
P Principal
 n number of periods over which interest is earned
 r interest rate per period

Future Value $S = P(1 + r)^n$

Present Value $P = S(1 + r)^{-n}$

R regular payment
 n number of periods
 r interest rate per period

Present Value of an Ordinary Annuity $A = R \left(\frac{1 - (1 + r)^{-n}}{r} \right)$

Present Value of an Annuity Due $A = R \left(\frac{1 - (1 + r)^{-n}}{r} \right) (1 + r)$

Future Value of an Ordinary Annuity $S = R \left(\frac{(1 + r)^n - 1}{r} \right)$

Future Value of an Annuity Due $S = R \left(\frac{(1 + r)^n - 1}{r} \right) (1 + r)$

Periodic payment into Sinking Fund $R = S \left(\frac{r}{(1 + r)^n - 1} \right)$

Periodic payment of an Amortized Loan $R = A \left(\frac{r}{1 - (1 + r)^{-n}} \right)$

$$\log_b(xy) = \log_b x + \log_b y$$

$$\log_b \left(\frac{x}{y} \right) = \log_b x - \log_b y$$

$$\log_y x = \frac{\log_b x}{\log_b y}$$
