15 – 2 Vocabulary Terms

*These vocabulary terms **MUST** be placed on note cards and turned in by Friday for credit.

1) **Adding Polynomial** – to add polynomials, combine like terms.

Example 1: Steps to solving

Add: $(6x^4 - 2x^3 + 7x^2 + x - 6) + (-7x^4 + 2x^3 - 5x + 7)$

1. Line up like terms vertically in standard form.

$$6x^4 - 2x^3 + 7x^2 + \ \ x - 6$$
$$-7x^4 + 2x^3 \qquad - 5x + 7$$
$$\overline{-1\,x^4 + 0x^3 + 7x^2 - 4x + 1}$$

The sum is written $x^4 + 7x^2 - 4x + 1$.

Example 2: Steps to solving

Simplying Adding Polynomials

$(6x^4 - 2x^3 + 7x^2 + x - 6) + (-7x^4 + 2x^3 - 5x + 7)$
Using Parenthesis:

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

$= -1\,x^4 + 0x^3 + 7x^2 - 4x + 1$

$= x^4 + 7x^2 - 4x + 1$

Or

Lining Up:

$$= \ \ 6x^4 - 2x^3 + 7x^2 + \ x \ -6$$
$$-7x^4 + 2x^3 \qquad -5x + 7$$
$$\overline{-x^4 + 0x^3 + 7x^2 \ \ -4x + 1}$$