Monday: Write a goal for the week

What is your goal for the week?

How will you attain that goal?

Classifying Polynomials

Degree- Largest exponent	Terms-Separated by +/-
0 – Constant (number)	0 - N/A
1 – linear (x)	1 – Monomial
2 – Quadratic $3x^2$	2 – Binomial
3 – Cubic x^3	3 – Trinomial
4 – Quartic x^4	4 – Polynomial
5 – Quintic x^5	5 – still polynomial
> 6 is called the nth degree	

x^7+2x^3+5 7th deg.

examples: Classify.

a) $14x^3+7x^4+5$ Quartic Trinomial

b) 765 Constant Monomial

Adding Polynomials

To add polynomials: combined like terms

Only add the coefficient of the terms with the same exponent

DO NOT CHANGE THE EXPONENT!!!

example 1 $(3x^3 - 5x^4 - 10x + 1) + (17x^4 - 3 + x^3)$

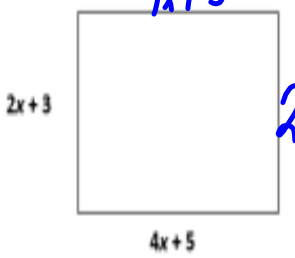
$3x^3 - 5x^4 - 10x + 1$

$+1x^3 + 17x^4 \quad -3$

$4x^3 + 12x^4 - 10x - 2$

$12x^4 + 4x^3 - 10x - 2$

Which expression represents the perimeter of the rectangle?



$2x + 4x + 2x + 4x + 3 + 5 + 3 + 5$

$12x + 16$

Subtracting Polynomials

To subtract polynomials: Change the signs of all the terms after the subtraction, drop the parenthesis, then add the polynomials

example 2 $(9x^3-4+x^2+8x)-(7x^3-3x+7)$

$-7x^3+3x-7$

$9x^3-4+x^2+8x$

$+\ -7x^3-7+3x$

$2x^3-11+x^2+11x$

$2x^3+x^2+11x-11$

A rectangular field is (4x + 6) long and (3x + 4) wide.

a) How much greater is the length than the width?

$(4x+6)-(3x+4)$

$-3x-4$

$4x+6$

$+\ -3x-4$

$x+2$

Multiplying

To multiply polynomials: Distribute each term. Multiply t coefficients and add the exponents.

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

$6x^4+3x^3-12x^2+21x$
$-2x^3-1x^2+4x-7$

$6x^4+x^3-13x^2+25x-7$

Find a polynomial expression for the volume of a rectangular prism with sides $(x-3),(x+4)$, and $(x-2)$.

Volume of a Rectangular Prism = Length x Width x Height

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

$(x-3)(x+4)$

$x^2+4x-3x-12$

$(x-2)(x^2+x-12)$

x^3+x^2-12x
$-2x^2-2x+24$

$x^3-x^2-14x+24$