

Notes 8.1 Adding and Subtracting Polynomials

Objective: To classify, add, and subtract Polynomials

Monomial: a real _____, a _____, or product of a real number and one or more variables with whole number _____

Degree of a Monomial: The _____ of the _____ of its variables.

Polynomial: an _____ which is the _____ of monomials.

Examples of monomials:

Sum of monomials:

Standard Form of a Polynomial: the _____ of the monomials _____ from left to right.

Degree of a Polynomial: Is the same as the _____ of the monomial with the highest degree.

Given :

The degree of the polynomial is _____

Complete the table

Polynomial	Standard Form	Degree	Name Using Degree	Number of Terms	Name Using Number of Terms
8					
$4+2x$					
$3x+3x^2-5+4x$					
$4x^3$					
$6a^4-3a+4a^3$					

Polynomial Addition: Horizontal and Vertical methods

1. $(5x^3 + 6x - 3) + (\quad)$	2. $(8w^5 - 9w^3 + w^2 - 2w + 1) + (4w^6 - w^5 + \quad)$
3. $\begin{array}{r} 15q^3 - 6q + 10 \\ + \quad 7q^3 + \quad \\ \hline \end{array}$	4. $\begin{array}{r} 8u^4 - 6u^2 + 8 \\ + \quad -8u^4 + \quad \\ \hline \end{array}$

Polynomial Subtraction: Horizontal and Vertical Methods

5. $(8a^5 - 2a^3 + a^2 + 8) - (4a^5 + a^3 - \quad)$	6. $(2y^3 - 8y^2 + 6y - 2) - (7y^3 - 6y^2 - \quad)$
7. $\begin{array}{r} 6j^7 - 5j^3 + 4j^2 + 8 \\ - (10j^7 + 5j^3 + \quad) \\ \hline \end{array}$	8. $\begin{array}{r} 15q^3 - 6q + 10 \\ - (-7q^3 + \quad) \\ \hline \end{array}$

All Mixed Up

9. $\begin{array}{r} 8f^3 - 7f + 13 \\ - (9f^3 - 2f^2 + \quad) \\ \hline \end{array}$	10. $(8a^5 - 2a^3 + a^2 + 8) + (4a^5 + a^3 - 5a^2 \quad)$
11. $(5x^3 + 6x - 3) - (-7x^3 + \quad)$	12. $\begin{array}{r} 6j^7 - 5j^3 + 4j^2 + 8 \\ + 10j^7 + 5j^3 + \quad \\ \hline \end{array}$