

North Carolina

Curriculum Matrix for Mathematics (2003 Revisions to Standard Course of Study)

North Carolina Mathematics Strands/Goals/Objectives Grade 7	Common Core Mathematics Domains/Standards Grade 7	National Essential Skills Study (NESS) National Rankings Rank		NESS	EOG	Priority
2.01 Draw objects to scale and use scale drawings to solve problems.	<u>Geometry</u> Draw, construct, and describe geometrical figures and describe the relationship between them. 1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale. 2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	M3	Use proportional reasoning to solve real-world problems.	H	M	H
		M13	Use the technique of dimensional analysis to convert units of measure (e.g., kilometers/hour to meters/minute) and apply ratios in real-world situations (e.g., scale drawings).			
2.02 Solve problems involving volume and surface area of cylinders, prisms, and composite shapes.	<u>Geometry</u> Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. 6. Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	M26	Know the classification and properties of three-dimensional figures (prisms, rectangular solids, pyramids, right circular cylinders, cones, and spheres) and be able to compute the volume and surface area of common solids.	M	M	M
3.02 Identify, define, and describe similar and congruent polygons with respect to angle measures, length of sides, and proportionality of sides.	<i>There is no North Carolina Mathematics Objective-Common Core alignment.</i>	M13	Use the technique of dimensional analysis to convert units of measure (e.g., kilometers/hour to meters/minute) and apply ratios in real-world situations (e.g., scale drawings).	H	H	H
		M15	Classify angles by measure (acute, right, obtuse, and straight) and understand angle relationships (supplementary, complementary, and vertical).			
		M54	Apply transformations (reflection, rotation, translation, and dilation) of 2-dimensional figures graphically to interpret, analyze, and illustrate the concepts of congruency, similarity, and symmetry.			