

# Factoring Trinomials

$$ax^2 + bx + c$$

# Steps To method 1

## Method 1 Steps-

1. Multiply “ac”
2. Find factors of “ac”
3. Add/sub the factors to find “b”

# Method 1

4. Factor “a”

5. Guess and check. See which number divide evenly in to factors of “ac”

6. Plug into parentheses.

# Factoring Method 1

- Example

- $6x^2 + 17x + 5$

- Multiply  $ac \rightarrow 6(5)=30$

- 

Find Factors of 30

Matches "b"



+30		Add/Sub
10	3	13
15	2	17
6	5	11

$$6x^2 + 17x + 5$$

- Factor "a"

6	
6	1
3	2

- Which Divides evenly with ac

**ac**

Does 6 go evenly in 15?

Does 6 go evenly in 2?

Does 3 go evenly in 15?

Does 2 go evenly in 2?

+30		Add/Sub
15	2	17

$$6x^2 + 17x + 5$$

- Put into Parentheses

6	
3	2

+30		Add/Sub
15	2	17

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

# More Examples

Examples

$$7x^2 + 29x + 4$$

$$6x^2 + 22x - 8$$