

Adding & Subtracting Polynomials

9-5-18

Combining like terms:

like terms — same variable w/ the same exponent

combine — + or — the coefficients, keep variable & exponent

Put polynomial in standard form

Put $0x^{\square}$ for a place holder for any missing terms

Use the vertical method to line up polynomials vertically

Example 1

$$(9w^3 + 8w^2) + (7w^3 + 4)$$

Example 2

$$(4x^2 + 5x + 1) - (6x^2 + x + 8)$$

Adding & Subtracting Polynomials

Combining like terms:

like terms — same variable w/ the same exponent
combine — + or — the coefficients, keep variable

Largest exponent to smallest exponent

$$\text{If } 3x^5 + 5x^3 - 2 + x^2 \rightarrow 3x^5 + 0x^4 + 5x^3 + x^2 + 0x - 2 \quad * \text{ exponents should decrease by 1}$$

Add/subtract like terms

$$(w^3 + 8w^2) + (7w^3 + 4)$$

$$\begin{array}{r} 9w^3 + 8w^2 + 0w + 0 \\ + 7w^3 + 0w^2 + 0w + 4 \\ \hline 16w^3 + 8w^2 + 4 \end{array}$$

$$(4x^2 + 5x + 1) - (6x^2 + x + 8)$$

$$\begin{array}{r} 4x^2 + 5x + 1 \\ - 6x^2 + x + 8 \\ \hline -2x^2 + 4x - 7 \end{array}$$

* subtract EVERY term!