Test Code	Year	Form
1201	15	6
Last Revision Date: 05/22/2015		

ACP Blueprint
Geometry Pre-AP
Semester 2, 2015–2016

SE Descriptions	TEKS/SE	No. of Items	% of Test
1. **Coordinate and transformational geometry.** Describe and perform transformations of figures in a plane using coordinate notation.	G.3A	1	4%
2. **Coordinate and transformational geometry.** Determine the image or pre-image of a given two-dimensional figure under a composition of rigid transformations, a composition of non-rigid transformations, and a composition of both, including dilations where the center can be any point in the plane.	G.3.B	1	4%
3. **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	1	4%
4. **Similarity, proof, and trigonometry.** Apply the Angle-Angle criterion to verify similar triangles and apply the proportionality of the corresponding sides to solve problems.	G.7B	2	7%
5. **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%
6. **Similarity, proof, and trigonometry.** Determine the lengths of sides and measures of angles in a right triangle by applying the trigonometric ratios sine, cosine, and tangent to solve problems.	G.9A	2	7%
7. **Similarity, proof, and trigonometry.** Apply the relationships in special right triangles 30°-60°-90° and 45°-45°-90° and the Pythagorean theorem, including Pythagorean triples, to solve problems.	G.9B	2	7%
8. **Two- dimensional and three- dimensional figures.** Identify the shapes of two-dimensional cross-sections of prisms, pyramids, cylinders, cones, and spheres and identify three-dimensional objects generated by rotations of two-dimensional shapes.	G.10A	2	7%
9. **Two- dimensional and three- dimensional figures.** Determine and describe how changes in the linear dimensions of a shape affect its perimeter, area, surface area, or volume, including proportional and non-proportional dimensional change.	G.10B	2	7%
10. **Two- dimensional and three- dimensional figures.** Apply the formula for the area of regular polygons to solve problems using appropriate units of measure.	G.11A	2	7%

SE Descriptions	TEKS/SE	No. of Items	% of Test
11. Two- dimensional and three- dimensional figures. Apply the formulas for the total and lateral surface area of three-dimensional figures, including prisms, pyramids, cones, cylinders, spheres, and composite figures, to solve problems using appropriate units of measure.	G.11C	2	7%
12. Two- dimensional and three- dimensional figures. Apply the formulas for the volume of three-dimensional figures, including prisms, pyramids, cones, cylinders, spheres, and composite figures, to solve problems using appropriate units of measure.	G.11D	2	7%
13. Circles. Apply theorems about circles, including relationships among angles, radii, chords, tangents, and secants, to solve non-contextual problems**.**	G.12A	1	4%
14. Circle. Apply the proportional relationship between the measure of an arc length of a circle and the circumference of the circle to solve problems.	G.12B	1	4%
15. Circles. Apply the proportional relationship between the measure of the area of a sector of a circle and the area of the circle to solve problems.	G.12C	1	4%
16. Circles. Show that the equation of a circle with center at the origin and radius r is $x^2 + y^2 = r^2$ and determine the equation for the graph of a circle with radius r and center (h, k), $(x - h)^2 + (y - k)^2 = r^2$.	G.12E	2	7%
17. Probability. Determine probabilities based on area to solve contextual problems.	G.13B	1	4%
18. Probabiltiy. Identify whether two events are independent and compute the probability of the two events occurring together with or without replacement.	G.13C	1	4%
Total		28	

Note: A copy of a Geometry Mathematics Reference Chart is printed in each booklet.
This assessment is consumable.
Graphing calculators are permitted on this assessment.
CAS calculators are **NOT** permitted.
Percentages are rounded to the nearest whole number.

Mathematical Process Standards	
Description:	**SE**
Apply mathematics to problems arising in everyday life, society, and the workplace.	1A
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
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
Communicate mathematical ideas, reasoning, and t heir implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.	1D
Create and use representations to organize, record, and communicate mathematical ideas.	1E
Analyze mathematical relationships to connect and communicate mathematical ideas.	1F
Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.	1G