

10.0

4 CST items

Students add, subtract, multiply, and divide monomials and polynomials. Students solve multistep problems, including word problems, by using these techniques.

Key Vocabulary

Polynomial	Term	Coefficient	Variable
Exponent	Degree	Monomial	Binomial
Trinomial	Constant	Linear	Quadratic
Cubic	Standard Form of a Polynomial		Distributive Property

Instructional Objectives

1 Rewrite polynomials in <i>Standard Form</i> , and classify polynomials by degree and number of terms.	1 Rewrite the polynomial in standard form and classify the polynomial: $2 + 5x^2 - 8x$
	2 Classify the following polynomial: $-12x^3$
	3 Create an example of a linear binomial.
	4 Create an example of a cubic trinomial.
2 Add and subtract polynomials, including combining like terms.	1 Simplify: $(5x^2 - 8x + 2) + (-x^2 - 2x + 7)$
	2 Simplify: $(x^2 + 8x^3 - 4) + (4x^2 - 3x - 5)$
	3 Simplify: $(5x^2 - 8x + 2) - (-x^2 - 2x + 7)$
	4 Simplify: $(x^2 + 8x^3 - 4) - (4x^2 - 3x - 5)$
3 Apply the <i>Distributive Property</i> to multiply monomials by binomials and trinomials.	1 Simplify: $2x^2(-3x + 5)$
	2 Simplify: $4x(-5x^2 - 2x + 1)$
	3 Simplify: $x(x - 5)$
	4 Simplify: $-6x(4x^2 + 3x + 7)$
4 Multiply binomials to produce trinomials.	1 Simplify: $(x + 3)(x + 5)$
	2 Simplify: $(x + 8)(x - 6)$
	3 Simplify: $(x - 4)^2$
	4 Simplify: $(3x - 7)(x + 2)$
5 Divide monomials to simplify expressions.	1 Simplify: $\frac{12x^2}{4x}$
	2 Simplify: $\frac{8x^5}{20x^2}$
	3 Simplify: $\frac{-10x^3}{2x^3}$
	4 Simplify: $\frac{14x^4}{-28x^7}$