

Polynomial Vocabulary

<p>Term:</p> $4xy^2 + 3x - 5$ <p style="text-align: center;">↓ ↓ ↓ terms</p> <p><i>Groupings of numbers and/or variables that are split apart by either addition or subtraction.</i></p>	<p>Like Terms</p> $\underline{-5x} + 4 + \underline{2x} = 16$ <p style="text-align: center;">"Like Terms"</p> <p><i>Terms whose variables and their exponents are the same.</i></p>	<p>Coefficient:</p> $4x - 7 = 5$ <p style="text-align: center;">↑ ↑ ↑ Coefficient Variable Operator Constants</p> <p><i>A number in front of a variable.</i></p>												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">$2x$</td> <td style="padding: 5px;">Monomial</td> <td style="padding: 5px;">Monomials consist of 1 term</td> </tr> <tr> <td style="padding: 5px;">$2x + 3y$ ↑ ↑ 1 2</td> <td style="padding: 5px;">Binomial</td> <td style="padding: 5px;">Binomials consist of 2 terms</td> </tr> <tr> <td style="padding: 5px;">$2x^2 + 3x + 5$ ↑ ↑ ↑ 1 2 3</td> <td style="padding: 5px;">Trinomial</td> <td style="padding: 5px;">Trinomials consist of 3 terms.</td> </tr> <tr> <td style="padding: 5px;">$3x^3 + 2x^2 - 6x + 2$ ↑ ↑ ↑ ↑ 1 2 3 4</td> <td style="padding: 5px;">Polynomial</td> <td style="padding: 5px;">If there are more than 3 terms, use the term polynomial.</td> </tr> </table>			$2x$	Monomial	Monomials consist of 1 term	$2x + 3y$ ↑ ↑ 1 2	Binomial	Binomials consist of 2 terms	$2x^2 + 3x + 5$ ↑ ↑ ↑ 1 2 3	Trinomial	Trinomials consist of 3 terms.	$3x^3 + 2x^2 - 6x + 2$ ↑ ↑ ↑ ↑ 1 2 3 4	Polynomial	If there are more than 3 terms, use the term polynomial.
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Like terms are defined as having the same _____ and the same _____.

When adding and subtracting polynomials, you add and subtract _____.

Adding Polynomials:

1. Remove parentheses and rewrite each term.
2. Combine _____ terms!

****Note:** Final answers should be in _____ form of polynomials!

Example 1: Simplify.

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

(b) $(6s^2 + 3s + 7) + (2s^3 - 6s - 4)$
_____ + _____ + _____ = _____

Subtracting Polynomials:

Subtraction is the same thing as adding the _____.

1. Remove the parentheses from the first expression and rewrite each term; _____ change the signs.
2. When you remove the parentheses from the second expression, change each term to its _____ sign.
3. _____ like terms.

Example 2: Simplify.

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

Rewrite :

Combine Like Terms:

_____ + _____ + _____ = _____

What if it looks a little different?

REMEMBER, DISTRIBUTE MEANS TO MULTIPLY!!!

What about these: $5(2x^2 - 3x + 10) + 3(3x^2 + 2x - 10)$

1. Distribute the _____ outside of the _____ FIRST!

2. Follow Steps Above

Try it.....

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

Distribute First:

Combine Like Terms:

What if it looks like this: $5(2x^2 - 3x + 10) - 3(3x^2 + 2x - 10)$

1. Distribute the _____ outside of the parenthesis to each _____ FIRST!

Multiply:

2. **Be Mindful of the MINUS!** Change the sign of the second set of parenthesis. Rewrite your problem.

Rewrite:

3. Combine _____ terms.

Try it.....