



- 4 multiplications
- CLT (simplify by adding like terms)

Use the Box Method to find the product of the binomials.

3.  $(x + 5)(x + 7)$

	$x$	$+5$	
$x$	$x^2$	$+5x$	CLT Add
$+7$	$+7x$	$+35$	

Result:  $x^2 + 12x + 35$

4.  $(x - 4)(x + 9)$

	$x$	$-4$	
$x$	$x^2$	$-4x$	$= 5x$
$+9$	$+9x$	$+36$	

Result:  $x^2 + 5x + 36$

Continue using the Box Method to find the product of binomials.

5.  $(2x - 5)(3x + 4)$

	$2x$	$-5$	
$3x$	$6x^2$	$-15x$	$= 7x$
$+4$	$+8x$	$-20$	

Result:  $6x^2 + 7x - 20$

6.  $(x - 7)(8x - 9)$

	$x$	$-7$	
$8x$	$8x^2$	$-56x$	$= -65x$
$-9$	$-9x$	$+63$	

Result:  $8x^2 - 65x + 63$

★ To Check your work - on calc

→  $y_1 =$  factored form

→  $y_2 =$  standard form (result)

2<sup>nd</sup> table

does  $y_1 = y_2$  ? → yes & great!  
→ no : find your mistake

First Outer Innner Last

$$(x+2)(x-4)$$

Diagram illustrating the FOIL method for the binomial  $(x+2)(x-4)$ . The terms are labeled: 'First' (x), 'Outer' (2), 'Inner' (x), and 'Last' (-4). Arrows indicate the multiplication of these pairs.

Use the FOIL Method to multiply these binomials.

7.  $(x+1)(x-4)$

$$\begin{array}{cccc} x^2 & -4x & +x & -4 \\ \text{(F)} & \text{(O)} & \text{(I)} & \text{(L)} \end{array}$$

CLT

Result:  $x^2 - 3x - 4$

Standard form

$\rightarrow ax^2 + bx + c$

8.  $(3x+5)(2x-1)$

$$\begin{array}{cccc} 6x^2 & -3x & +10x & -5 \\ \text{(F)} & \text{(O)} & \text{(I)} & \text{(L)} \end{array}$$

CLT

Result:  $6x^2 + 7x - 5$

9.  $(4x-1)(x-7)$

$$\begin{array}{cccc} 4x^2 & -28x & -x & +7 \\ \text{(F)} & \text{(O)} & \text{(I)} & \text{(L)} \end{array}$$

CLT

Result:  $4x^2 - 29x + 7$

10.  $(2x+5)(3x+2)$

$$\begin{array}{cccc} 6x^2 & +4x & +15x & +10 \\ \text{(F)} & \text{(O)} & \text{(I)} & \text{(L)} \end{array}$$

CLT

Result:  $6x^2 + 19x + 10$

To Check

$y_1$  = factored form

$y_2$  = standard form

2<sup>nd</sup> table  $\rightarrow$  y-values should be the same