

2/16/2021

Amortization Tables

Is a table of simple interest calculations that find the interest in each period (payment cycle), and then repeats until the end of the loan/saving time of investment.

See Excel

Deposit \$100 in an account earning 6% compounded monthly. And we leave it there for three years. What is the balance in the account? How much interest was earned?

Suppose we want to borrow \$15,000 for a used car. And we can afford \$600 payments per month. How long will it take to pay off the loan if we are charged 7% interest compounded monthly.

Effective Rate

How does compounding effect the interest earned at the end of the year?

Pretend you are depositing a \$1.00 into the account. Calculate the interest at the end of 1 year and subtract off the deposit. This is the equivalent of the effective rate.

$$Rate_{eff} = \left(1 + \frac{r}{n}\right)^n - 1$$

What is the effective rate of 7% compounded monthly? What is the effective rate of 6.9% compounded daily?

$$Rate_{eff} = \left(1 + \frac{0.07}{12}\right)^{12} - 1$$
$$Rate_{eff} = \left(1 + \frac{0.069}{365}\right)^{365} - 1$$

Which one earns more interest?

See Excel

Exam #1 material ends here.

If you can, install the Data Analysis Tool Pack by our next meeting in two weeks.