

<b>Planned Course: Geometry</b>		<b>Course Number: 302/303</b>		<b>Department: Mathematics</b>	
<b>Unit:</b>		<b>Grade Level:</b>		<b>Date Approved: 715/2008</b>	
<b>Estimated Time:</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>2.9.11.B Prove that two triangles or two polygons are congruent or similar using algebraic, coordinate and deductive proofs.</p> <p>2.9.11.C Identify and prove the properties of quadrilaterals involving opposite sides and angles, consecutive sides and angles and diagonals using deductive proofs</p> <p>2.9.11.I Model situations geometrically to formulate and solve problems.</p> <p>2.8.11.D Formulate expressions, equations, inequalities, systems of equations, systems of inequalities and matrices to model routine and non-routine problem situations.</p>	<p>▶ 6. How can discovering triangle properties help students formulate conjectures about specific triangle parts?</p> <p>▶ 6A. The students will be able to identify triangles by their angle measures and side lengths.</p> <p>▶ 6B. The students will be able to measure the angles of a triangle.</p> <p>▶ 6C. The students will be able to name the corresponding parts of triangles.</p> <p>▶ 6D. The students will be able to prove two triangles are congruent.</p> <p>▶ 6E. The students will be able to use congruent triangles to prove corresponding parts are congruent to solve problems.</p>	<p>▶ Overhead transparencies</p> <p>▶ Chalkboard Examples</p> <p>▶ PowerPoint Examples</p> <p>▶ Textbook Exercises</p> <p>▶ Paper Folding</p> <p>▶ Worksheets</p> <p>▶ Geometer's Sketchpad</p> <p>▶ Cooperative Group Work</p> <p>▶ Manipulatives (Set, T-square, and miter box)</p>	<p>▶ Graded homework</p> <p>▶ Classroom observation</p> <p>▶ Online Quiz/Test</p> <p>▶ In Class Quiz/Test</p>		
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<p>2.4.11.A Use direct proofs, indirect proofs or proof by contradiction to validate conjectures.</p> <p>2.1.8.D Apply ratio and proportion to mathematical problem situations involving distance, rate, time and similar triangles</p> <p>2.9.11.A Construct geometric figures using dynamic geometry tools (e.g., Geometer's Sketchpad, Cabri</p>	<p>▶ 6F. The students will discover, prove, and be able to use the properties of isosceles and right triangles.</p> <p>▶ 6G. The students will be able to expand their knowledge of the structure of geometry by defining new terms, developing postulates and theorems, and proving theorems pertaining to triangles.</p> <p>▶ 6H. The students will be able to construct, identify, and use special segments of a triangle: perpendicular and angle bisectors, medians, altitudes, and midsegments.</p> <p>▶ 6I. The students will be able to find the measures of the sides or the measures of the angles of a triangle and be able to determine triangle inequalities.</p>		
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	<p>▶ 6J. The students will be able to compare the measures of the sides and angles of one triangle with the measures of the sides and angles of another triangle to determine triangle inequalities between two triangles.</p> <p>▶ 6K. The students will continue to expand their knowledge of the structure of geometry by defining new terms and discovering and proving theorems pertaining to triangles.</p> <p>▶ 6L. The students will be able to use triangle inequalities to solve real-life problems.</p>				
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