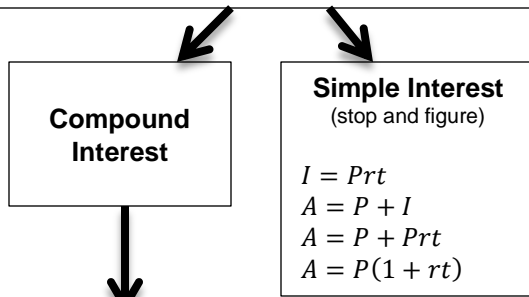


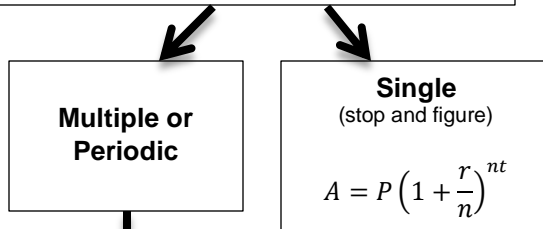


FINANCE MATH

1. What type of interest is mentioned?



2. How many deposits or payments?



3. When is the "big money" needed?

NOW – You make a large purchase in the present and pay it off over time.

$$P = \frac{pmt \left(1 - \left(1 + \frac{r}{n}\right)^{-nt}\right)}{\left(\frac{r}{n}\right)}$$

LATER – You will be saving up to have a large amount in the future.

$$A = \frac{pmt \left(\left(1 + \frac{r}{n}\right)^{nt} - 1\right)}{\left(\frac{r}{n}\right)}$$



FINANCE MATH

A final **A**mount (principal + interest)
P **P**rinciple (initial or beginning amount)
r interest **r**ate (in decimal form)
n # of compounding periods per year
t **t**ime (in years)
I **I**nterest
Y effective annual **Y**ield
pmt periodic payment

ADB **A**verage **D**aily **B**alance
APR **A**nnual **P**ercentage **R**ate

Effective rate – sometimes called the effective annual yield – is the simple interest rate that produces the same amount of money in an account at the end of one year as when the account is subjected to compound interest at a stated rate.

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

Be sure to convert your decimal calculator result to a percent.

Rule of 72

$$\frac{72}{EY \%} = \text{years to double}$$

Credit Card Average Daily Balance

$$ADB = \frac{\text{sum of the daily balances}}{\text{number of days in the billing cycle}}$$

Credit Card Interest (This is the monthly finance charge on the Average Daily Balance):

$$I = ADB \times \text{monthly rate} \times 1(\text{month})$$

or

$$I = ADB \times \frac{APR}{12} \times 1(\text{month})$$