

8 th Grade		
Geometry and Measurement		
GLE	Key Content & Skills	Common Benchmark Assessments
M:G&M:8:1 No standard at this grade	Types of figures <i>-Angles: adjacent, vertical, straight, or angle relationships formed by two nonparallel lines cut by a transversal</i> Attributes or properties <i>-Relationships resulting from two or three intersecting lines or two parallel lines cut by a transversal to solve problems</i>	
M:G&M:8:2 Applies the Pythagorean Theorem to find a missing side of a right triangle, or in problem solving situations.	Applications of theorems <i>-Applies the Pythagorean Theorem to find a missing side of a right triangle, or in problem solving situations</i>	Item 21, Page 9
M:G&M:8:3 No standard at this grade.	Types of 3 dimensional shapes <i>-Rectangular prisms, triangular prisms, cylinders, pyramids, cones, or spheres</i> Attributes and properties <i>-Shape of bases, number of lateral faces, number of bases, number of edges, or number of vertices)</i>	
M:G&M:8:4 No standard at this grade	Transformations <i>-Reflections, translations, and rotations</i> <i>-Solving problems on a coordinate plane involving reflections, translations, or rotations</i>	
M:G&M:8:5 Applies concepts of similarity to determine the impact of scaling on the volume or surface area of three-dimensional figures when linear dimensions are multiplied by a constant factor; to determine the length of sides of similar triangles, or to solve problems involving growth and rate.	How to demonstrate conceptual understanding of similarity <i>-Determine the length of sides of similar triangles</i> <i>-Solve problems involving growth and rate</i> Connection to Proportionality <i>-Determine the impact of scaling on the volume or surface area of 3D figures when linear dimensions are multiplied by a constant factor</i>	Item 13, Page 4 V19.0
M:G&M:8:6 Demonstrates conceptual understanding of surface area or volume by solving problems involving surface area and volume of rectangular prisms, triangular prisms, cylinders, pyramids, or cones. Expresses all measures using appropriate units.	Measures <i>-Using appropriate units</i> Volume <i>-Rectangular prisms, triangular prisms, cylinders, pyramids, or cones</i> Surface area <i>-Rectangular prisms, triangular prisms, cylinders, pyramids, or cones</i>	41 Page 10, 31 Page 11

Highlighted Boxes are Power Standards

Bolded Boxes are Standards tested on NECAP

Italics indicate Teaching Component from prior grade; should continue to be reinforced.

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Geometry and Measurement		
GLE	Key Content & Skills	Common Benchmark Assessments
M:G&M:8:7 No standard at this grade	<p>Types of measure and units -Inch (to 1/16 in.); Foot; Centimeter (to 1/10 cm); Meter (to 1/100m); Yard: Mile (use in scale and rate questions); Kilometer (use in scale and rate questions) Hour (to 1 minute); Day; Year C and F (to one degree) Quart (to one ounce); Gallon; Pint; Liter Kilogram; Gram (to 1/10 g) Pound (to ounce)</p> <p>Equivalencies -12 inches in 1 foot; 100 centimeters in 1 meter; 3 feet in 1 yard; 36 inches in 1 yard; 10 millimeters in 1 centimeter; 1000 millimeters in 1 meter -24 hours in 1 day; 7 days in 1 week; 365 days in 1 year; 60 seconds in 1 minute; 60 minutes in 1 hour -32 ounces in 1 quart; 4 quarts in 1 gallon; 2 pints in 1 quart; 1000 milliliters in 1 liter; 16 ounces in 1 pound -360° in 1 circle; 90° in 1 right angle</p>	
M:G&M:8:8 No standard at this grade	<i>Related to time and telling time Gr 1</i>	
M:G&M:8:9 No standard at this grade	<p>How to demonstrate understanding of location and position with connections to coordinate plane -<i>Interpreting and giving directions between locations¹</i> -<i>Plotting points in the four quadrants²</i> -<i>Determining horizontal and vertical distances between points Gr. 5</i></p> <p>Contexts to Emphasize - <i>On a map or coordinate grid (all four quadrants) Gr. 5</i></p> <p>Examples of Activities -<i>Games, mapping, identifying the vertices/polygons as they are reflected rotated, and translated</i></p>	30 Page 14
M:G&M:8:10 No standard at this grade	<p>Strategies or processes -<i>Sketching; Draws nets and uses the nets as a technique for finding surface area</i></p> <p>Types of 2 Dimensional shapes -<i>Three-dimensional solid</i></p> <p>Types of 3 Dimensional shapes -<i>Rectangular and triangular prisms, cylinders and pyramids</i></p>	

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