September 8, 2014

Intro to Polynomials

Classifying Polynomials:

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

Standard Form:
Terms must be in order by exponent (largest to smallest)

2 ~ **Leading Coefficient:**
Number in front of leading term

3 ~ **Degree:**
Largest degree (exponent)

7 ~ **Constant:**
Number without a variable

Classifying Polynomials:

Ex. 1 $7y + \cancel{2y^3} \cancel{-y^2} + \cancel{3y^4}$

a. Standard Form: $3y^4 + 2y^3 - y^2 + 7y$
b. Leading Coefficient: 3
c. Degree: 4
d. Constant: 0

Ex. 2 $\cancel{-9t^2} + \cancel{3t^3} \cancel{-4t} - 15$

a. Standard Form: $3t^3 - 9t^2 - 4t - 15$
b. Leading Coefficient: 3
c. Degree: 3
d. Constant: -15

Adding Polynomials:

Ex. 1 $(5x - 8) + (7x + 10)$

$12x + 2$

-1
2

Ex. 2 $(-a^2 + 2a - 8) + (2a^2 - 9a + 15)$

$a^2 - 7a + 7$

Adding Polynomials:

Ex. 3 Find the sum of $(2x^2 + 8x + 4)$ and $(x^2 - 8x - 2)$

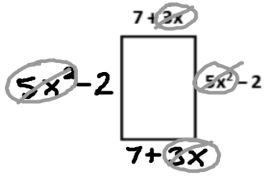
$3x^2 + 2$

Ex. 4 Find the sum of $(-5w^2 + 3w - 8)$ and $(15w^2 - 4w + 11)$

$10w^2 - w + 3$

Adding Polynomials:

Ex. 5 Find the perimeter of the following:

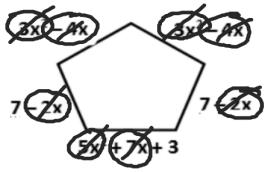


$7 + 3x$
$7 + 3x$
$5x^2 - 2$
$5x^2 - 2$

$10x^2 + 10 + 6x$

$10x^2 + 6x + 10$

Ex. 6 Find the perimeter of the following:



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

$11x^2 - 5x + 17$

Subtracting Polynomials:

K C F

Ex. 1 (-6x - 4) - (2x + 6)

K C F

$-6x - 4 + -2x - 6$

$-8x - 10$

Ex. 2 $(-7m^3 - m^2 - m) - (-10m^3 - m - 1)$

K C F

$-7m^3 - m^2 - m + 10m^3 + m + 1$

$3m^3 - m^2 + 1$

Subtracting Polynomials:

Ex. 3 $(4m^2 + 9m) - (2m^2 + 6)$

K C F

$4m^2 + 9m + -2m^2 - 6$

$2m^2 + 9m - 6$

Ex. 4 $(3x^3 - 2x^2 + x) - (x^2 + 2x - 3)$

K C F

$3x^3 - 2x^2 + x + -x^2 - 2x + 3$

$3x^3 - 3x^2 - x + 3$

Practice

* Odd *