

Planned Course: Algebra II		Course Number: M305	Department: Mathematics
Unit: Logarithmic Functions		Grade Level: 8-12	
Estimated Time: 26 days		Level/Track:	Date Approved: 7/15/08
PA Academic Standards	Core Concepts (in question format) • Skills/Knowledge	Activities/Strategies/Study Skills (identify some activities as remedial or enrichment activities)	Assessments (include types and topics)

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<p>ASSESSMENT ANCHORS</p> <p>M11.D.1 Demonstrate an understanding of patterns, relations and functions.</p> <p>M11.D.1.1 Analyze and/or use patterns or relations.</p> <p>M11.D.1.1.1 Analyze a set of data for the existence of a pattern and represent the pattern algebraically and/or graphically.</p> <p>M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.</p> <p>M11.A.2.2 Use exponents, roots and/or absolute value to solve problems.</p> <p>M11.A.2.2.1 Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).</p>	<ul style="list-style-type: none"> • Students will be able to graph exponential functions. • Students will be able to apply exponential functions to real life situations. 	<ol style="list-style-type: none"> 1. Students will manually graph exponential growth and decay functions. 2. Students will confirm graphs with graphing calculators. 3. Students will compare / contrast characteristics of exponential growth and decay functions. <ol style="list-style-type: none"> 1. Various applications to be selected from textbook. 	<ul style="list-style-type: none"> • Graded Homework • Classroom Observation • Online Quiz/Test • In Class Quiz/Test • Participation • Graded Class work • Projects

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<p>M11.A.2 Understand the meanings of operations, use operations and understand how they relate to each other.</p> <p>M11.A.2.2 Use exponents, roots and/or absolute value to solve problems.</p> <p>M11.A.2.2.1 Simplify/evaluate expressions involving positive and negative exponents, roots and/or absolute value (may contain all types of real numbers - exponents should not exceed power of 10).</p>	<ul style="list-style-type: none"> • Students will be able to solve exponential equations. 	<ol style="list-style-type: none"> 1. Students will convert expressions in exponent form to logarithmic form. 2. Students will evaluate basic logarithmic expressions. 3. Students will expand and condense exponential expressions. 4. Students will solve exponential equations for x. 	
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