Lesson 1.5- SWBAT add and subtract polynomial expressions.

Kickoff- Complete the following:

1) Given $p(x) = x^3 - 3x^2 + 4$ find $p(-3)$

2) Evaluate $x^3 - 6x^2 + 2y^2$ when x = -2 and y = 5

3) Simplify $\frac{1}{3}[x + 3(2x - 4y) - y]$

4) Simplify $x - 8\,[2x - 3(3 - x)]$

Polynomials can be added by combining like terms. We can use a horizontal or vertical format for this!

Examples:

1) Add $3x^2 - 7x - 5$ and $-x^2 - 3x - 1$

2) Add $2x^2 + 4x - 2$ and $4x + 2$

3) Subtract $(3x^2 - 7xy + y^2) - (-4x^2 + 7xy - 3y^2)$

4) Subtract $-2x^2 + 3x + 5$ from $3x^2 - 7x$

Practice: Simplify each of the following polynomials.

5) From $5x - 3y$ subtract $4x - 2y$

6) Subtract $6x^3 - 3x + 7) - (3x^2 - 5x + 12)$

7) Simplify $(5x^2 + 2x - 7) + (x^2 - 8x + 12)$

8) $(9r^3 + 5r^2 + 11r) + (-2r^3 + 9r - 8r^2)$

9) Subtract $t^4 - 3t^2$ from $5t^3 - 9$

10) $(3a^2 + 2a - 2) - (a^2 - 3a + 7)$

11) $(4x^2 + 5x - 3) + (7x^3 - 7x + 1) + (2x - 3x^2 + 4x^3 + 1)$

Directions: Simplify each of the following polynomial expressions.

12) $(12y^2 + 17y - 4) + (9y^2 - 13y + 3)$

13) $(3z^2 + 4z) - (6z^2 - 2)$

14) $(5 - 9a^3) + (4a^2 + 6a - 3)$

15) $(q^2 + 8) - (4q^2 + 1)$

16) Subtract $(-2x^2 + 3x - 1)$ from $(2x^2 + 3x - 1)$

17) $(3x + 7x^2 - 6) - (5x^2 + x + 9)$

18) $(7z^3 + 4z - 1) + (2z^2 - 6z + 2)$

19) $(6x^3 - 4x^2 + x - 9) - (3x^2 + 7x + 3)$

20)Subtract $(2s^2 + 10s)$ from $(-s^3 - 3)$

21) $(2x^2 + 1) + (x^2 - 2x + 1)$

22) $(3x + 7x^2 - 6) - (5x^2 + x + 9)$

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

24)$(x^2 - 7x + 10) + (2x^2 + 2x - 3) - (3x^2 - 5x + 7)$