

Georgia High School Geometry Curriculum Mapping

Geometry Performance Standard	Boardworks High School Geometry presentation
Mathematics I	
MM1G1. Students will investigate properties of geometric figures in the coordinate plane.	
a. Determine the distance between two points.	The distance between two points
b. Determine the distance between a point and a line.	–
c. Determine the midpoint of a segment.	The midpoint of a line segment
d. Understand the distance formula as an application of the Pythagorean theorem.	The distance between two points
e. Use the coordinate plane to investigate properties of and verify conjecture related to triangles and quadrilaterals.	–
MM1G2. Students will understand and use the language of mathematical argument and justification.	
a. Use conjecture, inductive reasoning, deductive reasoning, counterexamples, and indirect proof as appropriate.	–
b. Understand and use the relationships among a statement and its converse, inverse, and contrapositive.	–
MM1G3. Students will discover, prove, and apply properties of triangles, quadrilaterals, and other polygons.	
a. Determine the sum of interior and exterior angles in a polygon.	Interior and exterior angles of polygons
b. Understand and use the triangle inequality, the side-angle inequality, and the exterior-angle inequality.	The Triangle Inequality Theorem
c. Understand and use congruence postulates and theorems for triangles (SSS, SAS, ASA, AAS, HL).	Congruence and similarity
d. Understand, use, and prove properties of and relationships among special quadrilaterals: parallelogram, rectangle, rhombus, square, trapezoid, and kite.	Quadrilaterals
e. Find and use points of concurrency in triangles: incenter, orthocenter, circumcenter, and centroid.	–
Mathematics II	
MM2G1. Students will identify and use special right triangles.	
a. Determine the lengths of sides of 30°-60°-90° triangles.	Special right triangles
b. Determine the lengths of sides of 45°-45°-90° triangles.	Special right triangles

MM2G2. Students will define and apply sine, cosine, and tangent ratios to right triangles.	
a. Discover the relationship of the trigonometric ratios for similar triangles.	Trigonometry summary The cosine ratio The sine ratio The tangent ratio
b. Explain the relationship between the trigonometric ratios of complementary angles.	Trig value functions on the unit circle The cosine ratio The sine ratio The tangent ratio
c. Solve application problems using the trigonometric ratios.	Applying trigonometry
MM2G3. Students will understand the properties of circles.	
a. Understand and use properties of chords, tangents, and secants as an application of triangle similarity.	–
b. Understand and use properties of central, inscribed, and related angles	Parts of a circle Angles in a circle Using circle properties
c. Use the properties of circles to solve problems involving the length of an arc and the area of a sector.	The length of an arc The area of a sector
d. Justify measurements and relationships in circles using geometric and algebraic properties.	Angles in a circle The area of a circle The area of a sector The length of an arc
MM2G4. Students will find and compare the measures of spheres.	
a. Use and apply surface area and volume of a sphere.	Cylinders, cones and spheres
b. Determine the effect on surface area and volume of changing the radius or diameter of a sphere.	Cylinders, cones and spheres