

Maine High School Geometry  
Content Standards Mapping

Geometry	Boardworks High School Geometry presentation
<b>Geometric Figures</b>	
<b>1 Students justify statements about polygons and solve problems.</b>	
a. Use the properties of triangles to prove theorems about figures and relationships among figures.	Triangles Calculating sides of a triangle Finding the height of triangles using the the Pythagorean Theorem Right triangles Opposite and adjacent sides Identifying right triangles Similar right triangles The area of a triangle The Triangle Inequality Theorem
b. Solve for missing dimensions based on congruence and similarity.	Congruence and similarity Using congruence and similarity
c. Use the Pythagorean Theorem in situations where right triangles are created by adding segments to figures.	Finding the height of triangles using the Pythagorean Theorem
d. Use the distance formula.	Finding the distance between two points using the Pythagorean Theorem
<b>2 Students justify statements about circles and solve problems.</b>	
a. Use the concepts of central and inscribed angles to solve problems and justify statements.	Angles in a circle Parts of a circle
b. Use the relationships among arc length and circumference, and areas of circles and sectors to solve problems and justify statements.	The length of an arc Radius and circumference The area of a circle The area of a sector
<b>3 Students understand and use basic ideas of trigonometry.</b>	

a. Identify and find the value of trigonometric ratios for angles in right triangles.	Applying trigonometry Right triangles The cosine ratio The sine ratio The tangent ratio Trigonometry summary
b. Use trigonometry to solve for missing lengths in right triangles.	Applying trigonometry Opposite and adjacent sides
c. Use inverse trigonometric functions to find missing angles in right triangles.	Inverses in trigonometry
<b>Geometric Measurement</b>	
4 Students find the surface area and volume of three-dimensional objects.	
a. Find the volume and surface area of three-dimensional figures including cones and spheres.	Cylinders, cones and spheres Surface area of rectangular prisms Volume of right rectangular prisms Pyramids Prisms
b. Determine the effect of changes in linear dimensions on the volume and surface area of similar and other three-dimensional figures.	Cylinders, cones and spheres Surface area of rectangular prisms Volume of right rectangular prisms Pyramids Prisms Radius and circumference