Name: Date: Period:

Numerical Coefficient:

a fixed number that is multiplied to a variable. Ex: The numerical coefficient of 5x is 5.

Like Terms:

two or more terms that have the same variable. Like variable(s) must have the same exponents.
Please note that **#s without a variable** are "like" terms as well.

Circle the pairs of LIKE terms:

4x	7	$3x^2$	$5x^2$
2	-5	$3x^2$	5x
4x	7x	4ab	-9ab

A **Monomial** is:

a number (ex: 3, 5, 8, 27, etc.)

a variable (ex: x, y, a, c, etc.)

numbers and variables connected by multiplication or division (ex: 2x, 5y, 9b, $\frac{d}{4}$, $\frac{2k}{7}$)

A **Polynomial** is:

the sum or difference of two or more monomials.

A **binomial** is a polynomial with two terms.

Examples:

a + 8 x – 4 $2x^2 + 5$

A **trinomial** is a polynomial with three terms.

Examples:

$x^2 + 3x + 2$ $x^2 – 4x + 2$

The **Degree of a Monomial** is the **sum of the exponents** of the variables that appear in the monomial**.**

Ex 1: The degree of the monomial $7y^3z^2$ is 5 (since 3 + 2 = 5)

Ex 2: The degree of the monomial 7*x* is 1 (since the power of *x* is 1)

Ex 3: The degree of the monomial 66 is 0 (constants have degree 0)

The **Degree of a Polynomial** is the **greatest exponent** once simplified. A polynomial is in simplest form when it contains no "like" terms.

Ex: $5x^3 + 8x^2 – 5x^3 + 7$ Combine "like" terms: $8x^2 + 7$

The degree of this polynomial is 2 because once simplified, the greatest exponent is 2.

A polynomial is in standard form when the terms are arranged in descending order by degree.

Ex: $3x^2 – 7x + 3$

Combining "LIKE" Terms: YOU CAN ONLY COMBINE (ADD OR SUBTRACT) TERMS THAT ARE "LIKE" TERMS.

Example:

5a + 4a = _____ (Think 5 apples + 4 apples) 7m – 5m = _____ (Think 7 monkeys – 5 monkeys)

What about 5a + 7m? (5 apples + 7 monkeys????)

Directions: In each example below, combine like terms.

1.	4x + 2x =	2.	2x - 10x =	3.	5c + c =
4.	5c – 4c =	5.	-2x – 5x =	6.	-5c + 5c =
7.	10y – (-10y) =	8.	-3y – (-3y) =	9.	10c – 7c =
10.	5n – 6n =	11.	7c – c =	12.	-2d – 6d =
13.	8x + (-8x)	14.	-4x – 4x =	15.	-4x – (-4x) =