

Name _____

Date _____

Advanced Algebra

Algebraic Operations of Polynomials Assignment #1

DISTRIBUTE NEGATIVE SIGNS IN FRONT OF PARENTHESIS, then combine like terms

1) $(6x^2+1) + (5x^2 - 4)$

2) $(2x^3+11x+2) - (x^3-2x+7)$

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

4) $(14-16x) + (10x-5)$

5) $(8x^3 - 1) - (20x^3 + 2x^2 - x - 5)$

6) $6x - (22x+3-36x^2+x^3)$

7) $(4x^2 - 15x + 16) + (2x - 20)$

8) $(7x^3-2 + x^2 + 13x) - (4x^3 + 10)$

9) $(-3x^3 + 4x - 9) - (2x^3 + x^2 - x)$

10) $(6x^2 - 18x + 3) - (14x^2 - 12x + 9)$

11) $(15-10x^3 - 2x^2 +x) - (x^2 + 7x)$

12) $(50x-3) - (8x^3 + 9x^2 + 2x + 4)$

13) $(4x-33 + 9x^2) + (20x^3- 19x + 3)$

14) $(12x^3 - 5x^2 - 70x + 1) + (-17x^3+56x)$

Multiply the following: (YOU can set up a box or just distribute on the easier ones)

15) $x(x^2 + 9x - 5)$

16) $12x^2 (x-8)$

17) $-2x(x+4)$

18) $2x(3x^2 -x + 6)$

$$19) (x-2)(x-4)$$

$$20) (x+8)(x-1)$$

$$21) (x+3)(x^2 - x + 2)$$

$$22) (x+9)(x^2 - 6x + 4)$$

$$23) (2x-1)(3x^3 - x + 3)$$

$$24) (6x+2)(2x^2+x+1)$$

$$25) (x+9)(x^2 - 2x + 6)$$

$$26) (2x-3)(4x^2-3x+3)$$

Write in Standard Form:

$$27) (x-9)(x+9)$$

$$28) (x+2)(x-2)$$

$$29) (x+5)^2$$

$$30) (x-3)^2$$

$$31) (x-4)^3$$

$$32) (x+6)^3$$

$$33) (x+1)^3$$

$$34) (3x+4)^2$$

$$35) (2x-1)^2$$

$$36) (3x+2y)^3$$