**FACTORING STRATEGY**

Is there a **GCF** (Greatest Common Factor)?
If so, factor it out first.

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### 2 Terms

Is there a **difference of squares**?
If so, factor as

\[ A^2 - B^2 = (A + B)(A - B) \]

Do you still have a **difference of squares**? Be sure to check!

If not, factor out a **GCF only**!

Never factor a sum of squares:

\[ A^2 + B^2 = \text{prime} \]

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### 3 Terms

Is there a **perfect square trinomial**?
If so, factor using one of the forms

- \[ A^2 + 2AB + B^2 = (A + B)^2 \]
- \[ A^2 - 2AB + B^2 = (A - B)^2 \]

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### 4 Terms

Factor by Grouping:
1) Group the terms into two groups of two terms each.
2) Factor out a **gcf** from each group of terms.
3) Factor out the common binomial factor.
4) If none, rearrange the terms and try again.

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Is the trinomial of the form \( x^2 + bx + c \)?
If so, find factors of \( c \) whose sum is \( b \) and factor as:

\[ (x \, \, \, ) (x \, \, \, ) \]

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Is the trinomial of the form \( ax^2 + bx + c \)?
If so, **factor by** grouping, scissors, division, tic-tac-toe, or trial factors.

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**Factor completely.** Check the result by multiplying.