| Video Title | Grade Level | Domain (Topic) | Cluster | Standard |
| :---: | :---: | :---: | :---: | :---: |
| Exponential Growth | HS Functions | Interpreting Functions | Analyze functions using different representations | CCSS.MATH.CONTENT.HSF.IF.C. 7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. |
|  |  |  |  | CCSS.MATH.CONTENT.HSF.IF.C.7.E Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. |
|  | HS Functions | Interpreting Functions | Analyze functions using different representations | CCSS.MATH.CONTENT.HSF.IF.C. 8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. |
|  |  |  |  | CCSS.MATH.CONTENT.HSF.IF.C.8.B interpret expressions for exponential functions. For example, identify percent rate of change in functions such as $\mathbf{y}=$ (1.02)t, $y=(0.97) t, y=(1.01) 12 t, y=(1.2) t / 10$, and classify them as representing exponential growth or decay. |
|  | HS Functions | Linear, Quadratic, and Exponential Models | Construct and compare linear, quadratic, and exponential models and solve problems | CCSS.MATH.CONTENT.HSF.LE.A. 1 Distinguish between situations that can be modeled with linear functions and with exponential functions. |
|  |  |  |  | CCSS.MATH.CONTENT.HSF.LE.A.1.C Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval relative to another. |
|  | HS Functions | Linear, Quadratic, and Exponential Models | Construct and compare linear, quadratic, and exponential models and solve problems | CCSS.MATH.CONTENT.HSF.LE.A. 2 Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). |
|  | HS Functions | Linear, Quadratic, and Exponential Models | Interpret expressions for functions in terms of the situation they model | CCSS.MATH.CONTENT.HSF.LE.B. 5 Interpret the parameters in a linear or exponential function in terms of a context. |

