ACP Blueprint
Geometry Pre-AP
Semester 1, 2016-2017

SE Descriptions	TEKS/SE	No. of Items	% of Test
1. **Coordinate and transformation geometry.** Derive and use the distance, slope, and midpoint formulas to verify geometric relationships, including congruence of segments and parallelism or perpendicularity of pairs of lines.	G.2B	2	7%
2. **Coordinate and transformational geometry.** Determine an equation of a line parallel or perpendicular to a given line that passes through a given point.	G.2C	2	7%
3. **Logical argument and constructions.** Identify and determine the validity of the converse, inverse, and contrapositive of a conditional statement and recognize the connection between a biconditional statement and a true conditional statement with a true converse.	G.4B	2	7%
4. **Logical argument and constructions.** Verify that a conjecture is false using a counterexample.	G.4C	1	4%
5. **Logical argument and constructions.** Compare geometric relationships between Euclidean and spherical geometries, including parallel lines and the sum of the angles in a triangle.	G.4D	1	4%
6. **Logical argument and constructions**. Investigate patterns to make conjectures about geometric relationships, including angles formed by parallel lines cut by a transversal, criteria required for triangle congruence, special segments of triangles, diagonals of quadrilaterals, interior and exterior angles of polygons, ~~and special segments and angles of circles~~ choosing from a variety of tools.	G.5A	2	7%
7. **Logical argument and constructions.** Use the constructions of congruent segments, congruent angles, angle bisectors, and perpendicular bisectors to make conjectures about geometric relationships.	G.5C	2	7%
8. **Logical argument and constructions.** Verify the Triangle Inequality theorem using constructions and apply the theorem to solve problems.	G.5D	1	4%
9. **Proof and congruence.** Verify theorems about angles formed by the intersection of lines and line segments, including vertical angles, and angles formed by parallel lines cut by a transversal and prove equidistance between the endpoints of a segment and points on its perpendicular bisector and apply these relationships to solve problems.	G.6A	3	11%
10. **Proof and congruence.** Prove two triangles are congruent by applying the Side-Angle-Side, Angle-Side-Angle, Side-Side-Side, Angle-Angle-Side, and Hypotenuse-Leg congruence conditions.	G.6B	2	7%
11. **Proof and congruence.** Apply the definition of congruence, in terms of rigid transformations, to identify congruent figures and their corresponding sides and angles.	G.6C	1	4%

SE Descriptions	TEKS/SE	No. of Items	% of Test
12. Proof and congruence. Verify theorems about the relationships in triangles, including proof of the Pythagorean Theorem, the sum of interior angles, base angles of isosceles triangles, midsegments, and medians, and apply these relationships to solve problems.	G.6D	3	11%
13. Similarity, proof, and trigonometry. Apply the definition of similarity in terms of a dilation to identify similar figures and their proportional sides and the congruent corresponding angles.	G.7A	2	7%
14. Similarity, proof, and trigonometry. Prove theorems about similar triangles, including the Triangle Proportionality theorem, and apply these theorems to solve problems.	G.8A	2	7%
15. Similarity, proof, and trigonometry. Identify and apply the relationships that exist when an altitude is drawn to the hypotenuse of a right triangle, including the geometric mean, to solve problems.	G.8B	2	7%
Total		28	

Note: ~~Strikethrough~~ text indicates specified content not measured for this assessment.

A copy of a Geometry Mathematics Reference Chart is printed in each booklet.

This assessment is consumable.

A graphing calculator must be provided for each student.

CAS calculators are ___NOT___ permitted.

Percentages are rounded to the nearest whole number.

Mathematical Process Standards	
Description:	**SE**
1. Apply mathematics to problems arising in everyday life, society, and the workplace.	1A
2. Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.	1B
3. Select tools, including real objects, manipulative, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.	1C
4. Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	1D
5. Create and use representations to organize, record, and communicate mathematical ideas.	1E
6. Analyze mathematical relationships to connect and communicate mathematical ideas.	1F
7. Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	1G