

<b>Planned Course: Algebra II</b>		<b>Course Number: E305</b>		<b>Department: Mathematics</b>	
<b>Unit: Review of Basic Algebra</b>		<b>Grade Level: 8-12</b>		<b>Date Approved: 7/15/08</b>	
<b>Estimated Time: 18 days</b>		<b>Level/Track:</b>			
<b>PA Academic Standards</b>	<b>Core Concepts (in question format)</b> • Skills/Knowledge	<b>Activities/Strategies/Study Skills</b> (identify some activities as remedial or enrichment activities)	<b>Assessments</b> (include types and topics)		

<p><b>ASSESSMENT ANCHOR</b></p> <p><b>M11.A.1</b> Demonstrate an understanding of numbers, ways of representing numbers, relationships among numbers and number systems.</p> <p><b>M11.A.1.3.2</b> Compare and/or order any real numbers (rational and irrational may be mixed).</p>	<p>► Explain the number line. What are real numbers?</p> <ul style="list-style-type: none"> <li>• Students will be able to find negative &amp; positive numbers and zero on the number line.</li> <li>• Students will be able to determine the order of two numbers using the number line.</li> </ul> <p>► What happens when you add opposites?</p> <ul style="list-style-type: none"> <li>• Students will be able to add positive and negative integers.</li> <li>• Students will be able to subtract positive and negative integers.</li> <li>• Students will be able to multiply positive and negative integers.</li> <li>• Students will be able to divide positive and negative integers.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will use the number line to locate positives and negatives.</li> <li>2. Students will use the number line to find opposites.</li> <li>3. Students will use the number line to add / subtract integers.</li> <li>4. Students will use the chalkboard to display number line problems.</li> <li>5. Students will use the calculators to verify computations.</li> </ol>	<ul style="list-style-type: none"> <li>• Graded homework</li> <li>• Classroom observation</li> <li>• Online Quiz/Test</li> <li>• In Class Quiz/Test</li> <li>• Participation</li> </ul>		
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<p><b>M11.A.3.1</b> Apply the order of operations in computation and in problem-solving situations.</p> <p><b>M11.A.3.1.1</b> Simplify/evaluate expressions using the order of operations to solve problems (any rational numbers may be used).</p> <p><b>M11.D.2.1.3</b> Write, solve and/or apply a linear equation (including problem situations).</p>	<p>► What are the “Order of Operations”?</p> <ul style="list-style-type: none"> <li>• Students will be able to evaluate algebraic expressions.</li> <li>• Students will be able to determine which operation takes priority in a string of operations.</li> </ul> <p>► How do you find the value of a variable in an equation?</p> <ul style="list-style-type: none"> <li>• Students will be able to solve a “one-step” equation.</li> <li>• Students will be able to solve a “two-step” equation</li> <li>• Students will be able to solve an equation for a variable that occurs on both sides of equation.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will identify the variables in an expression.</li> <li>2. Students will substitute a given value for a variable and perform subsequent operations in correct priority order.</li> <li>3. Students will isolate a variable via “one-step” method.</li> <li>4. Students will isolate a variable via “two-step” method.</li> <li>5. Students will collect all variables to one side of equation.</li> <li>6. Students will use worksheets as study aides.</li> </ol>	<ul style="list-style-type: none"> <li>• Graded homework</li> <li>• Classroom observation</li> <li>• Online Quiz/Test</li> <li>• In Class Quiz/Test</li> <li>• Participation</li> </ul>
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<p><b>M11.D.2.1.3</b> Write, solve and/or apply a linear equation (including problem situations).</p> <p><b>M11.A.3</b> Compute accurately and fluently and make reasonable estimates.</p> <p><b>M11.A.3.2.1</b> Use estimation to solve problems.</p>	<ul style="list-style-type: none"> <li>• Students will be able to solve an equation for a variable that occurs on both sides of the equation.</li> <li>• Students will be able to solve word problems based on appropriate strategy.</li> <li>• Students will be able to solve a literal equation for any variable within the equation.</li> <li>• Students will be able to estimate the solution to a problem.</li> </ul>	<p>7. Students will substitute answers into original equation via calculator to verify.</p> <p>8. Flow charts will be utilized to solve word problems.</p>	<ul style="list-style-type: none"> <li>• Graded homework</li> <li>• Classroom observation</li> <li>• Online Quiz/Test</li> <li>• In Class Quiz/Test</li> <li>• Participation</li> </ul>
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<p><b>M11.D.2.1.1</b> Solve compound inequalities and/or graph their solution sets on a number line (may include absolute value inequalities).</p>	<p>► How do you solve and graph Linear Equations?</p> <ul style="list-style-type: none"> <li>• Students will be able to solve linear inequalities with variables on one side.</li> <li>• Students will be able to solve linear inequalities with variables on both sides.</li> <li>• Students will be able to solve compound linear inequalities.</li> <li>• Students will be able to solve absolute value inequalities.</li> <li>• Students will be able to graph linear and absolute value equations.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will view overhead transparencies as learning aides.</li> <li>2. Students will demonstrate concepts with chalkboard examples</li> <li>3. Students will utilize worksheets as learning aides.</li> <li>4. Students will use calculators to verify answers.</li> </ol>	<ul style="list-style-type: none"> <li>• Graded homework</li> <li>• Classroom observation</li> <li>• Online Quiz/Test</li> <li>• In Class Quiz/Test</li> <li>• Participation</li> </ul>
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