

# Vocabulary

Degree: Highest exponent

Leading coefficient: the coefficient with the highest exponent

ex:  $6x^3 + 7x - 10x^5$

degree: 5

L.C: -10

SF:  $-10x^5 + 6x^3 + 7x$

Standard Form: the exponents are written in descending order.

(greatest to least)

| <u>Name</u>   | <u>Degree</u>          | <u>Example</u>    |
|---------------|------------------------|-------------------|
| Constant      | 0                      | 4                 |
| Linear        | 1                      | $4x$              |
| Quadratic     | 2                      | $4x^2 - 7$        |
| Cubic         | 3                      | $4x^3 + 2x^2 - x$ |
| Higher than 3 | 4                      |                   |
|               | 4 <sup>th</sup> degree |                   |
|               | n <sup>th</sup> degree |                   |

# Types of Polynomials term

- 1 Monomial  $6; x; 7y; -9x^3yz^5$
- 2 Binomial  $x-9; 7x^2-5x$
- 3 Trinomial  $9x^2-5x+2$
- many Polynomial  $-8x^3+6x^2-8x+1$

## Non-Examples

$$8^x \quad \frac{4}{x} \quad x^{-3}$$

ex  $5x^3 + x^2 - 7x + 9$

degree  $\rightarrow$  3

leading coefficient

Cubic polynomial

coefficients: 5, 1, -7, 9

ex  $7xy^2$   
 D: 3  
 LC: 7  
 C: none

$5x^2 + 4x$   
 $\frac{2}{5}$   
 none

$$-8x^3 + 2x^2 - 8x - 5$$

D: 3  
 LC: -8  
 C: -5

$$6x - x^3 + 4$$

$$-x^3 + 6x + 4$$

D: 3  
 LC: -1  
 C: 4