NAME: _____

DATE: _____

Polynomials Terms and Definitions

Constant - *A number that always has the same value.*
Variable - *A letter that may be replaced (substituted) by numbers.*
Expression - *A combination of variables and/or constants.*
Term - *Part of an expression separated by a plus or minus sign.*
Factor - *Numbers and/or variables forming a product.*
Numerical Coefficient - *Numbers associated with a product.*
Literal Coefficient - *Variables associated with a product.*
Polynomial – *A single term or the algebraic sum and/or difference of terms.*
Monomial – *a single term consisting of an integer and/or a variable.*
Binomial – *the sum or difference of exactly two terms.*
Trinomial – *the sum or difference of exactly three terms.*
Degree of Polynomial – *the largest exponent or the largest sum of exponents on a single term within a polynomial.*
Standard Form of Polynomial – *A polynomial written in descending order (highest to lowest) according to the exponent/sum of exponents of each term.*
Ascending Order – *A polynomial written from lowest to highest.*

1. Given $\boldsymbol{3x^2 - 2x + xy + y - 4}$, answer each of the following:
    a. What is/are the constant(s)?

    b. What is/are the variable(s)?

    c. Is this an expression or an equation? Why?

    d. Write out each term.

    e. How many terms are there?

    f. Can we classify this as a trinomial, binomial, or monomial? Why?

    g. Identify the numerical coefficient(s).

    h. Identify the literal coefficient(s).

    i. Which term(s) have the highest degree?

    j. What is the degree of this polynomial?

    k. Write this polynomial in ascending order.

2. State an example of a trinomial with a degree of four using the Standard Form of a Polynomial.

3. Write a monomial with a degree of three that has a numerical coefficient and a literal coefficient.

4. Complete the table below.

Polynomial	Number of Terms	Type of Polynomial	Degree of Polynomial	Constant	Variable(s)	Numerical Coefficient
$x^2 + 3x + 1$						
$3y^8 - 4m^3$						
$2a^2b^3c^4$						
		Trinomial	5			
	4				m, n, p	