**Honors Geometry**

**FINAL Exam Outline**

**Chapter 5**

Midsegment of a triangle (5.1)

Coordinate proof (5.1)

Perpendicular bisector, Perpendicular Bisector Theorem and converse, point of concurrency, circumcenter (5.2)

Angle bisector, Angle Bisector Theorem and converse, incenter (5.3)

Median, centroid and theorem (5.4)

Altitude, orthocenter and theorem (5.4)

Relationship between sides of one triangle and included angle and sides of another triangle and included angle (5.5)

Triangle Inequality Theorem (5.5)

Hinge Theorem and converse (5.6)

Indirect Proof, setting up (5.6)

**Chapter 6**

Ratio – writing and simplifying (6.1)

Proportion – comparing and solving, cross product (6.1)

Geometric Mean (6.1)

Using proportions to find missing pieces of triangles (6.2)

Similar polygons – rules (6.3)

Scale factor and finding a missing piece of a polygon using scale factor (6.3)

Writing similarity statements (6.3)

AA Similarity Postulate (6.4)

SSS and SAS Similarity Theorems (6.5)

Triangle Proportionality Theorem and converse (6.6)

Parallel lines and transversals and proportionality (6.6)

Angle bisector and proportionality (6.6)

**Chapter 7**

The Pythagorean Theorem (7.1)

The Converse of the Pythagorean Theorem (7.2)

Classifying a triangle by its angles using the Pythagorean Theorem (7.2)

Altitude in a right triangle (7.3)

Geometric Mean Theorems (7.3)

45°-45°-90° and 30°-60°-90° triangles (7.4)

Tangent ratio − using to find missing pieces of a right triangle (7.5)

Sine and Cosine ratios − using to find missing pieces of a right triangle (7.6)

Solving right triangles – finding all missing pieces (7.7)

**Chapter 8**

Parallelograms − definition and properties (8.2)

Proving a quadrilateral is a parallelogram (8.3)

Special parallelograms – rhombus, rectangle, square (8.4)

Trapezoid and kite – parts and theorems (8.5)

**Chapter 10**

Circles – parts and special lines, segments, rays (10.1)

Tangents and radius, two tangents to same circle (10.1)

Classifying arcs and finding arc measure (10.2)

Central angles (10.2)

Arc Addition Postulate (10.2)

Congruent circles and congruent arcs (10.2)

Properties of chords in relationship to each other (10.3)

Inscribed angles and intercepted arcs (10.4)

Polygons inscribed in a circle and circles circumscribed about a polygon (10.4)

Right triangles and quadrilateral inscribed in a circle (10.4)

Tangents and secants and angle relationships with circles (10.5)

Chords, tangents, and secant segments inside and outside the circle (10.6)

**Chapter 11**

Area of a triangle, rectangle, square, parallelogram (11.1)

Area of a rhombus, kite, trapezoid (11.2)

Area and perimeter of similar figures (11.3)

Circumference, radius, diameter (11.4)

Arc length (11.4)

Area of a circle (11.5)

Area of a sector (11.5)

**Chapter 12**

Solids – polyhedron and parts (12.1)

Types of solids (12.1)

**\*Note – Chapter 11 was broken up: sections 11.1 and 11.2 with Chapter 8, 11.3 with Chapter 6, 11.4 and 11.5 with Chapter 10.**

**TESTS and Quizzes as study guides:**

TEST – Chapter 5 sections 5.1 – 5.6

TEST – Chapter 6 with 11.3

TEST − Chapter 7 sections 7.1 – 7.3

TEST – Chapter 7 sections 7.4 – 7.7

TEST – Chapter 8 with 11.1 and 11.2

TEST – Chapter 10 with 11.4 and 11.5

Quiz – 5.1 – 5.3

Quiz – 6.1, 6.2

Quiz – 7.4

Quiz – Circle parts 10.1

Quiz – Solids