The Terminology of Polynomial Expressions

Lamar State College-Orange

Definition:

Polynomials are algebraic expressions that meet further criteria.

These criteria are:

Example	**$4x^2$**
	Each term in a polynomial consists only of a number multiplied by variable(s) raised to a **positive** exponent.
4	Number -- **(The number is also known as the coefficient.)**
x	Variable(s)
2	Positive integer exponent -- **(Not a polynomial if it has a negative integer exponent.)**

Degree of the Term is the sum of the exponents of the variables.

Example	
$2x^4y^3$	**4 + 3 = 7 7 is the degree of the term.**
$5x^{-2}y^5$	**NOT A TERM because it has a negative exponent.**
8	**If a term consists only of a non-zero number (known as a constant term) its degree is 0.**
0	**TERM WITH NO DEGREE - The only term that has no degree at all is zero.**

The Degree of a Polynomial is the largest of the degrees of the individual terms.

Add the degrees of the variables of each term to decide what is the **Degree of the Polynomial**.

Example	**$2xy + 3x^2y^4-7x^5y^2$**
	$2x^1y^1+ 3x^2y^4-7x^5y^2$ (Remember – every number & variable has a degree even if it is not written $x = x^1$)
	Degree of term 1 is 2 (1+1= 2), **Degree of term 2 is 6** (2+4 = 6), **Degree of term 3 is 7** (5+2 = 7)
	7 is the Degree of the Polynomial. (It is the largest degree of the individual terms.)

Polynomials

- **Monomials** – Polynomials that consist of one term.
- **Binomials** – Polynomials that consist of two terms.
- **Trinomials** – Polynomials that consist of three terms.
- **Polynomials with more than three terms are simply known as Polynomials**.

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