

## **Sum and Difference of Cubes!**

**Recall Difference of Squares:**

$$A^2 - B^2 = (A+B)(A-B)$$

**Similarly:**

**“Diff of Cubes”**     $A^3 - B^3 = (A - B)(A^2 + AB + B^2)$

**and**

**“Sum of Cubes”**     $A^3 + B^3 = (A + B)(A^2 - AB + B^2)$

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Factor the following:

**Example 1**       $27x^3 + 125y^3$

**Example 2**       $3x^6y^3 - 24$

**Example 3**       $(3x-1)^3 - (2x-5)^3$

Homework: Textbook pg 182 # 2-8