

Planned Course: Honor Algebra II Unit: Rational Expressions Estimated Time: 18 days		Course Number: M305H Grade Level: 8-12 Level/Track: Honors		Department: Mathematics Date Approved: 08/21/01	
Academic Standards	Skills/Knowledge	Activities	Assessment		
<p>2.8.8 Algebra and Functions</p> <p>I. Generate a table or graph from a function and use graphing calculators and computer spreadsheets to graph and analyze functions.</p> <p>2.8.11 Algebra and Functions</p> <p>Q. Represent functional relationships in tables, charts and graphs.</p> <p>T. Analyze and categorize functions by their characteristics.</p>	<p>The student will be able to graph a rational function using asymptotes.</p>	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes • Unit test 		
<p>2.5.11 Mathematical Problem Solving and Communication</p> <p>A. Select and use appropriate mathematical concepts and techniques from different areas of mathematics and apply them to solving non-routine and multi-step problems.</p> <p>D. Formulate expressions, equations, inequalities,</p>	<p>The student will be able to use rational functions as real life models.</p>	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes • Unit test 		

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systems of equations, system of inequalities, and matrices to model routine and non-routine problem situations.			
<p>2.8.11 Algebra and Functions</p> <p>P. Analyze a relation to determine whether a direct or inverse variation exists and represent it algebraically and graphically.</p> <p>S. Analyze properties and relationships of functions (e.g., linear, polynomial, rational, trigonometric, exponential and logarithmic).</p>	The student will be able to use inverse and joint variation to create real life models.	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes • Unit test
<p>2.1.8 Numbers, Number Systems and Number Relationships</p> <p>E. Simplify and expand algebraic expressions using exponential forms.</p>	The student will be able to multiply and divide rational expressions.	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes

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<p>2.8.8 Algebra and Functions</p> <p>E. Select and use a strategy to solve an equation or inequality, explain the solution and check the solution for accuracy.</p> <p>J. Show that an equality relationship between two quantities remains the same as long as the same change is made to both quantities; and explain how a change in one quantity determines another quantity in a functional relationship.</p> <p>2.8.11 Algebra and Functions</p> <p>N. Solve linear, quadratic and exponential equations both symbolically and graphically.</p>	<p>The student will be able to solve equations that contain rational expressions.</p>	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<p>Classroom observation</p> <p>Graded homework</p> <p>Graded class work</p> <p>Quizzes</p> <p>Unit test</p>
<p>2.1.8 Numbers, Number Systems and Number Relationships</p>			

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<p>E. Simplify and expand algebraic expressions using exponential forms.</p>	<p>The student will be able to add and subtract rational expressions.</p> <p>The student will be able to simplify complex fractions.</p>	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes • Unit test
<p>2.8.8 Algebra and Functions</p> <p>F. Represent relationships with tables or graphs in the coordinate plane and verbal or symbolic rules.</p> <p>2.8.11 Algebra and Functions</p> <p>D. Formulate expressions, equations, inequalities, systems of equations, system of inequalities, and matrices to model routine and non-routine problem situations.</p>	<p>The student will be able to construct an amortization table for a loan and find the monthly payment for a loan.</p>	<ul style="list-style-type: none"> • Overhead transparencies • Chalkboard examples • Exercises in book • Worksheets • Graphing calculator 	<ul style="list-style-type: none"> • Classroom observation • Graded homework • Graded class work • Quizzes • Unit test