

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

March 28/2011

## Part 1

↓  
"not equal to"

### 1. Using Alge-tiles

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

The lengths of the sides are factors.

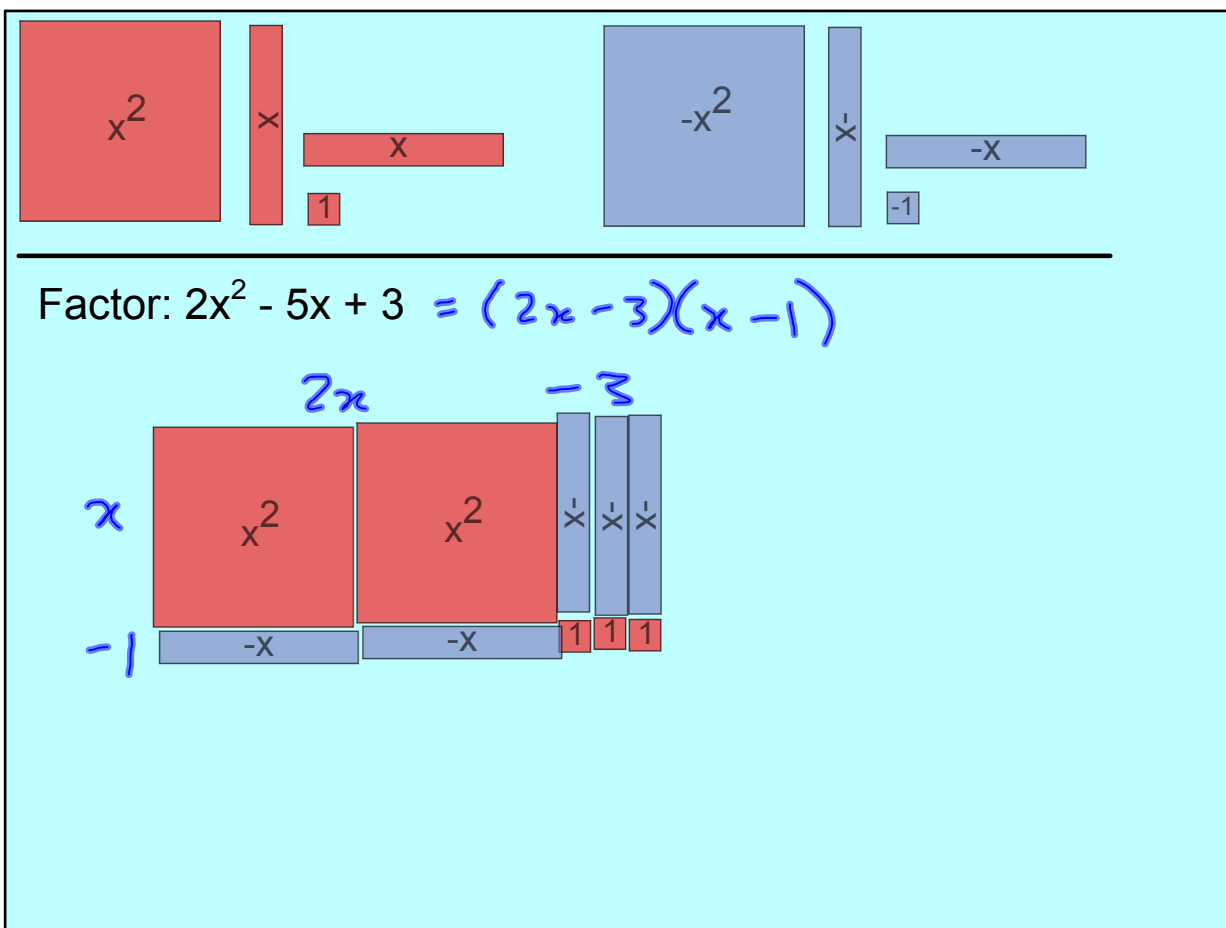
Hint: Focus on the corners with  $a$  and  $c$  first.

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Factor:  $3x^2 + 7x + 2 = (3x+1)(x+2)$

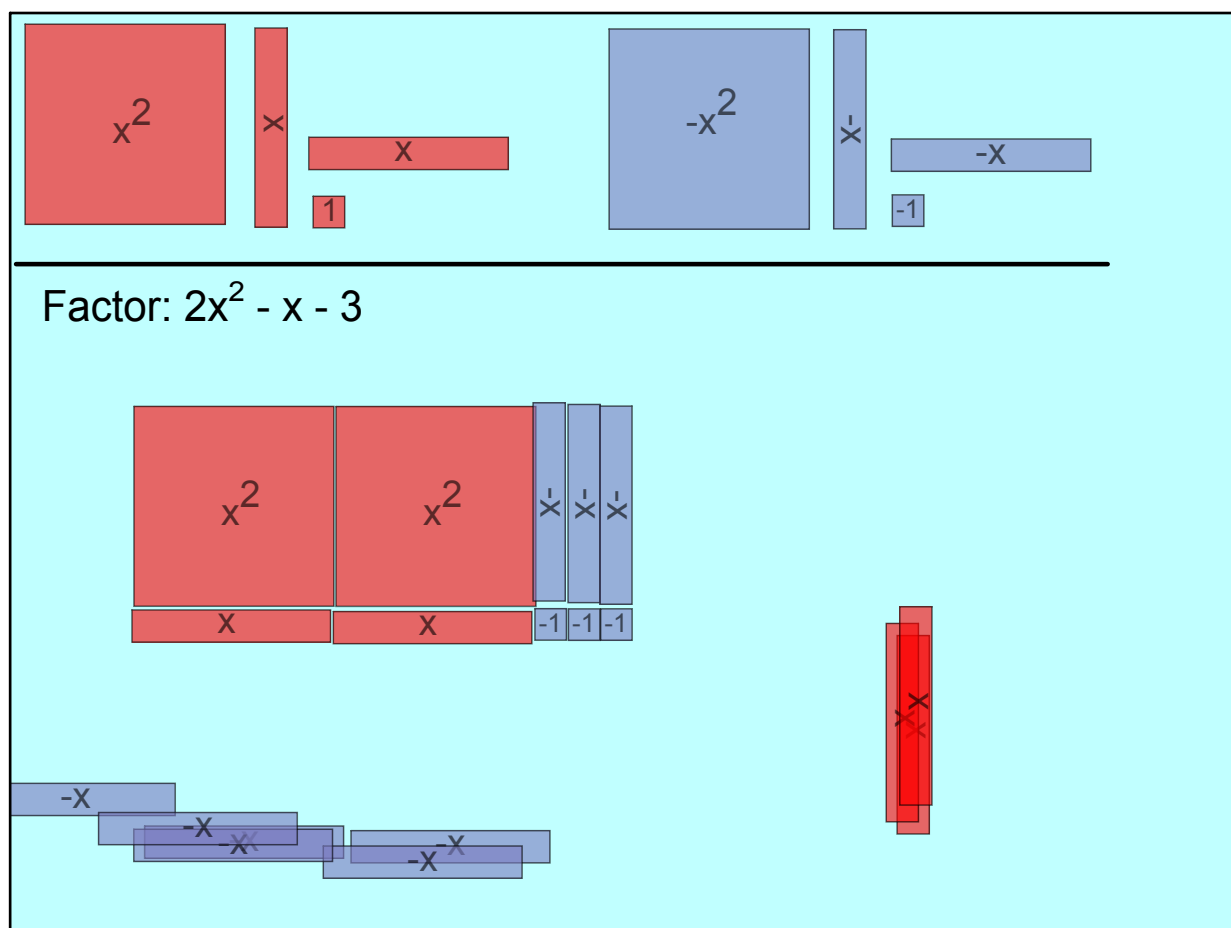
Diagram illustrating the factoring process using algebra tiles. The tiles are arranged to form a rectangle representing the product  $(3x+1)(x+2)$ . The tiles are labeled with their respective algebraic terms:  $x^2$ ,  $x$ ,  $1$ ,  $-x^2$ ,  $-x$ , and  $-1$ .

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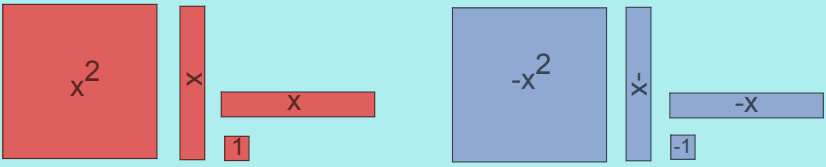
Factor:  $2x^2 - 5x + 3 = (2x - 3)(x - 1)$

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

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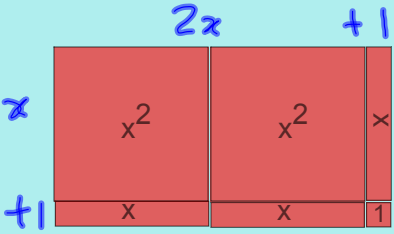


The simplest factoring is to find a common factor.  
If possible, always remove any common factors first.

Ex2: Factor  $10x^2 + 15x + 5$        $GCF = 5$

$= 5(2x^2 + 3x + 1)$

factor using tiles



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

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## Assigned Work

p.222 # 1, 2, 5ae, 6d (common factor first)

Mar 28-11:05 AM