3/8 Factor Trinomials : $x^2 + \underline{b}x + \underline{c}$ form
leading coefficient is 1.

$(x+5)(x+8)$

$x^2 + \underline{13}x + \underline{40}$

$(x-2)(x-9)$

$x^2 - \underline{11}x + \underline{18}$

$(y+6)(y+4)$

$y^2 + \underline{10}y + \underline{24}$

$(y+6x)(y+4x)$

$y^2 + 10xy + 24x^2$

$(x-5)(x+40)$

$x^2 + \underline{35}x - \underline{200}$

b = <u>add</u> the constants in 2 binomial factors

c = <u>multiply</u> the constants in 2 binomial factors

Factor Trinomials : $x^2 + bx + c$

$x^2 + \underline{4}x + \underline{3} = (x+3)(x+1)$

$b = 4 = \underline{3} + \underline{1}$

$c = 3 = \underline{3} * \underline{1}$

$x^2+8x-48=(x+12)(x-4)$

work

$b=8=\underline{12}+\underline{-4}$

$c=-48=\underline{12}*\underline{-4}$

$-8 \quad 6$

$8 \quad -6$

$12 \quad -4$

$-12 \quad 4$

$y^2-7y-18=(y+2)(y-9)$

c factors of -18	b sum of -7
$-6 \cdot 3$	-3 X
$6 \cdot -3$	3 X
$1 \cdot -18$	-17 X
$-1 \cdot 18$	17 X
$-2 \cdot 9$	7 X
$2 \cdot -9$	-7 ✓

$c^2-15c+44=(c-4)(c-11)$

$b=-15=\underline{-4}+\underline{-11}$

$c=44=\underline{-4}*\underline{-11}$

$m^2+2mn-15n^2=(m-3n)(m+5n)$

$b=2=\underline{-3}+\underline{5}$

$c=-15=\underline{-3}*\underline{5}$

3 5

$$a^2 - ab - 42b^2 = \boxed{(a-7b)(a+6b)}$$

$b = -1 = \underline{6} + \underline{-7}$

$c = -42 = \underline{6} \times \underline{-7}$

	a	$-7b$
a	a^2	$-7ab$
$6b$	$6ab$	$-42b^2$