

<b>Planned Course: Algebra II</b>		<b>Course Number: E305</b>	<b>Department: Mathematics</b>
<b>Unit: Linear Equations</b>		<b>Grade Level: 8-12</b>	
<b>Estimated Time: 18 days</b>		<b>Level/Track:</b>	<b>Date Approved: 7/15/08</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)

<b>ASSESSMENT ANCHOR</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>M11.D.2</b> Represent and/or analyze mathematical situations using numbers, symbols, words, tables and/or graphs.</p> <p><b>M11.D.2.1.2</b> Identify or graph functions, linear equations or linear inequalities on a coordinate plane.</p> <p><b>M11.D.4.1.1</b> Match the graph of a given function to its table or equation.</p> <p><b>M11.D.3.2.1</b> Apply the formula for the slope of a line to solve problems (formula given on reference sheet).</p>	<p>▶ Explain the concept of linear equations. How are they graphed? What are they used for? How do you solve them?</p> <ul style="list-style-type: none"> <li>• Students will be able to graph a linear equations using a table of values.</li> <li>• Students will be able to calculate the slope of a line.</li> <li>• Students will be able to identify parallel and perpendicular lines from their slope values.</li> <li>• Students will be able to graph a line from the slope and y-intercept of the line.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will use graph paper to accurately graph a linear equation.</li> <li>2. Use of overhead projector to illustrate graphs.</li> <li>3. Use graphing calculator projector to illustrate graphs.</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>

<b>Planned Course: Algebra II</b>		<b>Course Number: E305</b>	<b>Department: Mathematics</b>
<b>Unit: Linear Equations</b>		<b>Grade Level: 8-12</b>	
<b>Estimated Time: 18 days</b>		<b>Level/Track:</b>	<b>Date Approved: 7/15/08</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>M11.D.3.2</b> Compute and/or use the slope of a line.</p> <p><b>M11.D.3.2.1</b> Apply the formula for the slope of a line to solve problems (formula given on reference sheet).</p> <p><b>M11.D.3.2.2</b> Given the graph of the line, 2 points on the line, or the slope and a point on a line, write or identify the linear equation in point-slope, standard and/or slope-intercept form.</p>	<ul style="list-style-type: none"> <li>• Students will be able to calculate the slope of a line from two points.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will use the two-point slope formula to calculate slope</li> <li>2. Students will use the slope of a line to solve real world application</li> <li>3. Students will compute the linear equation of a line given, the slope of the line an one point, or two points of the line</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>
--	---	--	---

<b>Planned Course: Algebra II</b>		<b>Course Number: E305</b>	<b>Department: Mathematics</b>
<b>Unit: Linear Equations</b>		<b>Grade Level: 8-12</b>	
<b>Estimated Time: 18 days</b>		<b>Level/Track:</b>	<b>Date Approved: 7/15/08</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>M11.D.3.2</b> Compute and/or use the slope of a line.</p>	<p>▶ How can you quickly graph the line of a linear equation?</p>	<ol style="list-style-type: none"> <li>1. Use of graph paper for students to accurately find integer values for x and y intercepts</li> <li>2. Overhead projector using grid transparencies to demonstrate how to locate.</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>
<p><b>M11.D.3.2.3</b> Compute the slope and/or y-intercept represented by a linear equation or graph.</p>	<ul style="list-style-type: none"> <li>• Students will be able to graph the line of an equation in standard form by computing the x and y intercepts.</li> <li>• Students will be able to graph the line of an equation in slope-intercept form by using the slope and y-intercept.</li> </ul>		

<b>Planned Course: Algebra II</b>		<b>Course Number: E305</b>		<b>Department: Mathematics</b>	
<b>Unit: Linear Equations</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>M11.D.2.1</b> Write, solve and/or graph linear equations and inequalities using various methods.</p> <p><b>M11.D.2.1.5</b> Solve quadratic equations using factoring (integers only – not including completing the square or the Quadratic Formula).</p>	<p>► Explain the quadratic formula.</p> <ul style="list-style-type: none"> <li>• Students will be able to re-arrange a quadratic equation into standard form.</li> <li>• Students will be able to identify the values for a, b, and c and use them to find coordinates of the vertex of a parabola as well as other points on the graph.</li> <li>• Students will be able to determine the values of the discriminant.</li> <li>• Students will be able to use the discriminant to determine the number of solutions for a quadratic equation.</li> </ul>	<ol style="list-style-type: none"> <li>1. Students will place quadratic equations into proper standard form.</li> <li>2. Students will extract values of a, b, and c for use in the discriminant test and in general quadratic formula.</li> <li>3. Students will determine the nature and number of roots from the discriminant value.</li> <li>4. Students will find the location of the vertex.</li> </ol>	<p>Graded homework</p> <p>Classroom observation</p> <p>Online Quiz/Test</p> <p>In Class Quiz/Test</p> <p>Participation</p>
--	---	---	--