

## High School Weekly Lesson Plan Template–Unit #5/6

Unit 5/6	Course Name: Algebra 1 C&C	Notes	
Day 1	<p><b>Standards: A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</b></p> <p>LT: I can identify the geometric sequence, and write the explicit formula and recursive formula.</p> <p>SC:</p> <ul style="list-style-type: none"> <li>● I can write the explicit formula.</li> <li>● I can write the recursive formula.</li> </ul> <p>Lesson/Activity:</p> <p>Resources:</p>		
Day 2	<p><b>Standards: A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</b></p> <p>LT: I can identify the geometric sequence, and write the explicit formula and recursive formula.</p> <p>SC:</p> <ul style="list-style-type: none"> <li>● I can write the explicit formula.</li> <li>● I can write the recursive formula.</li> </ul> <p>Lesson/Activity:</p> <p>Resources:</p>		
Day 3	<p><b>A.PAR.8: Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p>		

	<ul style="list-style-type: none"> <li>• A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> </ul> <p>LT: I can solve exponential equations. (Like bases)</p> <p>SC:</p> <ul style="list-style-type: none"> <li>• I know the rules of exponents when multiplying.</li> <li>• I know the rules of exponents when dividing.</li> <li>• I know the rules of exponents when raising a power to a power.</li> </ul>		
<b>Day 4</b>	<p><b>A.PAR.8: Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p> <ul style="list-style-type: none"> <li>• A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> </ul> <p>LT: I can solve exponential equations.</p> <p>SC:</p> <ul style="list-style-type: none"> <li>• know the rules of exponents when multiplying.</li> <li>• I know the rules of exponents when dividing.</li> <li>• I know the rules of exponents when raising a power to a power.</li> </ul>		
<b>Day 5</b>	<p><b>A.PAR.8: Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p> <ul style="list-style-type: none"> <li>• A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> </ul> <p>LT: I can solve exponential equations.</p> <p>SC:</p>		

	<ul style="list-style-type: none"> <li>● I know the rules of exponents when multiplying.</li> <li>● I know the rules of exponents when dividing.</li> <li>● I know the rules of exponents when raising a power to a power.</li> </ul>		
<b>Day 6</b>	<p><b>A.PAR.8: Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p> <ul style="list-style-type: none"> <li>● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> </ul> <p>LT: I can solve exponential equations.</p> <p>SC:</p> <ul style="list-style-type: none"> <li>● know the rules of exponents when multiplying.</li> <li>● I know the rules of exponents when dividing.</li> <li>● I know the rules of exponents when raising a power to a power.</li> </ul>		
<b>Day 7</b>	<b>QUIZ</b>		
<b>Day 8</b>	<p><b>Standards:A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1: Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> <li>● A.FGR.9.3: Identify the effect on the graph generated by an</li> </ul>		

	<p>exponential function when replacing <math>f(x)</math> with <math>f(x) + k</math>, and <math>k</math> <math>f(x)</math>, for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs.</p> <ul style="list-style-type: none"> <li>● A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</li> <li>● A.FGR.9.5: Compare characteristics of two functions each represented in a different way.</li> </ul> <p>LT: I can graph and analyze an exponential function.  SC:</p> <ul style="list-style-type: none"> <li>● I can understand <math>b</math> impacts the shape of the graph when <math>b &gt; 1</math> and when <math>0 &lt; b &lt; 1</math>, graph of an exponential function <math>f</math> given by <math>f(x) = a \cdot bx</math>.</li> </ul> <p>Lesson/Activity:  Resources:</p>		
<p><b>Day 9</b></p>	<p><b>Standards:A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1: Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> <li>● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing <math>f(x)</math> with <math>f(x) + k</math>, and <math>k</math></li> </ul>		

	<p><math>f(x)</math>, for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs.</p> <ul style="list-style-type: none"> <li>● A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</li> <li>● A.FGR.9.5: Compare characteristics of two functions each represented in a different way.</li> </ul> <p><b>LT:</b> I can identify and interpret the key features of exponential functions represented in tables and graphs.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can identify the x-intercepts of a function.</li> <li>● I can identify the y-intercept of an exponential function.</li> <li>● I can identify the intervals of increase and decrease of a function.</li> <li>● I can identify the domain and range of a exponential function</li> <li>● I can identify the end behavior of the exponential function</li> </ul>		
<p><b>Day 10</b></p>	<p><b>Standards:A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1: Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> <li>● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing <math>f(x)</math> with <math>f(x) + k</math>, and <math>k</math></li> </ul>		

	<p><math>f(x)</math>, for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs.</p> <ul style="list-style-type: none"> <li>● A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</li> <li>● A.FGR.9.5: Compare characteristics of two functions each represented in a different way.</li> </ul> <p><b>LT:</b> I can identify and interpret the key features of exponential functions represented in tables and graphs.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can identify the x-intercepts of a function.</li> <li>● I can identify the y-intercept of an exponential function.</li> <li>● I can identify the intervals of increase and decrease of a function.</li> <li>● I can identify the domain and range of a exponential function</li> <li>● I can identify the end behavior of the exponential function</li> </ul>		
<p><b>Day 11</b></p>	<p><b>Standards:A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1: Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> <li>● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing <math>f(x)</math> with <math>f(x) + k</math>, and <math>k</math></li> </ul>		

	<p><math>f(x)</math>, for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs.</p> <ul style="list-style-type: none"> <li>● A.FGR.9.4: Use mathematically applicable situations algebraically and graphically to build and interpret geometric sequences as functions whose domain is a subset of the integers.</li> <li>● A.FGR.9.5: Compare characteristics of two functions each represented in a different way.</li> </ul> <p><b>LT:</b> I can identify and interpret the key features of exponential functions represented in tables and graphs.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can identify the x-intercepts of a function.</li> <li>● I can identify the y-intercept of an exponential function.</li> <li>● I can identify the intervals of increase and decrease of a function.</li> <li>● I can identify the domain and range of a exponential function</li> <li>● I can identify the end behavior of the exponential function</li> </ul>		
<b>Day 12</b>	<p><b>LT:</b> Identify the effect on the graph generated by an exponential function when replacing <math>f(x)</math> with <math>f(x) + k</math>, and <math>k f(x)</math>, for specific values of <math>k</math> (both positive and negative); find the value of <math>k</math> given the graphs.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can translate an exponential up, down, left or right.</li> <li>● I can reflect a function</li> <li>● I can stretch and compress a function.</li> </ul>		
<b>Day 13</b>	<p><b>A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p>		

	<ul style="list-style-type: none"> <li>● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> <li>● A.PAR.8.3 - Create exponential equations in two variables to represent relationships between quantities, including in mathematically applicable situations; graph equations on coordinate axes with labels and scales.</li> </ul> <p><b>LT:</b> I can create exponential equations and use them to solve problems.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can create exponential functions to represent the relationship between two variables.</li> <li>● I can explore exponential phenomena</li> <li>● I can analyze exponential equations</li> </ul>		
<p><b>Day 14</b></p>	<p><b>A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p> <ul style="list-style-type: none"> <li>● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> <li>● A.PAR.8.3 - Create exponential equations in two variables to represent relationships between quantities, including in mathematically applicable situations; graph equations on coordinate axes with labels and scales.</li> </ul> <p><b>LT:</b> I can create exponential equations and use them to solve problems.</p>		

	<p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can create exponential functions to represent the relationship between two variables.</li> <li>● I can explore exponential phenomena</li> <li>● I can analyze exponential equations</li> </ul>		
<p><b>Day 15</b></p>	<p><b>A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.</b></p> <ul style="list-style-type: none"> <li>● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations.</li> <li>● A.PAR.8.3 - Create exponential equations in two variables to represent relationships between quantities, including in mathematically applicable situations; graph equations on coordinate axes with labels and scales.</li> </ul> <p><b>LT:</b> I can create exponential equations and use them to solve problems.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can create exponential functions to represent the relationship between two variables.</li> <li>● I can explore exponential phenomena</li> <li>● I can analyze exponential equations</li> </ul>		
<p><b>Day 16</b></p>	<p><b>A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph</b></p>		

	<p><b>serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1 Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2 Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> <li>● A.FGR.9.5 Compare characteristics of two functions each represented in a different way.</li> </ul> <p><b>LT:</b> I can compare and contrast linear, quadratic, and exponential functions.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can recognize the differences between the graphs of linear, quadratic, and exponential functions.</li> <li>● I can recognize the differences between the tables of linear, quadratic, and exponential functions.</li> <li>● I can recognize the differences between the equations of linear, quadratic, and exponential functions.</li> </ul>		
Day 17	<p><b>A.FGR.9: Construct and analyze the graph of an exponential function to explain a mathematically applicable situation for which the graph serves as a model; compare exponential with linear and quadratic functions.</b></p> <ul style="list-style-type: none"> <li>● A.FGR.9.1 Use function notation to build and evaluate exponential functions for inputs in their domains and interpret statements that use function notation in terms of a context.</li> <li>● A.FGR.9.2 Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.</li> </ul>		

	<ul style="list-style-type: none"> <li>● A.FGR.9.5 Compare characteristics of two functions each represented in a different way.</li> </ul> <p><b>LT:</b> I can compare and contrast linear, quadratic, and exponential functions.</p> <p><b>SC:</b></p> <ul style="list-style-type: none"> <li>● I can recognize the differences between the graphs of linear, quadratic, and exponential functions.</li> <li>● I can recognize the differences between the tables of linear, quadratic, and exponential functions.</li> <li>● I can recognize the differences between the equations of linear, quadratic, and exponential functions.</li> </ul>		
<b>Day 18</b>	Test Review		
<b>Day 19</b>	Test		