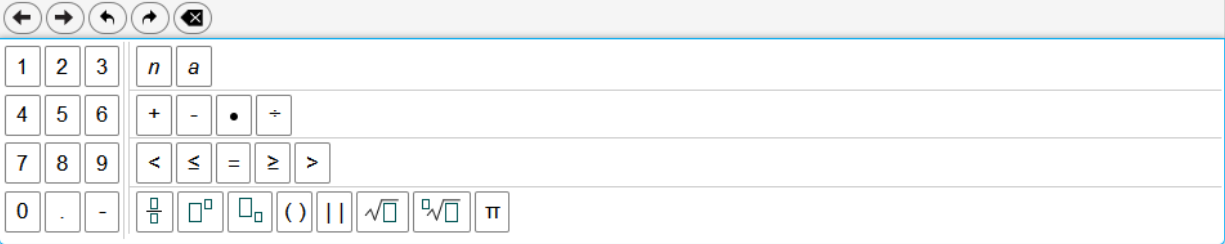


<p>MAFS.912.F-LE.1.2</p> <p>Also assesses MAFS.912.F-BF.1.1</p> <p>Also assesses MAFS.912.F-IF.1.3</p>	<p>Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (including reading these from a table).</p> <p>Write a function that describes a relationship between two quantities.</p> <ol style="list-style-type: none"> Determine an explicit expression, a recursive process, or steps for calculation from a context. Combine standard function types using arithmetic operations. <i>For example, build a function that models the temperature of a cooling body by adding a constant function to a decaying exponential, and relate these functions to the model.</i> Compose functions. <i>For example, if $T(y)$ is the temperature in the atmosphere as a function of height, and $h(t)$ is the height of a weather balloon as a function of time, then $T(h(t))$ is the temperature at the location of the weather balloon as a function of time.</i> <p>Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. <i>For example, the Fibonacci sequence is defined recursively by $f(0) = f(1) = 1$, $f(n+1) = f(n) + f(n-1)$ for $n \geq 1$.</i></p>
<p>Item Types</p>	<p>Editing Task Choice – May require choosing an expression, function, or definition of a variable.</p> <p>Equation Editor – May require creating a value, creating an expression, creating a function, or showing steps for a calculation.</p> <p>GRID – May require ordering of steps for a calculation from a context.</p> <p>Hot Text – May require dragging and dropping values or expressions to construct a function.</p> <p>Multiple Choice – May require selecting a choice from a set of possible choices.</p> <p>Multiselect – May require choosing equivalent functions.</p> <p>Open Response – May require explaining and interpreting a resulting function.</p> <p>Table Item – May require completing missing cells in a table.</p>
<p>Clarifications</p>	<p>Students will write a linear function, an arithmetic sequence, an exponential function, or a geometric sequence when given a graph that models a real-world context.</p> <p>Students will write a linear function, an arithmetic sequence, an exponential function, or a geometric sequence when given a verbal description of a real-world context.</p>

	<p>Students will write a linear function, an arithmetic sequence, an exponential function, or a geometric sequence when given a table of values or a set of ordered pairs that model a real-world context.</p> <p>Students will write an explicit function, define a recursive process, or complete a table of calculations that can be used to mathematically define a real-world context.</p> <p>Students will write a function that combines functions using arithmetic operations and relate the result to the context of the problem.</p> <p>Students will write a function to model a real-world context by composing functions and the information within the context.</p> <p>Students will write a recursive definition for a sequence that is presented as a sequence, a graph, or a table.</p>
<p>Assessment Limits</p>	<p>In items where the student must write a function using arithmetic operations or by composing functions, the student should have to generate the new function only.</p> <p>In items where the student constructs an exponential function, a geometric sequence, or a recursive definition from input-output pairs, at least two sets of pairs must have consecutive inputs.</p> <p>In items that require the student to construct arithmetic or geometric sequences, the real-world context should be discrete.</p> <p>In items that require the student to construct a linear or exponential function, the real-world context should be continuous.</p>
<p>Stimulus Attributes</p>	<p>Items should be set in a real-world context.</p> <p>Items may use function notation.</p> <p>In items where the student builds a function using arithmetic operations or by composition, the functions may be given using verbal descriptions, function notation or as equations.</p>
<p>Response Attributes</p>	<p>For F-BF.1.1b and c, the student may be asked to find a value.</p> <p>For F-LE.1.2 and F-BF.1.1, items may require the student to apply the basic modeling cycle.</p> <p>In items where the student writes a recursive formula, the student may be expected to give both parts of the formula.</p> <p>The student may be required to determine equivalent recursive formulas or functions.</p> <p>Items may require the student to choose an appropriate level of accuracy.</p>

Algebra 1 EOC Item Specifications
 Florida Standards Assessments

	<p>Items may require the student to choose and interpret the scale in a graph.</p> <p>Items may require the student to choose and interpret units.</p>
Calculator	Neutral

Sample Item	Item Type
Equation Editor	
<p>Chantel drew a picture of her dog on a piece of paper that is 12 centimeters long. She used a copy machine to enlarge her drawing. She used the 115% setting to make each new copy. She then used each new copy to generate the next copy, using the same copier setting.</p> <p>Enter a recursive formula that will give the length of each new copy.</p> <p>$a_1 =$ <input type="text"/></p> <p>$a_n =$ <input type="text"/></p>	
 <p>The image shows a toolbar for an equation editor. It includes navigation buttons (back, forward, undo, redo, delete) and a grid of mathematical symbols and constants: <ul style="list-style-type: none"> Row 1: 1, 2, 3, n, a Row 2: 4, 5, 6, $+$, $-$, \cdot, \div Row 3: 7, 8, 9, $<$, \leq, $=$, \geq, $>$ Row 4: 0, $.$, $-$, fraction template, power template, root template, parentheses, absolute value, square root, nth root, and π. </p>	