

Unit 6: Geometric Modeling

CCSS	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
<p>Arguments for volume formula (G.GMD.1) Use volume formulas (G.GMD.3)</p>		<p>Explain the formulas for <b>all of the following</b></p> <ul style="list-style-type: none"> <li>• volume of a cylinder</li> <li>• volume of a pyramid</li> <li>• volume of a cone</li> </ul> <p>using dissection arguments, cross sections of three dimensional objects, and Cavalieri’s principle Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems in context of a situation.</p>	<p>Explain the formulas for <b>2 of the following</b></p> <ul style="list-style-type: none"> <li>• volume of a cylinder</li> <li>• volume of a pyramid</li> <li>• volume of a cone</li> </ul> <p>using dissection arguments, cross sections of three dimensional objects, and Cavalieri’s principle Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems <b>in context of a situation.</b></p>	<p>Explain the formulas for <b>1 of the following</b></p> <ul style="list-style-type: none"> <li>• volume of a cylinder</li> <li>• volume of a pyramid</li> <li>• volume of a cone</li> </ul> <p>using dissection arguments, cross sections of three dimensional objects, and Cavalieri’s principle <b>Use volume formulas</b> for cylinders, pyramids, cones, and spheres to solve problems</p>	
<p>Perimeter and area from coordinates (G.GPE.7)</p>	<p>Can extend thinking beyond the standard, including tasks that may involve one of the following:</p> <ul style="list-style-type: none"> <li>• Designing</li> <li>• Connecting</li> <li>• Synthesizing</li> <li>• Applying</li> <li>• Justifying</li> <li>• Critiquing</li> <li>• Analyzing</li> <li>• Creating</li> <li>• Proving</li> </ul>	<p>Using coordinate geometry and the Pythagorean, slope, distance and midpoint formulas to do <b>both</b> of the following</p> <ul style="list-style-type: none"> <li>• find the perimeter of polygons.</li> <li>• find the area of <b>polygons using</b> triangles and rectangles</li> </ul>	<p>Using coordinate geometry and the Pythagorean, slope, distance and midpoint formulas to do <b>both</b> of the following</p> <ul style="list-style-type: none"> <li>• find the perimeter of polygons.</li> </ul> <p>find the area of triangles and rectangles</p>	<p>Using coordinate geometry and the Pythagorean, slope, distance and midpoint formulas to do <b>one</b> of the following</p> <ul style="list-style-type: none"> <li>• find the perimeter of polygons.</li> </ul> <p>find the area of triangles and rectangles</p>	<p>Little evidence of reasoning or application to solve the problem</p> <p>Does not meet the criteria in a level 1</p>
<p>Model objects (G.MG.1) Use density to model situations (G.MG.2) Use geometry to design (G.MG.3)</p>		<p><i>Describe objects in context of a situation using geometric shapes and use them to solve problems related to</i></p> <ul style="list-style-type: none"> <li>• <u>density based</u> on area and volume</li> </ul> <p>Design problems (i.e. maximum volume, minimum cost, etc.)</p>	<p>Describe objects in context of a situation using geometric shapes and use them to solve problems related to</p> <ul style="list-style-type: none"> <li>• area and volume <u>design problems</u></li> </ul>	<p>Describe objects in context of a situation using geometric shapes and use them to solve problems related to</p> <ul style="list-style-type: none"> <li>• <u>area and volume</u></li> </ul>	
<p>2-D to 3-D (G.GMD.4)</p>		<p>Identify the shapes of two-dimensional cross sections of three-dimensional objects <b>and</b> identify three-dimensional objects generated by rotations of two-dimensional objects.</p>	<p>Identify the shapes of two-dimensional cross sections of three-dimensional objects <b>or</b> identify three-dimensional objects generated by rotations of two-dimensional objects.</p>		