

CW# 9.2 Factoring

<p>key words</p>	<p>Factor of trinomial Factored form</p>
<p>journal</p>	<p>Factored form \leftrightarrow Trinomial (FOIL)</p> <p>1. $(x+2)(x+7) = x^2 + 9x + 14$</p> <p>2. $(x+3)(x-4) = x^2 - x - 12$</p> <p>3. $(x+3)(x-5) = x^2 - 2x - 15$</p>
<p>examples</p>	<p>#1 Factor Factor the trinomial.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>1. $x^2 + 4x + 3$</p> $\begin{array}{cc} \cdot 3 & \\ 1 & \times & 3 \\ & +4 & \end{array} \quad (x+1)(x+3)$ <p>3. $x^2 + 8x + 7$</p> $\begin{array}{cc} \cdot 7 & \\ 1 & \times & 7 \\ & +8 & \end{array} \quad (x+1)(x+7)$ <p>5. $x^2 - 11x - 12$</p> $\begin{array}{cc} \cdot & -12 \\ -12 & \times & 1 \\ & -11 & \end{array} \quad (x-12)(x+1)$ <p>7. $x^2 + 17x - 18$</p> $\begin{array}{cc} \cdot -18 & \\ 18 & \times & -1 \\ & 17 & \end{array} \quad (x+18)(x-1)$ </div> <div style="width: 45%;"> <p>2. $x^2 - 5x + 6$</p> $\begin{array}{cc} \cdot & -3 \\ -2 & \times & -3 \\ & -5 & \end{array} \quad (x-2)(x-3)$ <p>4. $x^2 - 5x + 4$</p> $\begin{array}{cc} \cdot & -4 \\ -1 & \times & -4 \\ & -5 & \end{array} \quad (x-1)(x-4)$ <p>6. $x^2 - 3x - 10$</p> $\begin{array}{cc} + & -10 \\ -5 & \times & 2 \\ & -3 & \end{array} \quad (x-5)(x+2)$ <p>8. $x^2 + 2x - 8$</p> $\begin{array}{cc} \cdot -8 & \\ 4 & \times & -2 \\ & 2 & \end{array} \quad (x+4)(x-2)$ </div> </div>

1) $x^2 - 4x + 3$

$\cdot c$	$+b$
3	-4
-1	-3

$(x-1)(x-3)$

2) $x^2 + 5x + 4$

$\cdot c$	$+b$
4	5
4	1

$(x+4)(x+1)$

3) $x^2 + x - 12$

$\cdot c$	$+b$
-12	1
4	-3

$(x+4)(x-3)$

4) $x^2 - 3x - 10$

$\cdot c$	$+b$
-10	-3
-5	2

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

5) $x^2 + 9x + 14$

$\cdot c$	$+b$
14	9
7	2

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

6) $x^2 + 2x + 1$

$\cdot c$	$+b$
1	2
1	1

$(x+1)(x+1) = (x+1)^2$

7) $x^2 - 5x + 6$

$\cdot c$	$+b$
6	-5
-2	-3

$(x-2)(x-3)$

8) $x^2 - 3x - 28$

$\cdot c$	$+b$
-28	-3
-7	4

$(x-7)(x+4)$