

Check

1. Factor each trinomial.

a) $x^2 - 6x + 8$

The coefficient of x is _____, so the sum of the factors is _____.

The constant term is _____, so the product of the factors is _____.

Factors of _____	Sum of the factors
$1 \times$ _____	$1 +$ _____ = _____
$(-1) \times$ _____	$-1 -$ _____ = _____
$2 \times$ _____	$2 +$ _____ = _____
$(-2) \times$ _____	$-2 -$ _____ = _____

8 is positive, so both its factors have the same sign. The x -term is negative, so both factors must be negative.

So, the factors of _____ are _____ and _____.

Then, $x^2 - 6x + 8 = (x - \text{_____})(x - \text{_____})$

b) $c^2 + 2c - 15$

The coefficient of c is _____, so the sum of the factors is _____.

The constant term is _____, so the product of the factors is _____.

Factors of _____	Sum of the factors
$1 \times$ (_____)	$1 -$ _____ = _____
$(-1) \times$ _____	$-1 +$ _____ = _____
$3 \times$ (_____)	$3 -$ _____ = _____
$(-3) \times$ _____	$-3 +$ _____ = _____

The factors of _____ are _____ and _____.

So, $c^2 + 2c - 15 = (c - \text{_____})(c + \text{_____})$

Practice

1. Expand, then simplify.

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

Use algebra tiles to make a rectangle.

Use _____ and _____ as the length.

Use _____ and _____ as the width.

To make the rectangle, use these tiles:



So, $(x + 3)(x + 5) = x^2 + \text{_____}x + \text{_____}$

Sketch the tiles.

Label the length and width.

