

**Argenta-Oreana High School**  
**Formal Geometry**  
**Textbook: Geometry Prentice Hall, 2007**

Date Semester	IL Lrning Stnds	IL Assmnt Stnds	Unit and/or Essential Question Content and/or Skills	Assessment and/or Products
<b>Semester I</b>  August September	7. A. 7. A. 4b 8. A. 4b 9. A 9. B 9. B. 4	7.11.03 8.11.04 9.11.06 9.11.07 9.11.09 9.11.10 9.11.17	Chapter 1: Tools of Geometry <ul style="list-style-type: none"> <li>▪ Patterns/Inductive Reasoning</li> <li>▪ Drawings, nets and other models</li> <li>• Undefined terms <i>point, line and plane</i></li> <li>• Draw representation of points, lines and planes (Collinear points, coplanar points, parallel &amp; skew lines)</li> <li>• Symbolic notation for point, line, segment, ray, distance</li> <li>• Addition of segments and angles</li> <li>• Measure segments and angles                Use ruler (both English and Metric measures) and protractor.</li> <li>• Postulates and theorems for points, lines and planes.</li> <li>• Basic constructions (compass and straightedge)</li> <li>• Coordinate plane – Distance formula &amp; Midpoint formula</li> <li>• Perimeter, Area &amp; Circumference – Squares, Rectangles, &amp; Circles</li> </ul>	Homework  Worksheets  Quizzes/Chapter Test
September October	8. D. 3a 9. B. 4 9. C. 4b, 9. C. 4c	6.11.05 8.11.21 9.11.17 9.11.18 10.11.03	Chapter 2: Reasoning and Proof <ul style="list-style-type: none"> <li>• Conditional statements - Identify and write in if-then form</li> <li>• Hypothesis, conclusion, converse, inverse and contrapositive – identify and write</li> <li>• Counterexamples</li> <li>• Biconditional statements</li> <li>• Algebraic properties</li> <li>• Congruence properties</li> <li>• Define, draw representations and use theorems for:                Vertical angles, perpendicular lines, supplementary angles, complementary angles</li> </ul>	Homework  Worksheets  Quizzes/Chapter Test

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			<ul style="list-style-type: none"> <li>• Plan and write two column proofs</li> </ul>	
October November	9. A 9. B 9. B. 4 9. C. 4c	8.11.12 8.11.13 9.11.04 9.11.05 9.11.17	Chapter 3: Perpendicular & Parallel Lines <ul style="list-style-type: none"> <li>• Vocabulary for two lines intersected by (a) transversal(s)               <ul style="list-style-type: none"> <li>Alternate interior and alternate exterior angles</li> <li>corresponding angles</li> <li>same-side interior angles</li> </ul> </li> <li>• Parallel lines and angle relationships (congruent/not congruent and parallel/not parallel)</li> <li>• Triangles               <ul style="list-style-type: none"> <li>Classify by sides and angles</li> <li>Sum of all angle measures</li> <li>Exterior angle equals sum of two remote exterior angles</li> <li>Possible lengths of the three sides of a triangle</li> </ul> </li> <li>• Polygons- Convex, non-convex and regular               <ul style="list-style-type: none"> <li>Sum of interior angles</li> <li>Sum of exterior angles</li> </ul> </li> <li>• Lines in the Coordinate Plane               <ul style="list-style-type: none"> <li>Slope, writing equations of lines, graphing lines.</li> <li>Slopes of parallel and perpendicular lines</li> <li>Constructing parallel and perpendicular lines</li> </ul> </li> </ul>	Homework  Graphing calculator activities for investigation  Worksheets  Quizzes/Chapter Test
November December	9. A 9. B. 4	9.11.05 9.11.13 9.11.16 9.11.17	Chapter 4: Congruent Triangles <ul style="list-style-type: none"> <li>• Corresponding parts of congruent figures CPCTC</li> <li>• Congruent triangles methods:               <ul style="list-style-type: none"> <li>SSS – Side, side, side</li> <li>SAS – Side, angle, side</li> <li>ASA – Angle, side, angle</li> </ul> </li> <li>• Isosceles &amp; Equilateral Triangles – Vocabulary &amp; Properties</li> <li>• Congruence in right triangles - HL</li> </ul>	Homework  Worksheets  Quizzes/Chapter Test

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Semester II January	9. C 9. C. 4b 9. C. 4c	9.11.17	Chapter 5: Relationships Within Triangle <ul style="list-style-type: none"> <li>• Triangles Midsegments, bisectors, points of concurrency</li> <li>• Inequalities in triangles</li> <li>• Inverses, contrapositives</li> </ul>	Homework  Construct the centroid of any type of triangle using cardboard triangle  Worksheets  Quizzes/Chapter Test
January	9. A 9. B 9. B. 4 9. C. 4c	9.11.04 9.11.05 9.11.09 9.11.17	Chapter 6: Quadrilaterals <ul style="list-style-type: none"> <li>• Classify quadrilaterals</li> <li>• Define parallelogram and its properties</li> <li>• Proving a quadrilateral a parallelogram</li> <li>• Special parallelograms</li> <li>• Trapezoid &amp; kites</li> <li>• Placing figures in the coordinate plane</li> </ul>	Homework  Graphing calculator activities  Worksheets  Quizzes/Chapter Test
February	6. D 6. D. 4 9. B. 4 9. C. 4c	6.11.17 9.11.05 9.11.12 9.11.16 9.11.17	Chapter 7: Similarity <ul style="list-style-type: none"> <li>• Ratio and proportion</li> <li>• Similar polygons</li> <li>• AA~, SAS ~, SSS~</li> <li>• Right Triangle Similarity</li> <li>• Proportions in Triangles</li> </ul>	Homework  Enlarge cartoon or famous painting  Worksheets  Quizzes/Chapter Test
March	9. A 9. D 9. D.4	9.11.01 9.11.04 9.11.19	Chapter 8: Right Triangles and Trigonometry <ul style="list-style-type: none"> <li>• Pythagorean Theorem and its converse</li> </ul>	Homework  Graphing Calculator activities

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		9.11.20 9.11.22	<ul style="list-style-type: none"> <li>• 45-45-90 and 30-60-90 Triangles</li> <li>• Sine, Cosine, and Tangent Ratio</li> <li>• Angles of Elevation and Depression</li> </ul>	Worksheets  Quizzes/Chapter Test
	9. A 9. A 4b	9.11.02 9.11.03	Chapter 9: Transformations (Optional) <ul style="list-style-type: none"> <li>• Translations</li> <li>• Reflections</li> <li>• Rotations</li> <li>• Symmetry</li> <li>• Dilations</li> <li>• Compositions of Reflections</li> <li>• Tessellations</li> </ul>	Homework  Tessellation activity  Tiling patterns  Kaleidoscope designs  Worksheets  Quizzes/Chapter Test
March April	7. A. 4b 9. A 9. D 10. C	7.11.03 7.11.05 7.11.06 9.11.10 10.11.09	Chapter 10: Area <ul style="list-style-type: none"> <li>• Area of Parallelograms, Triangles, rhombuses, trapezoids, kites and regular polygons.</li> <li>• Perimeter and area of similar figures</li> <li>• Circles and arcs</li> <li>• Area formulas for circles and sectors</li> <li>• Geometric Probability</li> </ul>	Homework  Hands on investigations  Graphing Calculator  Worksheets  Quizzes/Chapter Test
April May	7. A. 4b	7.11.03 7.11.05 7.11.06	Chapter 11: Surface Area and Volume <ul style="list-style-type: none"> <li>• Space figures and cross sections</li> <li>• Surface areas of prisms, cylinders, pyramids and cones</li> </ul>	Homework  Hands on investigations

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			<ul style="list-style-type: none"> <li>• Volume of prisms, cylinders, pyramids and cones</li> <li>• Surface area and volume of spheres</li> <li>• Area and volume of similar solids</li> </ul>	Graphing Calculator Worksheets Quizzes/Chapter Test
May	9. A	8.11.20 9.11.09 9.11.10	Chapter 12: Circles <ul style="list-style-type: none"> <li>• Tangent lines</li> <li>• Chords and Arcs</li> <li>• Inscribed angles</li> <li>• Angle Measures and Segment lengths</li> <li>• Circles in the Coordinate Plane</li> <li>• Locus: A set of points</li> </ul>	Homework Graphing Calculator Quizzes/Chapter Test