# 8th Grade Module 5 – Examples of Functions from Geometry

| | 4 - Mastery | 3 - Proficient | 2 - Basic | 1 - Below Basic | 0 - No Evidence |
|---|---|---|---|---|---|
| Topic A (8.F.1, 8.F.2, 8.F.3) | Meets **all** of the criteria in a Level 3<br><br>**Completes tasks including synthesis and evaluation** | Identify functions from **all** of the following **and justify your reasoning**:<br>• graphs<br>• tables<br>• ordered pairs<br><br>**Compare** properties of a function represented in different ways (algebraically, graphically, tables, or verbal descriptions)<br><br>**Explain** if a function is linear or non-linear | Identify functions from 2 of the following **and justify your reasoning**:<br>• graphs<br>• tables<br>• ordered pairs<br><br>**Identify properties of a function represented in different ways (algebraically, graphically, tables, or verbal descriptions)**<br><br>**Given a function, identify** if a function is linear or non-linear | **Identify functions from 2** of the following:<br>• graphs<br>• tables<br>• ordered pairs<br><br>**Given a graph, identify** if a function is linear or non-linear | **Shows no evidence of proficiency**<br><br>Little evidence of reasoning or application to solve the problem. |
| Topic B (8.G.9) | Meets **all** of the criteria in a Level 3<br><br>**Completes tasks including synthesis and evaluation** | Use the volume formulas for all of the following to solve **real world** problems:<br>• cones<br>• cylinders<br>• spheres | Use the volume formulas for **all** of the following to solve mathematical problems:<br>• cones<br>• cylinders<br>• spheres | Use the volume formulas for **two** of the following to solve **mathematical problems**:<br>• cones<br>• cylinders<br>• spheres | **Shows no evidence of proficiency**<br><br>Little evidence of reasoning or application to solve the problem. |

8.F.A.1 - Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. Represent a function as a mapping from one set onto another. (Function notation is not required.)

8.F.A.2 - Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).

8.F.A.3 - Interpret the equation y = mx + b as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

8.G.C.9 - Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.