Algebra 1 8.1

Write polynomials in standard form

Add and subtract polynomials

monomial

polynomial

binomial

trinomial

degree (of a monomial)

degree (of a polynomial)

activ: algebra tiles
whiteboards
5 in a row

number, variable or product

$3 + n - 5x + 8x^3$

$x^2a^2 + a^3 + 5x^3 - 2x^1$

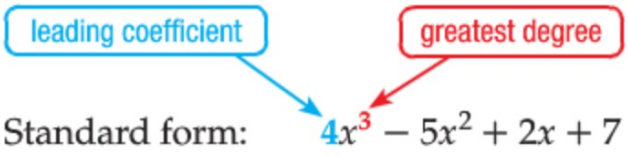
Monomial	Binomial	Trinomial
$5x$	$2x^2 + 7$	$1x^3 - 10x + 1$

$d = 3$

$LC = 1$

Degree	Name
0	constant
1	linear
2	quadratic
3	cubic

Polynomials are named based on their degree (exponents).


leading coefficient
greatest degree
Standard form: $4x^3 - 5x^2 + 2x + 7$

$d = 3$

Lc 4

GuidedPractice

3A. $(5x^2 - 3x + 4) + (6x - 3x^2 - 3)$ $= 2x^2 + 3x + 1$

3B. $(y^4 - 3y + 7) + (2y^3 + 2y - 2y^4 - 11)$ $= -y^4 + 2y^3 - y - 4$

Distributive property

Example 4 Subtract Polynomials

Find each difference.

a. $(3 - 2x + 2x^2) - (4x - 5 + 3x^2)$

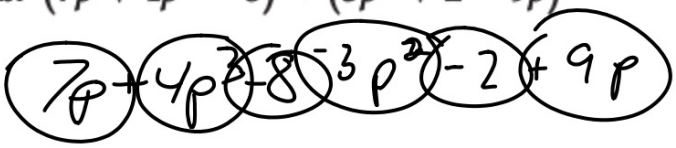
Danger!

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

$-1x^2$

$-x^2 - 6x + 8$

b. $(7p + 4p^3 - 8) + (3p^2 + 2 - 9p)$



$4p^3 - 3p^2 + 16p - 10$

GuidedPractice

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

4A. $(4x^3 - 3x^2 + 6x - 4) - (-2x^3 + x^2 - 2)$

4B. $(8y - 10 + 5y^2) - (7 - y^3 + 12y)$

$-7 + y^3 - 12y$

$y^3 + 5y^2 + -4y + -17$

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