Mathematics
Algebra 1: Academic
Unit 11: Rational Expressions & Equations

Essential Understandings	▪ Understanding the rules of rational expressions as well as how to solve rational equations is an important algebraic skill.
Essential Questions	▪ How do you solve proportions? ▪ How do you solve proportions containing variables? ▪ How do simplify rational expressions? ▪ How do you multiply and divide rational expressions? ▪ How do you add and subtract rational expressions? ▪ How do you solve rational equations?
Essential Knowledge	▪ Proportions can be solved by cross-multiplying. ▪ Simplifying rational expressions can be done by using factoring. ▪ Rational expressions can be multiplied and divided. ▪ Rational expressions can be added and subtracted. ▪ Rational equations can be solve.
Vocabulary	▪ <u>Terms</u>: o proportions, cross product property, rational expressions, rational equations, least common denominator
Essential Skills	▪ Solve proportions with numbers. ▪ Solve proportions with variables. ▪ Simplify rational expressions. ▪ Multiply and divide rational expressions. ▪ Add and subtract rational expressions. ▪ Solve rational equations.

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.
	  Equations and Inequalities
	  D2. Students solve families of equations and inequalities.
	    c. Solve simple rational equations.

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.
Sample Classroom Assessment Methods	▪ Quizzes ▪ Take-home worksheets ▪ Tests
Sample Resources	▪ <u>Publications</u>: o Algebra 1 Textbook (Foerster)