

Mathematics
Algebra 1: CP
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 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	- Solve proportions by cross multiplying. - Simplify 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 solved.
Vocabulary	<u>Terms:</u> - proportions, cross product property, rational expressions, rational equations, least common denominator
Essential Skills	- Solve proportions. - 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 Equations and Inequalities D2.Students solve families of equations and inequalities. - Solve systems of linear equations and inequalities in two unknowns and interpret their graphs. - Solve quadratic equations graphically, by factoring in cases where factoring is efficient, and by applying the quadratic formula. - Solve simple rational equations. - Solve absolute value equations and inequalities and interpret the results. - Apply the understanding that the solution(s) to equations of the form $f(x) = g(x)$ are x-value(s) of the point(s) of intersection of the graphs of $f(x)$ and $g(x)$ and common outputs in table of values. - Explain why the coordinates of the point of intersection of the lines represented by a system of equations is its solution and apply this understanding to solving problems. D3.Students understand and apply ideas of logarithms. - Use and interpret logarithmic scales.

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	b. Solve equations in the form of $x + b^y$ using the equivalent form $y = \log_b x$.
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	▪ Evaluate homework ▪ Quizzes ▪ Chapter test
Sample Resources	▪ <u>Publications:</u> ○ <u>Algebra 1</u> - McDougall Littell