Instructional Flow — Unit 5 — Exponential Functions

Section 5.1	• introduce growth and decay factors • application of growth and decay factors to percent increases and percent decreases
Section 5.2	• application of consecutive growth and/or decay factors to solve real-world problems involving percent changes
IG Section: Investigations of Exponential Functions	• investigations of exponential functions in real-world, engaging contexts
Section 5.3	• exploration of exponential functions numerically, algebraically, and graphically • application of growth and decay factors to exponential functions • exploration of real-world application of negative exponents in exponential functions
Section 5.4	• exploration of exponential functions numerically, algebraically, and graphically • analysis of patterns of change in data that represents exponential functions • classification of exponential growth or decay given a data table • investigation of exponential functions defined by $y = ab^x$, where $b > 0$ and $b \neq 1$ • analysis of half-life and doubling time of exponential functions in context
Section 5.5	• differentiation between growth and decay rates and growth and decay factors • investigation of exponential functions defined by $P = P_0\left(1 \pm r\right)^t$
Section 5.6	• exponential regression models • analysis of exponential regression models
IG Section: Exploration of Exponential Functions	• exploration of exponential functions defined by $y = a \cdot b^{x-h} + k$, where $a \neq 0$, $b > 0$, and $b \neq 1$ • investigations of transformations of exponential functions including dilations, reflections, and translations represented numerically, algebraically, and graphically • investigations of the horizontal asymptote