Lecture 7

Tuesday, September 17, 2024 10:59 PM

Last time, I said there are two types of interest: static interest and compound interest. I didn't use the correct the terminology. Please make a correction: "simple interest" instead of "static interest".

Interest is the extra amount generated by a chunk a money. Compound interest is the interest of interest. Let P be the original amount of money (called starting principal), and i is the interest per period (year, quarter, month, day,…) Then the amount P will grow into

$$A = P(1+i)^N$$

where A is called the accumulated balance.

Example: P = 1000, $i = 1\%$ and the compounding period is 1 year. After 10 years, how much does P grow into? If the compounding period is 1 month, how much does P grow into?

More examples on the worksheet.

Annual percentage yield (APY) is the relative change of the principal per year.

$$APY = \frac{A_2 - A_1}{A_1}$$