

Geometry Major Topics

1 – Tools of Geometry

1.1 Segment Lengths & Midpoints

1.2 Angle Measures & Bisectors

1.3 Representing & Describing Transformations

2 – Reasoning and Proof

2.1 Inductive Reasoning

2.2 Conditional Statements

2.3 Deductive Reasoning

2.4 Using Postulates and Diagrams

2.5 Reasoning Using Properties of Algebra

2.6 Proving Statements about Segments

2.7 Proving Statements about Angles

3 – Lines and Angles

3.1 Parallel Lines & Transversals

3.2 Proving Lines are Parallel

3.3 Perpendicular Lines

3.4 Writing Equations of Parallel & Perpendicular Lines

4 – Triangle Congruence Criteria/ Applications of Triangle Congruence

4.1 Applying Triangle Sum Properties

4.2 Congruence & Triangles

4.3 SSS Congruence

4.4 SAS, HL Congruence

4.5 ASA, AAS Congruence

4.6 Using Congruent Triangles

4.7 Using Isosceles & Equilateral Triangles

5 – Special Segments in Triangles

5.1 Midsegment Theorem

5.2 Perpendicular Bisectors

5.3 Angle Bisectors

- 5.4 Medians & Altitudes**
- 5.5 Triangle Inequalities**
- 5.6 Hinge Theorem**

6 – Similarity of Triangles

- 6.1 Ratios, Proportions, & Geometric Means**
- 6.2 Proportions to Solve Geometric Problems**
- 6.3 Similar Polygons**
- 6.4 AA Similarity**
- 6.5 SSS, SAS Similarity**
- 6.6 Proportionality Theorems**
- 6.7 Similarity Proportions**

7 – Trigonometry with Right Triangles

- 7.1 & 7.2 (combo section) Pythagorean Theorem & Converse**
- 7.3 Similar Right Triangles**
- 7.4 Special Right Triangles**
- 7.5 & 7.6 (combo section) Sine, Cosine, & Tangent**
- 7.7 Solving Right Triangles**

8 – Properties of Quadrilaterals

- 8.1 Angle Measures in Polygons**
- 8.2 Properties of Parallelograms**
- 8.3 Show Quadrilaterals are Parallelograms**
- 8.4 Rhombuses, Rectangles, & Squares**
- 8.5 Kites & Trapezoids**
- 8.6 Identify Special Quadrilaterals**

9- Transformations (covered throughout previous chapters)

10 - Angles and Segments in Circles

- 10.1 Central & Inscribed Angles**
- 10.2 Angles Inscribed in Quadrilaterals & Inscribed Polygons**
- 10.3 Properties of Chords**
- 10.4 Tangents & Secants to Circles**
- 10.5 Angles in Circles**
- 10.6 Segment Lengths in Circles**

10.7 Equations of Circles

11 – Arc Length and Sector Area (if time)

11.1 Circumference & Area

11.2 Arc Length & Radians

11.3 Sector Area

12 – Surface Area and Volume of Solids (if time)

12.1 Volumes of Prisms & Cylinders

12.2 Volumes of Pyramids & Cones

12.3 Surface Areas