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| Algebra AStandard 1: Quantities and Relationships  |
| **I can analyze functions by their properties and graphs.** |
| Proficiency Levels | Description |
| **Exceeds****Proficiency****Students can apply, analyze and evaluate the concepts and skills related to the learning target.**20% Weight on Assessments | **1.1--Independent and dependent quantities*** I can interpret the points on a graph in respect to the scenario.
* I can "read" a graph to determine increasing, decreasing and constant values and infer the rate of change (slope).

**1.2--Analyzing and sorting graphs*** I can explain why the vertical line test can be used to determine if a graph is function.

**1.3--Recognizing functions and their graphs*** I can identify the equation for the following functions citing a piece of evidence to support my answer: linear, exponential, quadratic, and linear absolute value.

**1.4--Recognizing Function by characteristics*** Given a general form of a function, I can create an equation and sketch a graph that meets specific criteria:

 --function/not function --linear, exponential, quadratic, absolute value function --discrete/continuous --increasing/decrease/constant --maximum/minimum |
| **Meets****Proficiency****Students can identify and recall foundation knowledge that relates to the learning target.**80% Weight on Assessments | **1.1-- Independent and dependent quantities*** I can identify the independent and dependent quantities in a given scenario.
* I can label each axis with the correct quantity and units.
* I can match a graph to its scenario.

**1.2-- Analyzing and sorting graphs*** I can identify the (+) and (-) regions of the four quadrants of a graph.
* I can determine the set of coordinates that make up a graph.
* I can identify the difference between a discrete and continuous function.
* I can use the vertical line test to determine if a graph is a function.

**1.3-- Recognizing functions and their graphs*** I can identify the properties of linear, exponential, quadratic, linear absolute value and linear piecewise functions.
* I can identify the graphs of linear, exponential, quadratic, and linear absolute value.
* I can graph a function using a t-chart.

**1.4-- Recognizing functions by characteristics*** I can classify a function family based on a given property.
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| **Developing****Proficiency****NP** | Student inconsistently demonstrates the learning target or needs to work on improving calculation errors that impedes a student's ability to meet proficiency. |
| **Proficiency Grade Conversion****Students will be assessed on their holistic understanding of the learning target. The meets and exceeds levels are weighted to emphasize the relative importance of foundational vs. application knowledge and skills.**  |
| Raw Score | >7 | >8 | >9 |
| Letter Grade | C | B | A |
| **Key Terms** |
| Dependent Quantity | Independent Quantity | x-axis | y-axis | Rate of change |
| Continuous Graph | Vertical Line Test | Function | Decreasing Function | Constant Function |
| Discrete Graph | Linear Absolute Value Functions | Increasing Function | Linear Function | Exponential Function |
| Quadratic Function | Absolute Minimum | Absolute Maximum | f(x) = $\left|x+b\right|+ c$ | f(x) = ax2 + bx + c |
| f(x) = mx + b | f(x) = a $∙b^{x}$ |  |