

Algebra I Honors

Unit 11: Rational Expressions & Equations

Essential Understandings	<ul style="list-style-type: none"> ▪ Understanding the rules of rational expressions as well as how to solve rational equations is an important algebraic skill.
Essential Questions	<ul style="list-style-type: none"> ▪ How do you solve proportions equations? ▪ How do you simplify rational expressions? ▪ How do you multiplied and divided rational expressions? ▪ How do you added and subtract rational expressions? ▪ How do you solve rational equations? ▪ How do you determine excluded values in rational equations? ▪ How do you graph rational equations? ▪ How do you graph inverse variation equations?
Essential Knowledge	<ul style="list-style-type: none"> ▪ Proportions can be solved by cross-multiplying. ▪ Rational expressions can be simplified by using factoring. ▪ Rational expressions can be added and subtracted using a least common denominator. ▪ Rational expressions can be multiplied and divided by using the laws of exponents and factoring. ▪ Rational equations can be solved using the cross product property. ▪ Rational functions can be graphed ▪ Inverse variation functions can be graphed.
Vocabulary	<ul style="list-style-type: none"> ▪ <u>Terms:</u> <ul style="list-style-type: none"> ○ proportions, cross product property, rational expressions, rational equations, least common denominator, rational functions, excluded values, inverse variation equations
Essential Skills	<ul style="list-style-type: none"> ▪ Solve proportions with numbers. ▪ Solve proportions with variables. ▪ Simplify rational expressions. ▪ Multiply and divide rational expressions. ▪ Add and subtract rational expressions. ▪ Solve rational equations and identify excluded values. ▪ Determine and understand the difference between direct variation and inverse variation equations. ▪ Graph and interpret rational functions using technology.
Related Maine Learning Results	<ul style="list-style-type: none"> D. Symbols and Expressions 1a D. Equations and Inequalities 2c
Sample Lessons And Activities	<ul style="list-style-type: none"> ▪ 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	<ul style="list-style-type: none"> ▪ Quizzes, take-home worksheets, and tests.
Sample Resources	<ul style="list-style-type: none"> ▪ <u>Publications:</u> Algebra 1 Textbook (Larson) ▪ <u>Other:</u> Graphing calculators.
Technology Link	<ul style="list-style-type: none"> ▪ http://www.brunswick.k12.me.us/curriculum