

objective: To add and subtract polynomials

Like terms: have the same variable and exponent

examples: $2x^2$ and x^2 / $-3x$ and $5x$

When adding and subtracting polynomials you add and subtract like terms.

Adding polynomials

- 1.) remove parenthesis and re-write
- 2.) combine like terms
- 3.) answers should always be in standard form.

a.) $(12m^2 + 4) + (8m^2 + 5)$

$$\boxed{12m^2} + 4 + \boxed{8m^2} + 5$$

$$\boxed{20m^2 + 9} \quad \text{Quadratic binomial}$$

Subtracting polynomials

- 1.) Distribute negative (minus sign) into the second polynomial and rewrite without parenthesis
- 2.) combine like terms
- 3.) write in standard form.

b.) $(2x^3 + 4x^2 - 6) - (5x^3 + 2x^2 - 2)$

$$\boxed{2x^3} + 4x^2 - 6 - \boxed{5x^3} - 2x^2 + 2$$

$$\boxed{-3x^3 + 2x^2 - 4} \quad \text{cubic trinomial}$$

What if...

c.)

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

$10x^2$	$-15x$	$+50$
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$-9x^2$	$-6x$	$+30$
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x^2	$-21x$	$+80$
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quadratic trinomial

- 1.) Distributive numbers outside the parenthesis
- 2.) rewrite without parenthesis
- 3.) combine like terms
- 4.) standard form.