Unit Guide

Exponential Functions

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This curriculum unit focuses on developing a clear understanding of the characteristics of exponential functions by examining their algebraic properties with respect to function operations.. The unit begins with the basic definition of a function. Students create a foldable in which they describe a function and its properties. The unit then reviews the basic properties of exponents and the properties of multiplication of real numbers to include the associativity and commutativity. Students then look at a series of basic exponential functions in which they describe their characteristics such as increasing or decreasing, y intercept, domain, range and asymptotic behavior. Once the students have been introduced to the basic exponential function, this unit moves to examining the behavior of an exponential when it is multiplied by a constant value. Finally, the students will use the properties of real numbers to look at the product of two exponential functions. The culminating activity for this unit is a card sort, where students must match an exponential equation, to a graph, to a table and to a description, where some of the information has been left blank. By the completion of this unit, students will have been exposed to an in depth look at the characteristics and properties of exponential functions.