CLASSIFYING POLYNOMIALS

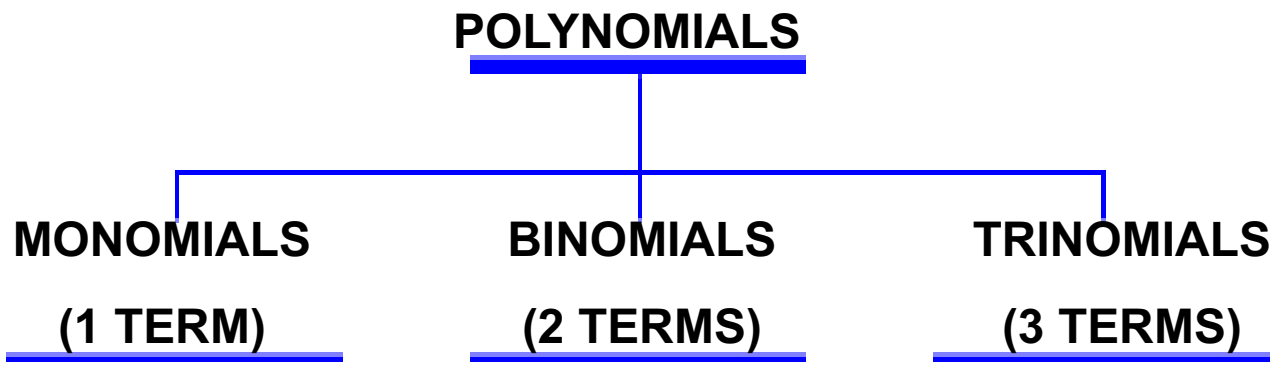
POLYNOMIAL

A _____ is a sum or difference of terms. Polynomials have special names based on their _____ and the number of _____ they have.

DEGREE

TERMS

NAMING BY NUMBER OF TERMS



Classify each polynomial based on the number of terms that it has.

Ex. 1:	$5x^2 + 2x - 4$	**TRINOMIAL**
Ex. 2:	$3a^3 + 2a$	**BINOMIAL**
Ex. 3:	$5mn^2$	**MONOMIAL**
Ex. 4:	$3x^2$	**MONOMIAL**
Ex. 5:	$4x^2 - 7x$	**BINOMIAL**
Ex. 6:	$-9x^2 + 2x - 5$	**TRINOMIAL**
Ex. 7:	$5ab^2$	**MONOMIAL**
Ex. 8:	$-9a^2bc^3 - 2ab^4$	**BINOMIAL**

NAMING BY THE DEGREE

The **DEGREE** of a polynomial is the exponent of the term with the greatest exponent(s).

Find the degree of each polynomial below.

Ex. 1:	$5x + 9x^2$ Degree:	2	**BINOMIAL**
Ex. 2:	$3x^3 + 5x - x^2$ Degree:	3	**TRINOMIAL**
Ex. 3:	$-4x + 7$ Degree:	1	**BINOMAL**
Ex. 4:	$-x^4 + 2x^2 + 5x^3 - x$ Degree:	4	**POLYNOMIAL**

The degree of a monomial is the **sum** of the exponents.

ADD 2 & 5

Ex. 5:	$5xy + 9x^2y^3$ Degree:	5	**BINOMIAL**
Ex. 6:	$3x^3y^5 + 5xy - x^2y$ Degree:	8	**TRINOMIAL**
Ex. 7:	$-4xy + 7y^3$ Degree:	3	**BINOMIAL**
Ex. 8:	$-x^4y + 2x^2y^5$ Degree:	7	**BINOMIAL**

Classify each polynomial above using its degree and number of terms.

Ex. 1 **QUADRATIC BINOMIAL**

Ex. 2 **CUBIC TRINOMIAL**

Ex. 3 **LINEAR BINOMIAL**

Ex. 4 **QUARTIC POLYNOMIAL**

Ex. 5 **5^{TH} DEGREE BINOMIAL**

Ex. 6 **8^{TH} DEGREE TRINOMIAL**

Ex. 7 **CUBIC BINOMIAL**

Ex. 8 **7^{TH} DEGREE BINOMIAL**