

Operations w/Polynomials - Pre-4

Topic: Operations with Polys

Date:

Objectives: SWEAT (Perform Simple Operation with Polynomials)

Main Ideas:	Assignment:	
DOK	Give an example of the following:	
	Distributive Property	Associative Property
Simple Examples	$(2x + 6) + (3x - 8)$	$(x + 2)(x - 3)$
	$(x - 9) + (x + 6) - (3x - 8)$	$(x^2 + 9x - 17) - (4x^2 - 6x - 12)$
	$(2x - 1)^2 + (x + 7)^2$	$(x - 2)(x^2 + 2x + 4)$
	$(x - 9)(x + 9)$	$-2x(x^2 - 3x - 5) + (x^3 - 3x^2 - 6x)$
	$(x^2 + 3x - 4)(x^2 - 6x + 5)$	$5m^3(m^4 - 3m^5 - 2m + 5)$

Simplifying Monomials	Simplify using no negative exponents.	
	$(8x^{-3}y^3)(-2x^5y^{-6})^3$	$\frac{18c^7d^5}{-3c^{-2}d^7}$
	$\left(\frac{3a}{4}\right)^{-3}$	$(-2x^3y^2)^5$
Degree and Naming Polynomials	<p><u>Definition of a polynomial</u> – is a function in the form $f(x) = a_nx^n + a_{n-1}x^{n-1} + \dots + a_1x + a_0$ $a_n \neq 0$, All exponents are whole #'s and all coefficients are real #'s a_n is the Leading Coefficient (or LC) n is the Degree of the polynomial a_0 is the constant term</p>	
	$f(x) = \frac{1}{4}x^4 - 8x^5$ $f(x) = \sqrt{x} + x + 4$ $f(x) = x^3 + 2x^2 + 6$	$f(x) = 2x^3 - 5x^4 + 2$ $f(x) = x^{-3}$ $f(x) = x^7 - 6x - 8$
Other Examples	$(-x^2 - 3x + 4) - (x^2 + 2x + 5)$	$(x + 7)(2x^2 + 3x - 5)$
	$(x^2 - 5x + 16)(x^2 - 3x - 5)$	$(x - 5)(x - 3)(x + 4)$
Upper Level	$\frac{x^m \cdot x^{m-5}}{x^{5m+3}}$	$\left((x^{5f})^{(f+3)}\right)^{(f-1)}$