Worksheet 2

1- Perform the following operations:

a. $(x^3 + 2x^2 - 5x + 3) + (-x^3 + 2x - 4)$

b. $(-2x^4 + 3x^2 - 7x) - (8x^4 + 6x^3 - 17)$

c. $3(x^2 - 2x + 2) - 2(5x^2 - x + 4)$

2- Perform the indicated operation:

a. $(3x - 2)(x^2 + 2x + 2)$

b. $(x - 2)^2$

c. $(3 - 2x)(3 + 2x)$

d. $(4 + 3x)(16 - 12x + 9x^2)$

d. $(x - 1)(x^2 + x + 1)$

3- Determine whether the following is a polynomial:

a- $x - \frac{1}{x}$

b. $1 + x^2 + 2x$

4- what is the leading coefficient, leading term and degree of:

a. $x + 2x^3 + 9x^7 - 21$

b. $-3x^3 + 4x - 15$