

Multiply the following binomials:

$$(x + 2)(x + 3)$$

$$\begin{array}{l} F \quad x^2 \\ O \quad 3x \\ 1 \quad 2x \\ L \quad 6 \end{array}$$

$$x^2 + 5x + 6$$

$$(x + 5)(x - 6)$$

$$\begin{array}{l} x \\ -6 \end{array} \begin{array}{c} x + 5 \\ \begin{array}{|c|c|} \hline x^2 & 5x \\ \hline -6x & -30 \\ \hline \end{array} \end{array} = x^2 - x - 30$$

$$(x + 4)^2 = \text{Perfect Square}$$

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

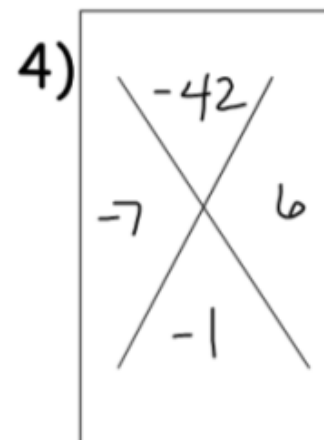
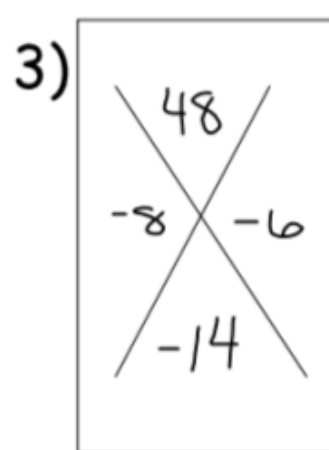
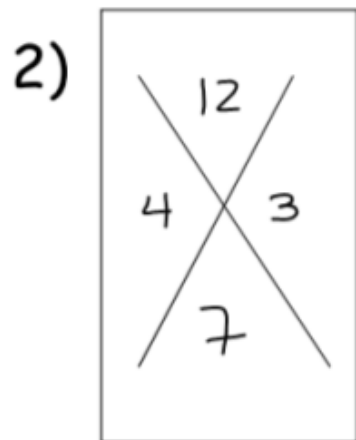
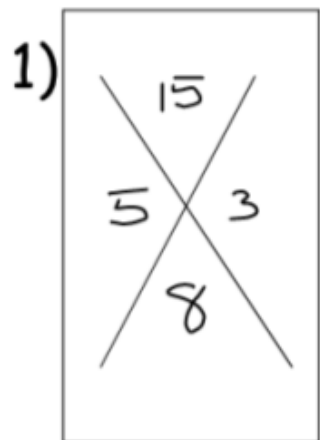
$$\begin{array}{l} x \\ + \\ 4 \end{array} \begin{array}{c} x + 4 \\ \begin{array}{|c|c|} \hline x^2 & 4x \\ \hline 4x & 16 \\ \hline \end{array} \end{array}$$

$$x^2 + 8x + 16$$

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

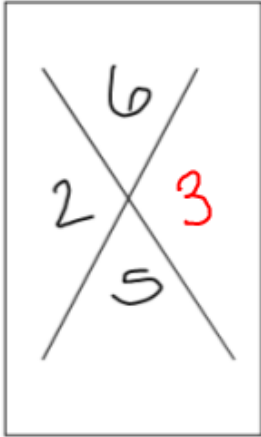
$$\begin{array}{l} F \quad x^2 \\ O \quad 2x \\ 1 \quad -2x \\ L \quad -4 \end{array} = x^2 - 4$$

Do you see a pattern????

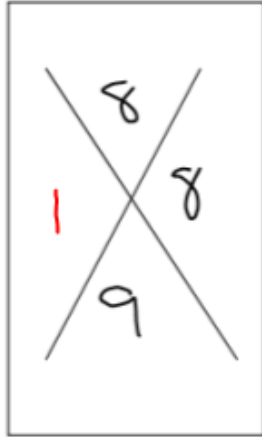


Try these...

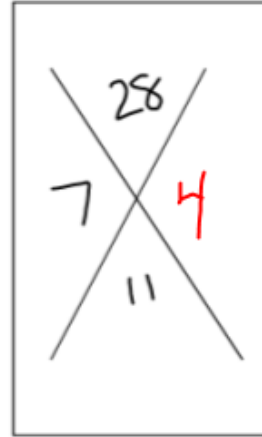
5)



6)



7)

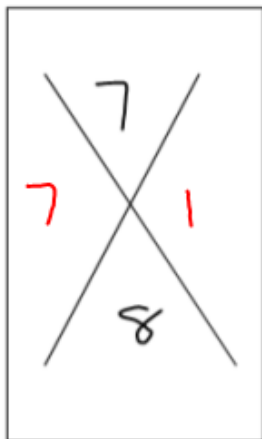


8)

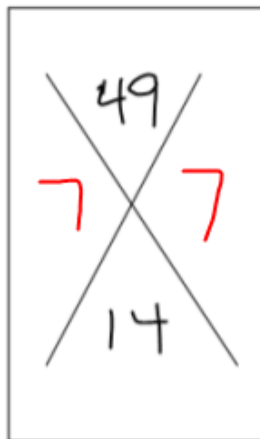


Try these...

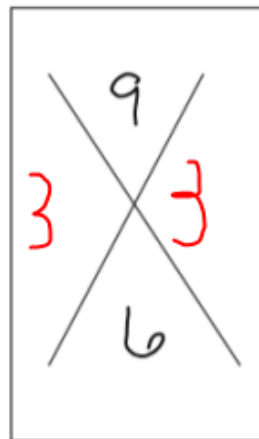
9)



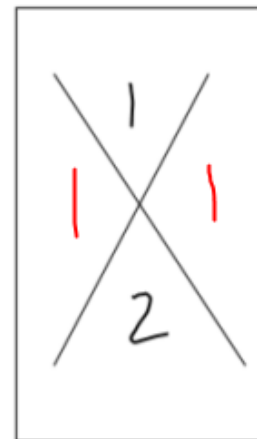
10)



11)



12)



13)

$$\begin{array}{c} 45 \\ -9 \quad -5 \\ -14 \end{array}$$

14)

$$\begin{array}{c} 36 \\ 6 \quad 6 \\ 12 \end{array}$$

15)

$$\begin{array}{c} 4 \\ -4 \quad -1 \\ -5 \end{array}$$

16)

$$\begin{array}{c} 15 \\ -5 \quad -3 \\ -8 \end{array}$$

17)

$$\begin{array}{c} -15 \\ -5 \quad 3 \\ -2 \end{array}$$

18)

$$\begin{array}{c} -15 \\ 5 \quad -3 \\ 2 \end{array}$$

19)

$$\begin{array}{c} -28 \\ -7 \quad 4 \\ -3 \end{array}$$

20)

$$\begin{array}{c} -42 \\ -7 \quad 6 \\ -1 \end{array}$$

Set up X-Factors, Solve, Factor

CHECK YOUR ANSWER!!!

$$x^2 + \underline{8}x + 15 \quad \text{Check}$$

$$(x+5)(x+3)$$

$$\underline{x^2 + 5x + 6} \quad \text{Check}$$

$$(x+2)(x+3)$$

$$z^2 - 8z + 7 \quad \text{Check}$$

$$\begin{array}{ccc} & 7 & \\ -1 & \times & -7 \\ & -8 & \end{array}$$

$$(z-1)(z-7)$$

$$x^2 - 2x - 15 \quad \text{Check}$$

$$\begin{array}{ccc} & -15 & \\ -5 & \times & 3 \\ & -2 & \end{array}$$

$$(x-5)(x+3)$$

$$c^2 - 7c + 10 \quad \text{Check}$$

$$(c-5)(c-2)$$

$$a^2 + 11a + 30 \quad \text{Check}$$

$$(a+5)(a+6)$$



	Trinomial	X-Factor	Factored Form	Check your Work!!!
1	$x^2 + 5x + 6$			
2	$x^2 + 6x + 8$			
3	$x^2 - 12x + 20$			

4	$x^2 - 9x + 14$			
5	$x^2 + 5x - 6$			
6	$x^2 - 9x - 36$			
7	$x^2 + 7x - 8$			

8

$x^2 - x - 20$

9

$x^2 - 6x - 27$

10

$x^2 - 2x - 48$

11

$x^2 + 11x - 12$

# Homework #2

## Factoring Trinomials