  $\underline{\text{standard form}}$  quadratic equations using  $\underline{\text{THE GRID METHOD}}$ .

Now, we will learn how to do the very same thing, but this time using FOIL.

## **Expanding Factored Form Quadratic Equations Using FOIL**



 $y = x^2 + 3x - 5x - 15$ 

Therefore, the factored form equation y = (x - 5)(x + 3) is equivalent to the standard form equation  $y = x^2 - 2x - 15$ . Both equations will produce the same parabolic graph!

Expand: 
$$y = (x + 2)(x + 3)$$
  
 $y = x^2 + 3x + 2x + 6$   
 $y = x^2 + 5x + 6$ 

Expand: 
$$y = (x + 6)(x - 5)$$
  
 $\sqrt{-x^2 - 5} \times +6 \times -30$   
 $\sqrt{-x^2 + x - 30}$ 

Expand: 
$$y = (x - 8)(x + 4)$$

$$\begin{cases}
/= X^2 + 4 \times -8 \times -32 \\
/= X^2 - 4 \times -32
\end{cases}$$

Expand: 
$$y = (x + 2)(x - 2)$$

$$\sqrt{= x^2 - 2x + 2x - 4}$$

$$\sqrt{= x^2 - 2x + 2x - 4}$$

Expand: 
$$y = (x + 3)(x + 3)$$

$$\sqrt{= x^2 + 3x + 3x + 4}$$

$$\sqrt{= x^2 + 6x + 3}$$