Describing Polynomials

Polynomials are a single term or sum/difference of terms. They have variables raised to whole-number exponents ≥ zero. The variable cannot be under a radical, in the exponent, or in the denominator of a fraction.

Examples	Non-Examples

1) A linear function is _____ a trinomial.

2) A cubic function is _____ a binomial.

3) A constant function is _____ a monomial.

4) A degree 3 polynomial is _____ a cubic function.

5) The degree of a polynomial is _____ negative.

6) The leading coefficient of a polynomial is _____ positive.

Rewrite in standard form, then classify by degree and type

A) $3(x-3)^2+9(2x)$ B) $4x(2x-3)-(x^2-10)$ C) $(x+2)(x-2)-x^2$

Example 1 Polynomials in standard form

Standard form: put terms in order of decreasing exponents

Standard form	Classify by Degree	Classify by Type	Leading Coefficient
A) $4x^2-2(2x^2-3x+2)$			
B) $2(x^3-5x+8)-5(3-2x)-1$			
C) $\frac{1}{2}(2x-3)^2$			

Describing Polynomials

Classify by degree (highest exp. when in standard form)			Classify by type (number of terms)		
Degree	Name	Example	Terms	Name	Example
0	Constant		1	Monomial	
1	Linear		2	Binomial	
2	Quadratic		3	Trinomial	
3	Cubic		4	4-term polynomial	
4	4th degree				
5	5th degree		5	5-term polynomial	