**ARC Week at Glance**

**-Subject: Mathematics Course: Advance Algebra: Concepts & Connections Grade:** **10th – 12th Date: 9/29/2025**

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| **Standard(s):** AA.FGR.3.1 Find the inverse of exponential and logarithmic functions using equations, tables, and graphs, limiting the domain of inverses where necessary to maintain functionality, and prove by composition or verify by inspection that one function is the inverse of another.  AA.FGR.3.2 Analyze, graph, and compare exponential and logarithmic functions.  AA.FGR.3.3 Use the definition of a logarithm, logarithmic properties, and the inverse relationship between exponential and logarithmic functions to solve problems in context.  AA.FGR.3.4 Create exponential equations and use logarithms to solve contextual problems for which only one variable is unknown. AA.FGR.3.5 Create and interpret logarithmic equations in one variable and use them to solve problems.  **Assessment(s):  Quiz  Unit Test  Project  Lab  None** | | | |
|  | **Learning Target**  **(I am learning about…)** | **Success Criteria**  **(I can….)** | **Lesson/Activities of the Day** | **Assignments/Formative Assessment** |
| **Monday** | I am learning to find the inverse of exponential functions and logarithmic functions | I can create exponential growth and decay models and make inferences | * Teacher will review with students what is logarithmic functions, how they are used in the real world and how they relate to exponential functions. * Teacher will discuss how to convert a logarithmic function into an exponential function and an exponential function into a logarithmic function * Teacher will provide to the students guided practice over concept and students will be provided with classwork over converting logarithmic and exponential functions | Assignment over Converting Logarithmic and Exponential Functions |
| **Tuesday** | I am learning to find the inverse of exponential functions and logarithmic functions | I can create exponential growth and decay models and make inferences  I can create and make inferences from compound interest models | * Teacher will review with students what is logarithmic functions, how they are used in the real world and how they relate to exponential functions. * Teacher will discuss how to convert a logarithmic function into an exponential function and an exponential function into a logarithmic function * Teacher will provide to the students guided practice over concept and students will be provided with classwork over converting logarithmic and exponential functions | Assignment over Converting Logarithmic and Exponential Functions |
| **Wednesday** | I am learning to find the inverse of exponential functions and logarithmic functions  I am learning to use the graph of exponential and logarithmic functions to compare and find the inverse | I can create exponential growth and decay models and make inferences  I can create and make inferences from compound interest models  I can graph exponential functions and its transformations | * Teacher will discuss how to graph exponential and logarithmic functions * Teacher will discuss how to find the inverse of one or both using a table, a graph and the algebraic representation. * Teacher will compare with the students how the graphs of exponential functions and logarithmic functions compare to one another * Students will then investigate over Comparing Exponential and Logarithmic functions via graphs and tables | Investigation over logarithmic and exponential functions |
| **Thursday** | I am learning to find the inverse of exponential functions and logarithmic functions  I am learning to use the graph of exponential and logarithmic functions to compare and find the inverse | I can create exponential growth and decay models and make inferences  I can create and make inferences from compound interest models  I can graph exponential functions and its transformations | * Teacher will discuss how to graph exponential and logarithmic functions * Teacher will discuss how to find the inverse of one or both using a table, a graph and the algebraic representation. * Teacher will compare with the students how the graphs of exponential functions and logarithmic functions compare to one another * Students will then investigate over Comparing Exponential and Logarithmic functions via graphs and tables | Investigation over logarithmic and exponential functions |
| **Friday** | I am learning to find the inverse of exponential functions and logarithmic functions  I am learning to use the graph of exponential and logarithmic functions to compare and find the inverse | I can create exponential growth and decay models and make inferences  I can create and make inferences from compound interest models  I can graph exponential functions and its transformations | Assessment over Logarithmic and Exponential Functions 1 | Assessment over Logarithmic and Exponential Functions 1 |

**\*** Exit Ticket/Final Stretch Check  Electronic Tools  Dry Erase Boards – quick checks  Turn & Talk Discussion (verbal responses)  Teacher Observation – document Clipboard

Quick Write/Draw  Annotation  Extended Writing  Socratic Seminar  Jigsaw  Thinking Maps  Worked Examples  Other :\_\_\_\_\_\_\_\_\_\_\_