

Name

8.5 Factor $x^2 + bx + c$

Ag I

I can factor trinomials of the form $x^2 + bx + c$.

$$x^2 + bx + c$$

* Think of what 2 numbers multiply to c and add to b .

Example 1:

Ch. 8 Quiz

1) $x^2 + 3x + 2$ $2 \cdot 1 = 2$ 2) $a^2 + 7a + 10$ $5 \cdot 2 = 10$

h. 7/8 Test

$\boxed{(x+2)(x+1)}$ $2+1=3$ $\boxed{(a+5)(a+2)}$ $5+2=7$

3) $t^2 + 9t + 14$ $7 \cdot 2 = 14$

$\boxed{(t+7)(t+2)}$ $7+2=9$

Example 2/3:

4) $x^2 - 4x + 3$ $-3 \cdot -1 = 3$

$\boxed{(x-3)(x-1)}$ $-3+(-1)=-4$

5) $t^2 - 8t + 12$ $-6 \cdot -2 = 12$

$\boxed{(t-6)(t-2)}$ $-6+(-2)=-8$

6) $m^2 + m - 20$ $-4 \cdot 5 = -20$

$\boxed{(m-4)(m+5)}$ $-4+5=1$

7) $w^2 + 6w - 16$ $8 \cdot -2 = -16$

$\boxed{(w+8)(w-2)}$ $8+(-2)=6$

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I can factor trinomials of the form $x^2 + bx + c$.

Example 4:

$$8) s^2 - 2s = 24$$

Ch. 8 Quiz

$$s^2 - 2s - 24 = 0 \quad -6 \cdot 4 = -24$$

$$(s - 6)(s + 4) \quad -6 + 4 = -2$$

Ch. 7/8 Test

* Complete Skills Practice, pg. 528, #

$$x^2 - 4x + 3 = 0$$
$$x^2 - 4x + 3 = (x - 1)(x - 3)$$

$$x^2 - 8x + 15 = 0$$
$$x^2 - 8x + 15 = (x - 3)(x - 5)$$

$$m^2 - 11m + 30 = 0$$
$$m^2 - 11m + 30 = (m - 5)(m - 6)$$

$$w^2 - 12w + 36 = 0$$
$$w^2 - 12w + 36 = (w - 6)(w - 6)$$