appreciation: increase in the value of an asset over time

compounding period: time over which interest is calculated and paid on an investment or loan

compound interest: interest earned on both the original amount that was invested and any interest that has accumulated over time

curve of best fit: a curve that best approximates the trend on a scatter plot

depreciation: decrease in the value of an asset over time

exponential function: a function of the form $y = a(b)^x$ where x is any real number and $a \neq 0$, $b > 0$, $b \neq 1$

> Example: $y = 3(5)^x$ is an exponential function.

exponential decay function: an exponential function whose y-values decrease as one moves from left to right along the x-axis

> Example: $y = 2\left(\dfrac{1}{3}\right)^x$ is an exponential decay function. For an exponential function of the form $y = a(b)^x$, exponential decay occurs when $a > 0$ and $0 < b < 1$.

exponential growth function: an exponential function whose y-values increase as one moves from left to right along the x-axis

> Example: $y = 4(2)^x$ is an exponential growth function. For an exponential function of the form $y = a(b)^x$, exponential growth occurs when $a > 0$ and $b > 1$.

future value: amount that an investment will be worth after a specified amount of time

half-life exponential function: a function of the form $y = a\left(\dfrac{1}{2}\right)^{\frac{x}{h}}$ where the base is $\dfrac{1}{2}$, $a \neq 0$, and $h \neq 0$

   Example: $y = 6\left(\dfrac{1}{2}\right)^{\frac{2}{3}}$ is a half-life exponential function. The value of h is called the half-life because it corresponds to the point on the graph of the function where the value of the function is half its initial value, a.

principal: an original amount of money that is invested or borrowed