High School Weekly Lesson Plan Template–Unit 5/6

Unit 5/6	Course Name: Algebra 1 C&C	Notes	
Day 1-2	**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. Lesson/Activity: Introduction to Exponential Explorations. Avi and Benita 3 Act Task. Geometric Sequence Patterns.		
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 . Lesson/Activity: Reasoning About Exponential Graphs		
Days 4-5	**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 domain and range of an exponential function. Lesson/Activity: Graphing Functions, Writing Equations of Functions, Characteristics.		
Day 6	**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. Lesson/Activity: Transformations of Exponential Functions		

Day 7	**Quiz**		
Day 8-9	**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 Lesson Activity: Intervals of Increase/Decrease and End Behavior.		
Day 10-11	**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 Lesson Activity: Exponential Growth/Decay Problems		
Day 12	**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.9.5: Compare characteristics of two functions each represented in a different way. • **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 Lesson Activity: Average Rate of Change		
Day 13	Unit 5 Practice Test		
Day 14	**Unit 5 Test**		
Day 15-17	**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. Lesson Activity: Representing Linear and Exponential Growth		