

Planned Course: Geometry		Course Number: 302/303		Department: Mathematics	
Unit:		Grade Level:		Date Approved: 7/15/2008	
Estimated Time:		Level/Track:			
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)		

<p>2.1.11.A Use operations (e.g., opposite, reciprocal, absolute value, raising to a power, finding roots, finding logarithms).</p> <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.B Prove that two triangles or two polygons are congruent or similar using algebraic, coordinate and deductive proofs.</p> <p>2.10.11.B Identify, create and solve practical problems involving right triangles using the trigonometric functions and the Pythagorean Theorem.</p>	<p>▶ 10. How can students take radical numbers and apply them to properties of right triangles?</p> <p>▶ 10A. The students will be able to simplify and rationalize radicals.</p> <p>▶ 10B. The students will be able to prove that two right triangles are congruent.</p> <p>▶ 10C. The students will be able to use the proportionality properties of right triangles.</p> <p>▶ 10D. The students will be able to find the geometric mean of two numbers.</p> <p>▶ 10E. The students will be able to use the Pythagorean Theorem and its converse.</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>2.5.11.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>2.9.11.A Construct geometric figures using dynamic geometry tools (e.g., Geometer's Sketchpad, Cabri)</p>	<p>▶ 10F. The students will be able to find the lengths of sides of special right triangles.</p> <p>▶ 10G. The students will be able to find the trigonometric ratios of an acute angle.</p> <p>▶ 10H. The students will be able to solve a right triangle.</p> <p>▶ 10I. The students will be able to use the properties of right triangles to solve real-life problems.</p>				
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