Name: Sect #: 48   ST.ID #:

1) Simplify the expression $(2x-3)^3 - (x+4)^2$ to find:

    a)   The standard form

    b) Coefficients

    c) Leading coefficient

    d) Degree

    e) Terms

2) Evaluate $-3x^2 - 4 + 3x - x^3$ at $x = -3$

3) Name the following expressions as mono, bio, trio, poly (specify its degree) or no polynomial:

    a) $-3\sqrt{x} + 5x + 3$ b) $\dfrac{1}{x} + 5$

    c) $-3x + 4xy^5 - 2x^4$ d) $2x + \dfrac{1}{2}$

4) Perform the indicated operations, simplify & write the answer in standard form:

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

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

5) Factor completely :

    a) $2x^4 - 32$

    b) $8x^2 - 7x - 1$

c) $3x^3 + 24$

d) $3x^2 + 12$

e) $3x^3 - x^2 - 3x + 1$

f) $z^2 - x^2 + 4xy - 4y^2$

g) $6x^2 - 29x - 5$

h) $3x^2 - 8x - 2$

BONUS

1) $4x^2 + 2x - y - y^2$

2) $x^{12} - y^6$

3) Find the value of k such that the trinomial $25x^2 - kxy + 4y^2$ is perfect square

4) $x^{6n} - x^{3n} - 6$