

Planned Course: Honors Geometry		Course Number: M307H		Department: Mathematics	
Unit: Relationships Within Triangles		Grade Level: 9-12		Date Approved: 7/15/09	
Estimated Time: 14 days		Level/Track: Honors			
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>ASSESSMENT ANCHORS M11.C.1.2 Recognize and/or apply properties of angles, triangles, and quadrilaterals.</p> <p>ACADEMIC STANDARDS 2.4.11 Mathematical Reasoning and Connections A. Use direct proofs, indirect proofs or proof by contradiction to validate conjectures.</p>	<p>▶ What properties emerge when investigating midsegments, perpendicular bisectors, angle bisectors, medians, and altitudes of triangles?</p> <ul style="list-style-type: none"> • Student will be able to apply the midsegment theorem of a triangle. • Student will be able to apply the properties of the circumcenter, incenter, orthocenter, and centroid of a triangle <p>▶ In a triangle, how do the lengths of the sides compare to each other and to the angles of the triangle?</p> <ul style="list-style-type: none"> • Student will be able to use indirect reasoning to prove conjectures involving inequalities. • Student will be able to apply the theorems relating the sides and angles of triangles to solve problems. 	<p>▶ The student will prove the midsegment theorem.</p> <p>▶ Enrichment Activity: The student will locate the circumcenter, incenter, orthocenter, and centroid of a triangle using a protractor and ruler.</p> <p>▶ The student will analyze diagrams with specific given information to determine various side lengths and angles.</p> <p>▶ The student will supply missing portions of an indirect proof.</p> <p>▶ The student will write a proof by contradiction.</p>	<p>▶ Graded homework</p> <p>▶ Classroom observation and/or participation</p> <p>▶ Quiz</p> <p>▶ Test</p>		
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