

# Add & Subtract Polynomials

## Example 1 Adding polynomial expressions

Combine like terms. Like terms have the same variable and exponent. When adding, the exponent does not change, only the coefficients.

Add the polynomial expressions. Write the answer in standard form.

$$A] (3x^4 - 8x^2 + 2) + (-2x^4 + 3x^2 - 5) \quad B] (2x^2 - 5x + 1) + (x^3 - x^2 - 3)$$

## Example 2 Subtracting polynomial expressions

Distribute the negative then combine like terms. When subtracting, the exponent does not change, only the coefficients.

Subtract the polynomial expressions. Write the answer in standard form.  
A]  $(6x^3 - 5x + 9) - (-2x^3 + 7x - 8)$  B]  $(3x^4 + 2x - 5) - (2x^2 - 3x + 2)$

## Example 3 Operations with more than 2 polynomials

Perform operations from left to right.

Simplify the expression. Write the answer in standard form.  
A]  $(3x^3 - x^2 + 9x - 1) - (x^2 + 5x - 4) + (x - 7)$