Name _____

Factoring Trinomials in the form of $ax^2 \pm bx - c$

Date _____ Period _____

Factoring Trinomials in the form...

$$ax^2 \pm bx - c$$

For this lesson $a \neq 1$ and c is alway negative

When c is negative, our factors will have different signs

Factors that add to get b

$$6x^2 + 5x - 4$$

Step 1: Find positive factors of $a \cdot c$

Step 2: c is negative ⇒ different signs

Step 3: Split the Middle b term

Step 4: Factor by Grouping

$5x^2 + 3x - 2$

Step 1: Find positive factors of $a \cdot c$

Step 3: Split the Middle b term

Step 4: Factor by Grouping

Step 2: c is negative ⇒ different signs

$3x^2 + 17x - 6$

Step 1: Find positive factors of $a \cdot c$

Step 3: Split the Middle b term

Step 4: Factor by Grouping

Step 2: c is negative ⇒ different signs

$2x^2 + 5x - 7$

Step 1: Find positive factors of $a \cdot c$

Step 3: Split the Middle b term

Step 4: Factor by Grouping

Step 2: c is negative ⇒ different signs

$2x^2 - 7x - 15$

Step 1: Find positive factors of $a \cdot c$

Step 3: Split the Middle b term

Step 4: Factor by Grouping

Step 2: c is negative ⇒ different signs

$6x^2 - 5x - 4$

Step 1: Find positive factors of $a \cdot c$

Step 2: c is negative ⇒ different signs

Step 3: Split the Middle b term

Step 4: Factor by Grouping

$3x^2 - 23x - 8$

Step 1: Find positive factors of $a \cdot c$

Step 2: c is negative ⇒ different signs

Step 3: Split the Middle b term

Step 4: Factor by Grouping

$3x^2 - 5x - 8$

Step 1: Find positive factors of $a \cdot c$

Step 2: c is negative ⇒ different signs

Step 3: Split the Middle b term

Step 4: Factor by Grouping

Factoring Trinomials of the form...

$$ax^2 \pm bx - c$$

For this lesson $a \neq 1$ and c is alway negative

When c is negative, our factors will have different signs

Factors that add to get b

Step 1: Find positive factors of $a \cdot c$

Step 2: c is negative ⇒ different signs

add to b

Step 3: Split the Middle b term

Step 4: Factor by Grouping