Mathematics
Algebra 1: Academic
Unit 2: Properties of Real Numbers

Essential Understandings	▪ Use of real numbers is a very important step in understanding algebra.
Essential Questions	▪ What are the different types of real numbers? ▪ How do you graph real numbers? ▪ What is absolute value? ▪ How do you add, subtract, multiply and divide real numbers? ▪ What are the essential algebraic properties? ▪ How do you evaluate complex expressions? ▪ How do you simplify complex expressions?
Essential Knowledge	▪ There are many types of real numbers. ▪ All real numbers can be graphed on number lines. ▪ Absolute value is a distance the number is from zero ▪ Adding, subtracting, multiplying, and dividing follow important rules. ▪ You can only combine like terms.
Vocabulary	▪ <u>Terms</u>: o real numbers, integers, irrational/rational numbers, number line, absolute value, commutative property, associative property, distributive property, properties of zero, simplify, evaluate, solve, factors, terms, like terms, coefficient, constant, reciprocal, multiplicative inverse, additive inverse, opposite, substitute
Essential Skills	▪ Identify sets of real numbers (i.e. integers, irrational/rational numbers) ▪ Graph real numbers on number lines. ▪ Find the absolute value and simplify expressions containing absolute values. ▪ Add, subtract, multiply and divide real numbers ▪ Use order of operations including powers, square roots, and distributive property to simplify complex expressions ▪ Evaluate complex expressions by correctly substituting given values for variables. ▪ Simplify complex expressions by combining like terms.

Related Maine Learning Results	<u>Mathematics</u>
	D. Algebra
	  Symbols and Expressions
	  D1. Students understand and use polynomials and expressions with rational exponents.
	    a. Simplify expressions including those with rational numbers.

Sample Lessons And Activities	▪ Students will orally respond to questions. ▪ Students will utilize worksheets and in their notes to demonstrate individual understanding of the concepts.

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Sample Classroom Assessment Methods	- Quizzes - Take-home worksheets - Tests
Sample Resources	- Publications: - Algebra -Foerster