Extra Support for Factoring Worksheet

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IMPORTANT NOTES

1) To factor a polynomial completely, look for:

A. GREATEST COMMON FACTOR, GCF

Take the GCF out always at the beginning if you can

For example:

Ex1)

$$3x^2 + 6x + 9 = 3(x^2 + 2x + 3)$$

Ex2)

$$2x^7 + 4x^3 + 10x = 2x(x^6 + 2x^2 + 5)$$

B. A PERFECT SQUARE TRINOMIAL

If it is trinomial (three terms), check if it is a perfect square trinomial

$$x^2 + 10x + 25 \quad = (x+5)^2$$

Conditions for a Perfect Square Trinomial

- First term must be a perfect square.
  $(x)(x) = x^2$

- Last term must be a perfect square.
  $(5)(5) = 25$

- Middle term must be twice the product of the roots of the first and last term.

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