Lesson 1.1 Polynomials / Algebra 1 Review

Algebra 2

Terms to know:

Term	Definition
Variable	A quantity that is unknown, unspecified, or can change within the context of a problem. Most often variables are represented by a letter or symbol. "x"
Terms	A single number or a combination of numbers and variables using exclusively multiplication or division. xy or 2x
Like Term	Same Variable and Same Exponents $2x^2$ and $6x^2$ ~~$6x^2$ and $2x$~~
Polynomial	One term or the sum of two or more terms Monomial: 1 term (Ex. 3ab) Binomial: 2 terms (Ex. $2a^4 + 3a^2$) Trinomial: 3 terms (Ex. $x^2 + 2x + 4$)
Standard Form	Alphabetical order, exponents in descending order $3x^3 + 4x^2 - 2x + 1x^0$ highest exponent 1st $4a^3b - 5a^2b^2 + 5ab^3$

Adding Polynomials:

* drop ( ), add like terms, simplify
* $(6x^2 - 7x + 8) + (-4x^2 + 9x - 5)$

$6x^2 - 7x + 8 - 4x^2 + 9x - 5$

$6x^2 - 4x^2 - 7x + 9x + 8 - 5$

$2x^2 + 2x + 3$

Subtracting Polynomials:

* have to distribute (-1)
* $(4x^2 - 5x + 6) - (2x^2 + 3x - 1)$

$4x^2 - 5x + 6 - 2x^2 - 3x + 1$

$4x^2 - 2x^2 - 5x - 3x + 6 + 1$

$2x^2 - 8x + 7$

Multiplying Polynomials: Use distributive Property

* $3x(2x^2 - 4x + 6)$

$3x(2x^2) - 3x(4x) + 3x(6)$

$6x^3 - 12x^2 + 18x$

* $(x + 2)(x - 3)$

F (First): $x \cdot x = x^2$

O (Outside): $x \cdot -3 = -3x$

I (Inside): $2 \cdot x = 2x$

L (Last): $2 \cdot -3 = -6$

$x^2 - 3x + 2x - 6$

$x^2 - x - 6$

* $(n^2 + 4n - 6)(n + 2)$

$n^3 + 2n^2 + 4n^2 + 8n - 6n - 12$

$n^3 + 6n^2 + 2n - 12$