Adding, Multiplying, and Subtracting Monomials

A Monomial is an algebraic expression which contains only one term. Each term may be the product of constants and variables with non-negative exponents.

Examples: 7 8x 9xy $5x^2yz^3$

Addition of Monomials

EXAMPLES

THE ADDITION OF TWO SAME MONOMIALS (MONOMIALS WITH SAME VARIABLES(S) WITH SAME EXPONENT(S)) WILL RESULT IN A MONOMIAL I.E. $4X^2Y+9X^2Y = (4+9)X^2Y = 13X^2Y$

THE ADDITION OF TWO DIFFERENT MONOMIALS (MONOMIALS WITH DIFFERENT VARIABLES WITH SAME OR DIFFERENT EXPONENT(S)) WILL RESULT IN A POLYNOMIAL I.E. $7XY+8X = (7Y+8)X$

Subtraction of Monomials

EXAMPLES

THE SUBTRACTION OF TWO SAME MONOMIALS (MONOMIALS WITH SAME VARIABLES(S) WITH SAME EXPONENT(S)) WILL RESULT IN A MONOMIAL I.E. $9XY^2-5XY^2 = (9-5)XY^2 = 4XY^2$

THE SUBTRACTION OF TWO DIFFERENT MONOMIALS (MONOMIALS WITH DIFFERENT VARIABLES WITH SAME OR DIFFERENT EXPONENT(S)) WILL RESULT IN A POLYNOMIAL I.E. $8X^2Y-9Z = 8X^2Y-9Z$

Multiplication of Monomials

EXAMPLES

THE MULTIPLICATION OF TWO MONOMIALS WITH ALWAYS RESULT IN A MONOMIAL.

$4X^2Y.6XY^2Z = (4.6).(X^2.X).(Y.Y^2).Z$ COMBINING LIKE TERMS

$= 24.X^3.Y^3.Z = 24X^3Y^3Z$ EXPONENTS WILL BE ADDED WHEN MULTIPLYING TWO WHEN MULTIPLYING EXPRESSIONS WITH SAME BASES.

Meets: Common Core Standard High School – Related to HSA-APR.A.1