

## POLYNOMIALS

A **polynomial** is ...

other definitions: **terms**

**like terms**

**binomial**

**trinomial**

**degree of a polynomial**

Examples: like terms:  $2rs^2$  and  $-6rs^2$

unlike terms:  $2rs$  and  $-6r^2s$

binomial  $x + 2$   
 $3y - 1$

trinomial  $x^2 + 2x + 4$   
 $4y^4 + y^2 + 9$

## Degree of a polynomial

1. Find degree of all monomials in the polynomial
2. The degree of the whole polynomial is equal to the highest degree monomial

Example: What is the degree of:

$$2xy^2 + 4x^2y - 6y^4$$

This is a polynomial of degree

Standard form of a polynomial

A polynomial with powers of the  
written in order from least to greatest

$$4x^3 - 5x^2 + 2x - 7$$

Rewrite these polynomials in standard form:

$$8 - 2x + 4x^4 - 3x$$

$$4p - 2p^2 - 5p^4 + 3$$

Adding and Subtracting Polynomials/Simplify  
Perform the indicated operation and  
combine like terms

Example:  $(6x^2-3x+2) - (4x^2+x-3)$

*Method 1 Horizontal*

*Method 2 Vertical*

$$(6x^2-3x+2) - (4x^2+x-3)$$

$$\text{Example: } (12m^3 + 3m + 2) - (8m^3 + 4m^2 + m - 3)$$

$$(5x^2 - 3x + 4) + (6x - 3x^2 - 3)$$

$$11x^2 + 4y^2 + 6xy + 3y^2 - 5xy - 10x^2$$

