

Lesson 5-12 → What it Means When
"Annual Interest
Compounds Monthly"

Chase Savings is a savings bank
It's "Rate" is 0.01% and
"Interest is compounded and credited
monthly!"

If you deposit \$500, how
much do you have after x months?

$$f(x) = 500 \left(1 + \frac{0.0001}{12} \right)^x$$

So.... 0.01% is NOT 1%

And you don't get 0.01% every month

You only get $\frac{0.01\%}{12}$ every month

According to Google, The 2022 average bank savings rate is 0.33%

According to Google, The average yearly return of the S&P 500 is 10.331% over the last 50 years as of November 2022

Some emerging market & tech funds have paid up towards 15%

\$500 for 5 years (or 60 months)

$$\text{Chase} \rightarrow 500 \left(1 + \frac{0.0001}{12}\right)^{60} = 500.03$$

$$\text{Average Bank} \rightarrow 500 \left(1 + \frac{0.0033}{12}\right)^{60} = 508.32$$

$$\text{S\&P 500} \rightarrow 500 (1 + 0.10331)^5 = 817.44$$