Formula Sheet

Annuities

Future Value given **R**ent: $F = \left[\dfrac{(1+i)^n - 1}{i} \right] \cdot R$

Rent if **P**resent Value is known: $R = \dfrac{1}{a_{n \neg i}} P$ So, $R = \dfrac{i(1+i)^n}{(1+i)^n - 1} \cdot P$

Present Value **R**ent is known: $P = a_{n \neg i} R$ So, $P = \dfrac{(1+i)^n - 1}{i(1+i)^n} \cdot R$

where $a_{n \neg i} = \dfrac{(1+i)^n - 1}{i(1+i)^n}$

Misc formulas $i = \dfrac{r}{m}$ and $n = m \times t$

Compound Interest

Compound Amount: $F = (1+i)^n P$

Present Value: $P = \left[\dfrac{1}{(1+i)^n} \right] F = \dfrac{F}{(1+i)^n}$

where i is the interest rate per period and n is the number of interest periods

Simple Interest
Amount: $A = (1 + nr) P$

where r is the interest rate and n is the number of years