

Polynomials Guided Notes

Vocabulary	Definition	Example
Polynomial	An algebraic expression of one or more <u>terms</u> connected by the operations of <u>addition</u> and <u>subtraction</u> , whose <u>variables</u> have whole number exponents.	$3x^2 - 2x + 5$
Terms	<u>Number</u> , <u>variable</u> , or a product of the two.	5, x, 5x, or $5x^2$
Variable	A <u>letter</u> or <u>symbol</u> that represents a quantity that can vary.	In the term 5x, the variable is x.
Coefficient	A <u>number</u> that appears in front of a variable.	In the term 5x, the coefficient is 5 In the polynomial $3x^2 - 2x + 5$, the coefficients are 3 and -2.
Constant	A term with NO <u>variable</u> . It is a <u>number</u> that does not change, even when a variable in the polynomial changes.	In the polynomial $3x^2 - 2x + 5$, the constant is 5.
Degree	The degree is determined by looking at the greatest <u>exponent</u> on a variable in a polynomial.	5x has a degree of 1. $3x^2 + 5x$ has a degree of 2. A constant (like 5) has a degree of 0.
Monomial	A polynomial with <u>1</u> term.	4x, 6, or $2x^2$
Binomial	A polynomial with <u>2</u> terms.	$2x - 5$, or $2x^2 + 4x$
Trinomial	A polynomial with <u>3</u> terms.	$2x^2 + 4x - 5$

- A Polynomial is usually written in descending order; that is the exponents of the variables decrease from left to right.
 - Ex: $2x - 4x^2 + 7$ would normally be written as $-4x^2 + 2x + 7$.
- An algebraic expression that contains a term with a variable in the denominator, such as $3/x$, or the square root of a variable, such as \sqrt{x} , is NOT a polynomial.