High School Weekly Lesson Plan Template–Unit 5/6

Unit 5/6	Course Name: Algebra 1 C&C	Notes	
Day 1	**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.** LT: I can identify the geometric sequence, and write the explicit formula and recursive formula. SC: ● I can write the explicit formula. ● I can write the recursive formula.		
Day 2	**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.** LT: I can identify the geometric sequence, and write the explicit formula and recursive formula. SC: ● I can write the explicit formula. ● I can write the recursive formula.		
Day 3	**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. ● 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. ● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations. ● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing f(x) with f(x) + k, and k f(x), for specific values of k (both positive and negative); find the value of k given the graphs. ● 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. ● A.FGR.9.5: Compare characteristics of two functions each represented in a different way. LT: I can graph and analyze an exponential function. SC: ● I can understand b impacts the shape of the graph when b > 1 and when 0 < b < 1,graph of an exponential function f given by f(x) = a • bx .		
Day 4	**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. ● 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. ● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations. ● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing f(x) with f(x) + k, and k f(x), for specific values of k (both positive and negative); find the value of k given the graphs. ● 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. ● A.FGR.9.5: Compare characteristics of two functions each represented in a different way. **LT**: I can identify and interpret the key features of exponential functions represented in tables and graphs. **SC:** ● I can identify the x-intercepts of a function. ● I can identify the y-intercept of an exponential function. ● I can identify the intervals of increase and decrease of a function. ● I can identify the domain and range of a exponential function ● I can identify the end behavior of the exponential function		
Day 5	**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. ● 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. ● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations. ● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing f(x) with f(x) + k, and k f(x), for specific values of k (both positive and negative); find the value of k given the graphs. ● 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. ● A.FGR.9.5: Compare characteristics of two functions each represented in a different way. **LT**: I can identify and interpret the key features of exponential functions represented in tables and graphs. **SC:** ● I can identify the x-intercepts of a function. ● I can identify the y-intercept of an exponential function. ● I can identify the intervals of increase and decrease of a function. ● I can identify the domain and range of a exponential function ● I can identify the end behavior of the exponential function		
Day 6	**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. ● 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. ● A.FGR.9.2: Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations. ● A.FGR.9.3: Identify the effect on the graph generated by an exponential function when replacing f(x) with f(x) + k, and k f(x), for specific values of k (both positive and negative); find the value of k given the graphs. ● 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. ● A.FGR.9.5: Compare characteristics of two functions each represented in a different way. **LT**: I can identify and interpret the key features of exponential functions represented in tables and graphs. **SC:** ● I can identify the x-intercepts of a function. ● I can identify the y-intercept of an exponential function. ● I can identify the intervals of increase and decrease of a function. ● I can identify the domain and range of a exponential function ● I can identify the end behavior of the exponential function		
Day 7	**LT**: Identify the effect on the graph generated by an exponential function when replacing f(x) with f(x) + k, and k f(x), for specific values of k (both positive and negative); find the value of k given the graphs.		

	SC: ● I can translate an exponential up, down, left or right. ● I can reflect a function ● I can stretch and compress a function.		
Day 8	**Quiz**		
Day 9	**A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.** ● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations. ● 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. **LT:** I can create exponential equations and use them to solve problems. **SC:** ● I can create exponential functions to represent the relationship between two variables. ● I can explore exponential phenomena ● I can analyze exponential equations		
Day 10	**A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential**		

	equations in mathematically applicable situations. ● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations. ● 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. **LT:** I can create exponential equations and use them to solve problems. **SC:** ● I can create exponential functions to represent the relationship between two variables. ● I can explore exponential phenomena ● I can analyze exponential equations		
Day 11	**A.PAR.8 Create and analyze exponential expressions and equations to represent and model real-life phenomena; solve exponential equations in mathematically applicable situations.** ● A.PAR.8.2 - Create exponential equations in one variable and use them to solve problems, including mathematically applicable situations. ● 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. **LT:** I can create exponential equations and use them to solve		

	problems. **SC:** ● I can create exponential functions to represent the relationship between two variables. ● I can explore exponential phenomena ● I can analyze exponential equations		
Day 12	Rate of Change (Linear, Quadratic, & Exponential) **LT:** I can find the rate of change of linear, quadratic, and exponential functions. **SC:** ● I can find the common difference or common ratio in a tabular data set. ● I can put the change in y over the change in x ● I can determine whether the rate of change is linear, quadratic, or exponential Lesson Activity: Resources:		
Day 13	**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.** ● 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. ● A.FGR.9.2 Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations.		

	● A.FGR.9.5 Compare characteristics of two functions each represented in a different way. **LT:** I can compare and contrast linear, quadratic, and exponential functions. **SC:** ● I can recognize the differences between the graphs of linear, quadratic, and exponential functions. ● I can recognize the differences between the tables of linear, quadratic, and exponential functions. ● I can recognize the differences between the equations of linear, quadratic, and exponential functions.		
Day 14	**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.** ● 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. ● A.FGR.9.2 Graph and analyze the key characteristics of simple exponential functions based on mathematically applicable situations. ● A.FGR.9.5 Compare characteristics of two functions each represented in a different way. **LT:** I can compare and contrast linear, quadratic, and exponential functions. **SC:** ● I can recognize the differences between the graphs of linear,		

	quadratic, and exponential functions. ● I can recognize the differences between the tables of linear, quadratic, and exponential functions. ● I can recognize the differences between the equations of linear, quadratic, and exponential functions.		
Day 15	Test Review		
Day 16	Test		