

Algebra A

Standard 1: Quantities and Relationships

I can analyze functions by their properties and graphs.

Proficiency Levels	Description
<p style="text-align: center;">Exceeds Proficiency</p> <p>Students can apply, analyze and evaluate the concepts and skills related to the learning target.</p> <p>20% Weight on Assessments</p>	<p>1.1--Independent and dependent quantities</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can interpret the points on a graph in respect to the scenario. <input type="checkbox"/> I can "read" a graph to determine increasing, decreasing and constant values and infer the rate of change (slope). <p>1.2--Analyzing and sorting graphs</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can explain why the vertical line test can be used to determine if a graph is function. <p>1.3--Recognizing functions and their graphs</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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. <p>1.4--Recognizing Function by characteristics</p> <ul style="list-style-type: none"> <input type="checkbox"/> Given a general form of a function, I can create an equation and sketch a graph that meets specific criteria: <ul style="list-style-type: none"> --function/not function --linear, exponential, quadratic, absolute value function --discrete/continuous --increasing/decrease/constant --maximum/minimum
<p style="text-align: center;">Meets Proficiency</p> <p>Students can identify and recall foundation knowledge that relates to the learning target.</p> <p>80% Weight on Assessments</p>	<p>1.1-- Independent and dependent quantities</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can identify the independent and dependent quantities in a given scenario. <input type="checkbox"/> I can label each axis with the correct quantity and units. <input type="checkbox"/> I can match a graph to its scenario. <p>1.2-- Analyzing and sorting graphs</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can identify the (+) and (-) regions of the four quadrants of a graph. <input type="checkbox"/> I can determine the set of coordinates that make up a graph. <input type="checkbox"/> I can identify the difference between a discrete and continuous function. <input type="checkbox"/> I can use the vertical line test to determine if a graph is a function. <p>1.3-- Recognizing functions and their graphs</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can identify the properties of linear, exponential, quadratic, linear absolute value and linear piecewise functions. <input type="checkbox"/> I can identify the graphs of linear, exponential, quadratic, and linear absolute value. <input type="checkbox"/> I can graph a function using a t-chart. <p>1.4-- Recognizing functions by characteristics</p> <ul style="list-style-type: none"> <input type="checkbox"/> I can classify a function family based on a given property.
<p style="text-align: center;">Developing Proficiency NP</p>	<p>Student inconsistently demonstrates the learning target or needs to work on improving calculation errors that impedes a student's ability to meet proficiency.</p>

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	$f(x) = x + b + c$	$f(x) = ax^2 + bx + c$
$f(x) = mx + b$	$f(x) = a \cdot b^x$			