Factoring Complex Trinomials ($ax^2 + bx + c$, $a \neq 1$)

1. Using Alge-tiles

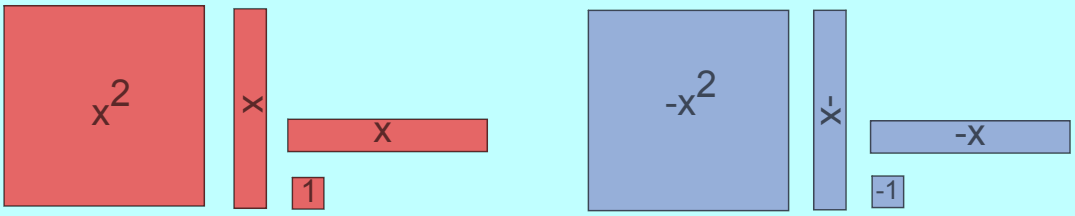
April 6/2010

Model the expression as an area. The tiles must form a rectangle (or square).

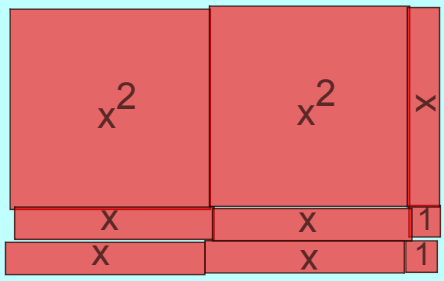
The lengths of the sides are factors.

Hint: Focus on the corners with a and c first.

Mar 26-8:24 AM



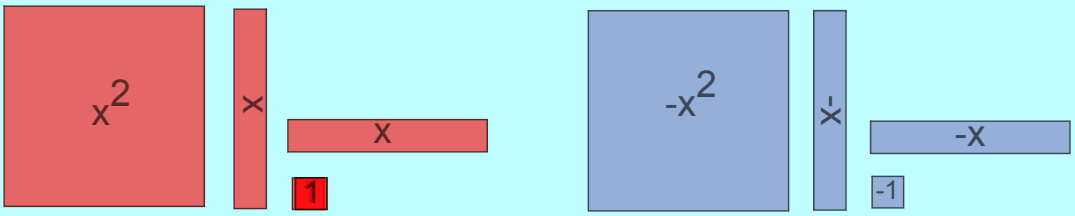
Factor: $2x^2 + 5x + 2$



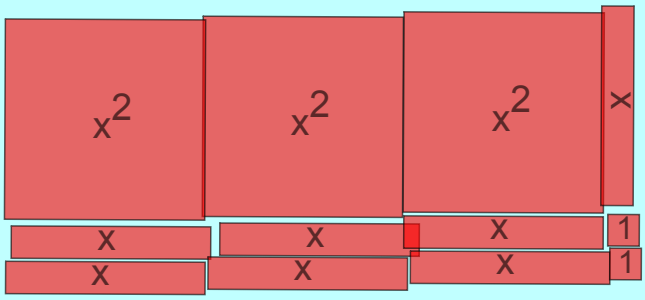
$2x^2 + 5x + 2$

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

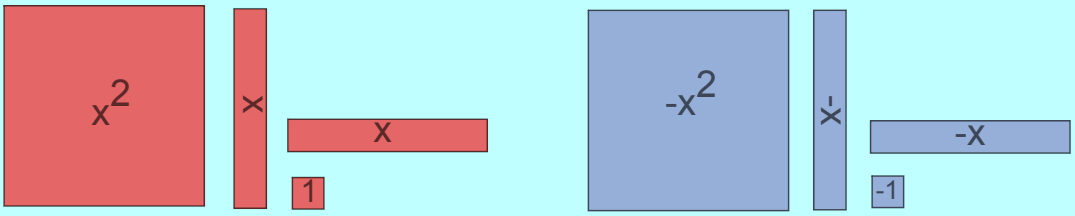
Mar 25-8:02 AM



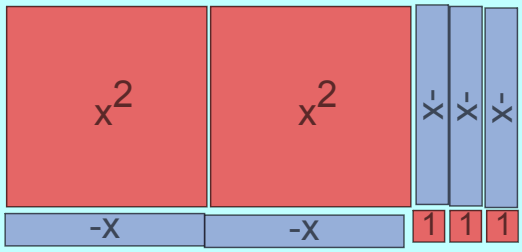
Factor: $3x^2 + 7x + 2$



Mar 25-8:02 AM



Factor: $2x^2 - 5x + 3$



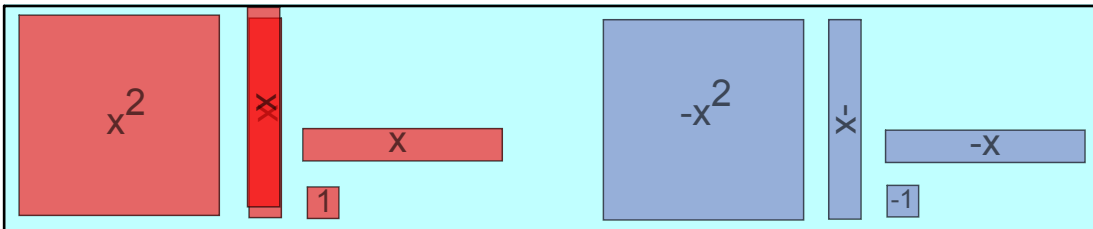
$(2x-3)(x-1)$

Check

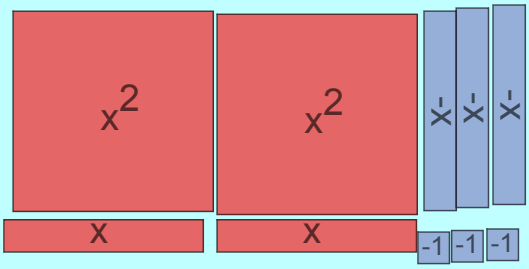
$2x^2 - 2x - 3x + 3$

$= 2x^2 - 5x + 3$ ✓

Mar 25-8:02 AM



Factor: $2x^2 - x - 3$ $= (2x-3)(x+1)$

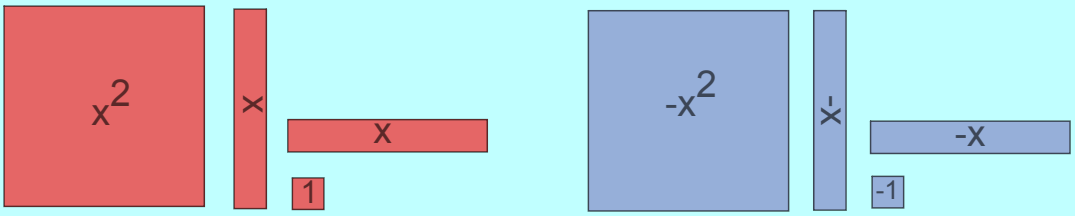


Mar 25-8:02 AM

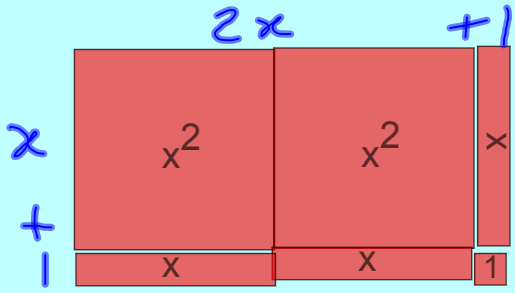
The simplest factoring is to find a common factor.

If possible, always remove any common factors first.

Mar 26-8:24 AM

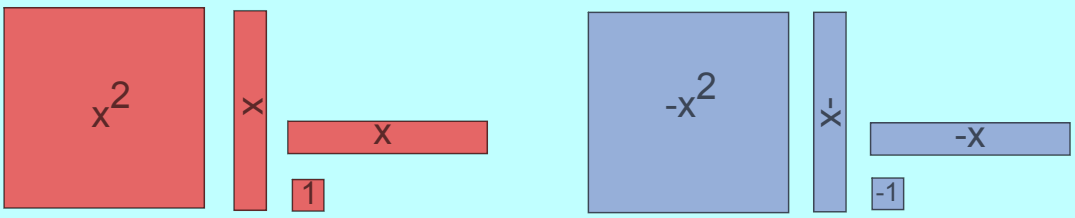


Factor: $10x^2 + 15x + 5$ $= 5(\underbrace{2x^2 + 3x + 1}_{\text{factor with tiles}})$



$= 5(2x+1)(x+1)$

Mar 25-8:02 AM



Factor: $10x^2 - 11x - 6$

	$2x$	-3
$5x$	$10x^2$	$-15x$
2	$4x$	-6

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

	$2x$	$+3$
$5x$	$10x^2$	$15x$
-2	$-4x$	-6

Mar 25-8:02 AM

Assigned Work:

Handout Section 3.6

(1, 2)(odd)
3aceg
4acfknopqr

(don't forget common factors first)

Mar 26-9:06 AM