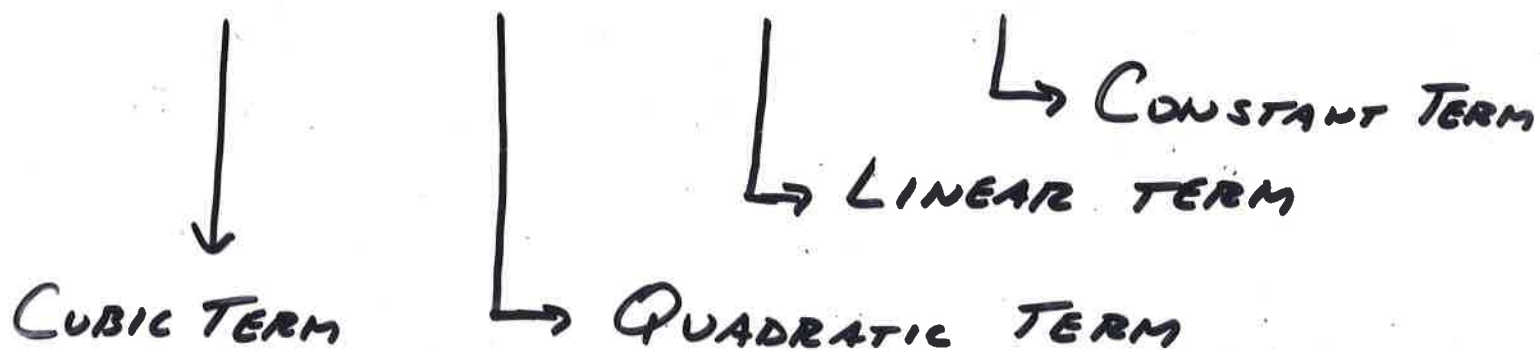


## 5.1 POLYNOMIAL FUNCTIONS

$$4x^3 - 5x^2 - 6x + 7$$



THE DEGREE (HIGHEST EXPONENT) IS 3.

THE LEADING COEFFICIENT IS 4

STANDARD FORM IS IN DECREASING POWERS OF THE VARIABLE.

$$11x^5 - 4x^3 + 7x^2 - 4$$

STD. FORM

$$-4x^3 + 11x^5 + 7x^2 - 4$$

NOT STD. FORM

MONOMIAL : ONE TERM :  $4x^7$

BINOMIAL : TWO TERMS :  $4x^7 - 3x^4$

TRINOMIAL : THREE TERMS :  $x^2 - 3x + 7$

## TO NAME BY DEGREE...

DEGREE	NAME	EXAMPLES
0	CONSTANT	6
1	LINEAR	$x + 4$
2	QUADRATIC	$3x^2 + 4x - 7$
3	CUBIC	$5x^3 - 2x$
4	QUARTIC	$7x^4 - 2x^3 + x + 1$
5	QUINTIC	$-2x^5 + 4x^2 - 2x - 1$

EX: SIMPLIFY. THEN CLASSIFY IT BY DEGREE AND BY NUMBER OF TERMS

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

$$-x^2 - 4 - 4x + x^2 + 6 = -4x + 2$$

LINEAR, BINOMIAL