

Illinois High School Geometry
Content Standards Mapping

Illinois Goal 9 Standard	Boardworks High School Geometry presentation
A. Demonstrate and apply geometric concepts involving points, lines, planes and space.	
9.A.4a Construct a model of a three-dimensional figure from a two-dimensional pattern.	Cylinders, cones and spheres Prisms Pyramids
9.A.4b Make perspective drawings, tessellations and scale drawings, with and without the use of technology.	Tessellation Dilation The center of dilation
[Late High School] 9.A.5 Use geometric figures and their properties to solve problems in the arts, the physical and life sciences and the building trades, with and without the use of technology.	Applying trigonometry Area formulas and calculations Combining transformations Interior and exterior polygons Pyramids The Pythagorean Theorem Using construction Using angles Using area formulas Using congruence and similarity Using the Pythagorean Theorem to solve problems in context Using length, area and volume formulas Using polygons
B. Identify, describe, classify and compare relationships using points, lines, planes and solids.	

<p>9.B.4 Recognize and apply relationships within and among geometric figures.</p>	<p>Applying trigonometry Cylinders, cones and spheres Edges of rectangular prisms Prisms Pyramids Surface area of rectangular prisms Volume of right rectangular prisms Parts of a circle Polygons Quadrilaterals Radius and circumference Angles in a circle The area of a circle The area of a sector The area of a triangle The length of an arc Triangles Internal and external angles of polygons Right triangles Special right triangles</p>
<p>[Late High School] 9.B.5 Construct and use two- and three-dimensional models of objects that have practical applications (e.g., blueprints, topo-graphical maps, scale models).</p>	<p>–</p>
<p>C. Construct convincing arguments and proofs to solve problems.</p>	<p></p>

9.C.4a Construct and test logical arguments for geometric situations using technology where appropriate.	Congruence and similarity Angles in a circle Identifying right triangles Using area formulas Using circle properties Using construction Using congruence and similarity Interior and exterior angles of polygons Parts of a circle The Pythagorean Theorem The Triangle Inequality Theorem Pythagorean triples Triangles
9.C.4b Construct and communicate convincing arguments for geometric situations.	Congruence and similarity Angles in a circle Identifying right triangles Using area formulas Using circle properties Using construction Using congruence and similarity Interior and exterior angles of polygons Parts of a circle The Pythagorean Theorem The Triangle Inequality Theorem Pythagorean triples Triangles
9.C.4c Develop and communicate mathematical proofs (e.g., two-column, paragraph, indirect) and counter examples for geometric statements.	–
[Late High School] 9.C.5a Perform and describe an original investigation of a geometric problem and verify the analysis and conclusions to an audience.	–
9.C.5b Apply physical models, graphs, coordinate systems, networks and vectors to develop solutions in applied contexts (e.g., bus routing, areas of irregular shapes, describing forces and other physical quantities).	Translation Rotation Combining transformations
D. Use trigonometric ratios and circular functions to solve problems.	

<p>9.D.4 Analyze and solve problems involving triangles (e.g., distances which cannot be measured directly) using trigonometric ratios.</p>	<p>Trig value functions on the unit circle Right triangles The sine ratio The cosine ratio The tangent ratio Applying trigonometry Trigonometry summary</p>
<p>[Late High School] 9.D.5 Analyze and solve problems involving periodic patterns (e.g., sound waves, tide variations) using circular functions and communicate results orally and in writing.</p>	<p>–</p>