

## Chapter 5 Section 6 A General Factoring Strategy

Look for Greatest Common Factor  
Common Factor with a Negative Coefficient.

Binomial

Difference of two squares

$$a^2 - b^2$$

$$(a - b)(a + b)$$

Sum, Difference of two cubes

$$a^3 - b^3$$

$$(a - b)(a^2 + ab + b^2)$$

$$a^3 + b^3$$

$$(a + b)(a^2 - ab + b^2)$$

Trinomial

Perfect square trinomial

$$a^2 + 2ab + b^2$$

$$(a + b)^2$$

$$a^2 - 2ab + b^2$$

$$(a - b)^2$$

Sum, Product

Table

Four or more terms

Factor by grouping.

Example 1: page 375

$$\text{Factor: } 2x^3 + 8x^2 + 8x$$

$$\text{Example 2: } 4x^2y + 16xy - 20y$$

Example 3: Page 376

$$9b^2x - 16y - 16x + 9b^2y$$

Example 5: page 377

$$3x^{10} + 3x$$