

Unit 3: Polynomials

Day 1: Polynomial Review

Today we will....

1. Learn the definitions for polynomials
2. Review working with polynomials

Definitions:

Term: "a number or variable or the product of a number and a variable"

E.g. -4 , x , $4x$, $15x^2y$ are each terms

Polynomial: "an expression containing one or more terms"

E.g. $4x^2y + 3x - 5$

"NOTE: a POLYNOMIAL cannot have a variable in the denominator of a fraction."

Types of Polynomials: m in a polynomial (though it is a term!)

Polynomials are classified by the number of terms:

Name	Number of Terms	Example
Monomial		
Binomial		
Trinomial		

The **degree** of a polynomial is the highest exponent that appears in any term of the expanded form of the polynomial.

Examples: What is the degree of each of the following?

1. $12x^3 + 4x - 5$ 2. $x(x - 3)$ 3. $x^2(2x^2 + 5x - 9)$

Simplifying Expressions

Simplify:

1.) $(2x - 4) + (7x + 5)$

2.) $3(x + 9) - (3x - 11)$

3.) $-3(2y + 6x) + 2(5y - x) - 4(-2y - 2x)$

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

$$5.) -2x^2(x+4y) + 3y(5x - x^2) - 7(x^3 - y)$$

$$6.) w^4(6w + 3w^3) - 2w^5$$

Practice

p. 22 #5odd, 7odd

p. 244 #4odd

p. 255 #5