

## Unit 3: Polynomials

### Day 6: Factoring Complex Trinomials Using Decomposition

Today we will....

1. Learn the method of Decomposition to factor complex trinomials ( $a \neq 1$ )

$$3x^2 - 10x + 8$$

$$\underline{ax^2 + bx + c}$$

**Step 1:** Find Product  $ac$

**Step 2:** Find factors of  $ac$  that sum to  $b$

**Step 3:** Decompose  $b$  into the factors of  $ac$

**Step 4:** Common Factor the first two terms and common factor the second two terms.

**Step 5:** Common Factor the binomial

Examples.

Factor each of the following.

Remember to look for common factors first!

1.  $3x^2 + 11x + 6$

2.  $4x^2 - 8x - 5$

3.  $12x^2 - 25x + 12$

4.  $7x^2 + 19x - 6$

5.  $16a^2 - 50a + 36$   
\*common factor first!

6.  $18x^2 + 33x - 30$   
\*common factor first!

Practice:

Worksheet " Boarding House"  
and for additional practice...Pg 307 #5

## Attachments

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Factor\_Trinomial.pdf