Polynomials

Obj: Add/Subtract/Multiply/Divide
      Polynomials

What is a polynomial?

Finite sum of terms

countable

Ex) $2x^3 + x^2 - 5x^1 + 12$ (written in descending order)

the degree of the polynomial
is the greatest degree of its terms.

*Look at the term with the greatest exponent.

$$2x^{\boxed{3}} \text{ \tiny degree} + x^2 - 5x + \boxed{12}$$

↑ leading coefficient

↑ constant term

10/14/14

ex) Find the sum

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

Grouping

$$\underline{(2x^3 + x^3) + (-5x^2 + 2x^2) + x - 1}$$

$$\boxed{3x^3 - 3x^2 + x - 1}$$

Q: Can we solve for "x"? NO, this is an expression!

Vertical Addition

$$\begin{array}{r} 2x^3 - 5x^2 + x + 0 \\ + \quad x^3 + 2x^2 + 0 - 1 \\ \hline 3x^3 - 3x^2 + x - 1 \end{array}$$