Planned Course: Honors Geometry	Course Number: M307H	Department: Mathematics	
Unit: Parallel and Perpendicular Lines Estimated Time: 12 days	Grade Level: 9-12 Level/Track: Honors	Date Approved: 7/15/08	
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)**
ASSESSMENT ANCHORS M11.C.1.2 Recognize and/or apply properties of angles, triangles, and quadrilaterals. ACADEMIC STANDARDS 2.9.11 Geometry A. Construct geometric figures using dynamic geometry tools (e.g., Geometer's Sketchpad, Cabri Geometre).	► What special angle pairs are formed when a transversal intersects two coplanar lines and how do the angles compare when the coplanar lines are parallel? ● Student will be able to identify the special angle pairs formed when a transversal intersects two coplanar lines. ● Student will be able to apply the corresponding angles postulate and theorems about parallel lines. ● Student will be able to use a transversal to prove that lines are parallel. ► What special relationship do the interior angles of a triangle have and how does the construction of a parallel line impact the proof of this relationship? Also, how does this relationship correspond to the relationship of the interior angles of other polygons? ● Student will be able to apply the Triangle Interior Angle Theorem and the	► The student will prove the alternate and consecutive interior angle theorems, and the alternate exterior angle theorem and use these theorems in appropriate situations to find angle measures or prove lines are parallel. ► Enrichment Activity: The student will construct parallel and perpendicular lines using only a straightedge and compass. ► The student will classify triangles and other polygons by their angle measures and side lengths. ► The student will prove the angles of a triangle total 180 and the Triangle Exterior Angle Theorem. ► The student will divide polygons into triangles from one vertex to discover the formula used to determine the interior and exterior angles	► Graded homework ► Classroom observation and/or participation ►Quiz ►Test

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	Triangle Exterior Angle Theorem. ● Student will be able to derive and apply the formulas to find the interior and exterior angles of polygons.	sums in a polygon. ►The student will analyze various diagrams to determine missing side lengths and angle measures.	