

DO NOW

Multiply:

1. $(2x + 3)(x - 4)$

2. $(a - 3)^2$

$2x^2 - 8x + 3x - 12$

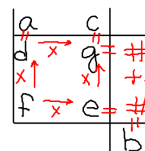
$a^2 - 6a + 9$

$2x^2 - 5x - 12$

7.3 Factoring Trinomials

Determine the binomials that multiply to be the given trinomial.

Puzzle Boxes:



$ax^2 + bx + c = (dx + e)(fx + g)$

Examples:

1. $4x^2 + 7x + 3$

4	3
1	3

←outers
←inners
7 ✓

$4x^2 + 7x + 3$

$(4x + 3)(x + 1)$

$4x^2 + 4x + 3x + 3$
 $7x$

2. $2x^2 - 11x + 12$

2	12
1	-3

←outers
←inners
-11 ✓

$2x^2 - 11x + 12$

$(x - 4)(2x - 3)$

Check:
 $2x^2 - 3x - 8x + 12$
 $-11x$

NEVER
put negatives
in the 1st
column!

3. $2x^2 - 7x - 15$

2	-15
1	3

←outers
←inners
-7 ✓

$2x^2 - 7x - 15$

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

4. $3x^2 + 8x + 4$

3	4
1	2

←outers
←inners
8 ✓

$3x^2 + 8x + 4$

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

HOMEWORK

Worksheet - Factor Puzzles