

Name _____ Date _____ Per _____

Introduction to Polynomials

Learning Targets:

- To classify polynomials according to degree and number of terms.
- To add and subtract polynomials.

Monomial:

Binomial:

Trinomial:

Degree:

Term:

Like terms:

Coefficient:

Linear:

Quadratic:

Cubic:

Quartic:

Quintic:

Standard Form:

Introduction to Polynomials

Classifying Polynomials

Polynomials can be classified by number of terms and by degree. Polynomials with one term are monomials. Polynomials with two terms are called **binomials**, and those with three terms are called **trinomials**.

Example	Number of Terms	Class by Terms	Degree	Class by Degree
12				
2y				
3x - 4				
$x^2 - 5x + 4$				
$4x^3 - 2x^2 + x - 5$				
$x^5 - 5x$				
$4x^7 - 6x^3 + 14x - 54$				

Write the following polynomials in standard form.

- 1.) $3 - x^2$: _____
- 2.) $5x - 3x^3 + x^2$: _____
- 3.) $7 - 3x^4 + 2x - 5x^3$: _____

Simplify the given polynomials.

1.) $-2(3x + 1) - x^2 + 5x$

2.) $-3x^3 + 4(x - 3) + 12$

Simplify the following polynomials by performing the given operations and write answers in standard form.

- 1.) $(5x - 3x^2 + 4) + (-4 + 2x - x^2)$: _____
- 2.) $(-2 + 4x + 5x^3) - (2x^3 - x + 1 - 2x^2)$: _____
- 3.) $(3x - 4) - (2x^2 + 3x^4 - 3) + (2 - 5x^2 + x^3)$: _____