

Planned Course: Honors Geometry		Course Number: M307H		Department: Mathematics	
Unit: Reasoning and Proof		Grade Level: 9-12		Date Approved: 7/15/08	
Estimated Time: 12 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>Academic Standards: 2.4.11 Mathematical Reasoning and Connections A. Use direct proofs, indirect proofs or proof by contradiction to validate conjectures. B. Construct valid arguments from stated facts.</p> <p>2.9.11 Geometry I. Model situations geometrically to formulate and solve problems.</p>	<p>► How does the Law of Syllogism support the logical deductive reasoning that is demonstrated in a standard two-column proof?</p> <ul style="list-style-type: none"> • Student will be able to use the Law of Detachment and the Law of Syllogism to draw conclusions and formulate valid arguments. • Student will be able to identify and apply the algebraic properties of equality and the properties of congruence. • Student will be able to write a standard two-column proof. 	<ul style="list-style-type: none"> – The student will write conditionals and their converses, and determine their truth values. – The student will write definitions as bi-conditionals. – The student will supply the missing statement and/or reason in a standard two-column proof. – The student will solve problems using previous theorems and postulates. 	<ul style="list-style-type: none"> • Graded homework • Classroom observation and/or participation • Quiz • Test 		
---	--	--	---	--	--