|  |  |  |  |
| --- | --- | --- | --- |
| **LG #** | **G09** | **Standards:** | **G-MG.1.1, G-MG.1.2, G-MG.1.3** |
| **4.0** | **In addition to Score 3.0, in-depth inferences and applications that go beyond instruction to the standard.****The student will be able to:*** Design a composite structure to meet constraints and optimization requirements.

**No major errors or omissions regarding the score 4.0 content.** |
| **3.5** | In addition to 3.0, in-depth inferences and applications with partial success. |
| **3.0** | **Students will be able to apply geometric concepts in modeling situations.****The student will be able to:*** [Use geometric shapes, their measures, and their properties to describe objects](http://www.cpalms.org/Public/PreviewResource/Preview/72106) (e.g., [modeling a tree trunk](http://www.cpalms.org/Public/PreviewResource/Preview/72122) or a human torso as a cylinder). ([G-MG.1.1](http://www.cpalms.org/Public/PreviewResource/Preview/72148))
* [Apply concepts of density based on area in modeling situations (e.g., persons per square mile). (G-MG.1.2)](http://www.cpalms.org/Public/PreviewResource/Preview/72102)
* [Apply concepts of density based on volume in modeling situations (e.g., BTUs per cubic foot). (G-MG.1.2)](http://www.cpalms.org/Public/PreviewResource/Preview/72112)
* [Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).](http://www.cpalms.org/Public/PreviewResource/Preview/72141) ([G-MG.1.3](http://www.cpalms.org/Public/PreviewResource/Preview/72161))

**No major errors or omissions regarding the score 3.0 content (simple or complex).** |
| **2.5** | No major errors or omissions regarding 2.0 content and partial knowledge of 3.0 content. |
| **2.0** | **The student recognizes and describes specific terminology such as:**

|  |  |  |
| --- | --- | --- |
| * Density
 | * Constraints
 | * Area
 |
| * Volume
 | * Modeling
 | * Ratio
 |
| * Minimize
 | * Maximize
 |   |

**The student will be able to:*** [Use geometric shapes to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder). (G-MG.1.1)](http://www.cpalms.org/Public/PreviewResource/Preview/72100)
* Calculate density based on area using a formula. (G-MG.1.2)
* Calculate density based on volume using a formula. (G-MG.1.2)
* Identify relevant geometric models for use in solving a design problem. (G-MG.1.3)
 |
| **1.5** | Partial knowledge of the score 2.0 content, but major errors or omissions regarding score 3.0 content. |
| **1.0** | With partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. |
| **0.5** | With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes. |
| **0.0** | Even with help, no understanding or skill is demonstrated |