

Financial Math

Compounded Interest

① For n # of compoundings per year

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

A = Amount at end of term

P = Initial Amount

r = interest rate

n = number of times compounded per year

t = # of years

② Continuous Compounding

$$A = Pe^{rt} \quad e \approx 2.718$$

Terms

Monthly (12) = n

Quarterly (4) = n

Semi Annually (2) = n

annually/yearly (1) = n

Daily or continuously use Pe^{rt} $n \geq 365$