

# 10.5 Factoring the Trinomial

April 25, 2007

$$x^2 + bx + c$$

$$(x+4)(x+2) = x^2 + 6x + 8$$

What is the Relationship?

\* Add the '4' & '2' to get '6'!

\* Multiply the '4' & '2' to get '8'!

$$(y+4)(y+3) =$$

$$y^2 + 3y + 4y + 12$$
$$\boxed{y^2 + 7y + 12}$$

$$(a-2)(a-3) =$$

$$a^2 - 3a - 2a + 6$$
$$\boxed{a^2 - 5a + 6}$$

This works

This works

These  
are  
Special

Factor : (Reverse F.O.I.L) What 2 #'s Multiply

ex1)

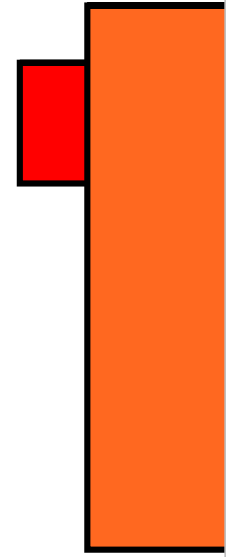
$$x^2 + 9x + 14$$

1 · 14  
2 · 7

to get '14'  
+ Add to get  
'-9'!

$(x + 2)(x + 7)$

\*gray is the free stuff



$$(b+7)(b-3) = b^2 + 4b - 21$$
$$(b-3)(b+7) = \underline{b^2 + 4b - 21}$$

$$(b-7)(b+3) = b^2 - 4b - 21$$

What is the difference/Pattern?

The First Sign of the trinomial is dependent on the Sign w/ the larger Abs. Value!

Factor: It is special

$$c^2 - 5c + 6$$

1.6  
2.3

$$\underline{\underline{(c - 2)(c - 3)}}$$

$$x^2 - 7x + 12$$

1.12  
2.6  
3.4

$$\underline{\underline{(x - 3)(x - 4)}}$$

ex 3 | Factor  $\begin{matrix} 1 \cdot 10 \\ 2 \cdot 5 \end{matrix}$

$$x^2 - 3x - 10$$

$$(x + 2)(x - 5)$$

ex 4 |

$$x^2 - 6x - 7$$

$\begin{matrix} 1 \cdot 7 \end{matrix}$

$$\underline{\underline{(x + 1)(x - 7)}}$$

O.T.L.

① Pgs 599:

12-14(a)  
15-23(a)

} Show All  
Work