

Warm Up:

Simplify.

1. $4a - 8 + 9a + 3$

2. $7d + 5c - c + 3d - 1$

3. $5b^2 + b - 4 + 3b^2 - 2$

4. $5(2y - 1) - 4(6 - y)$

5. $-1(6x + 3x - 8)$

Speak Like A Mathematician

monomial: a _____, a _____, or the _____ of a number and one or more _____.

polynomial: a _____ or the _____ of two or more monomials.

binomial: the sum of _____ monomials.

trinomial: the _____ of three monomials

degree of a monomial: the _____ of all the exponents in a monomial.

degree of a polynomial: the _____ degree of any term in a polynomial.

How can I meet today’s standards?

*I can **add** and **subtract** polynomials.*

Polynomials by Degree

Degree	Name
0	
1	
2	
3	
4	quartic
5	quintic
6, 7, ...	

Example 1: Identify Polynomials

Determine whether each expression is a polynomial. If it is a polynomial, find the degree and determine whether it is a monomial, binomial, or trinomial.

A) $8ab - 2c$

B) -11.25

C) $2x^{-2} + 3xy$

D) $9x^3 - 8x + 5x - 27$

E) $2m^2 + 2mn - n^2$

Example 2: Standard Form of a Polynomial

Write each polynomial in standard form.

A) $11x - 2x^5 + 3x^3 - 9$

B) $4x + 12 + 2x^3 - 3x^2$

C) $5b - 10b^2 + 35 - b^3$

Example 3: Adding Polynomials (Horizontal or Vertical Method)

Find each sum.

A) $(3x^2 - 4) + (x^2 - 9)$

B) $(8 - x^2) + (4x + 2x^2 - 9)$

C) $(-3c - 22 + c^2) + (2c^2 - 12 + 22c)$

D) $(9y - 2x + 2x^2 - 13) + (28 - 4y + 4x^2)$

E) $(-m^2 + m) + (11 + m^2)$

Example 4: Subtracting Polynomials (Horizontal or Vertical Method)

A) $(6x - 11) - (2x - 19)$

B) $(-12t + t^2 - 4) - (2t - t^2)$

C) $(x + 2) - (7x - 3x^2 + 14)$

D) $(9q + q^2 - 2) - (q + 3)$

E) $(3 - 2x + 2x^2) - (4x - 5 + 3x^2)$

Key Concept:

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