

MATH 105 Equations

Chapter 1 Equations

- $I = Prt$
- $F = P + Prt = P(1 + rt)$
- $F = P(1 + r)^t$
- $I = F - P$
- $F = P\left(1 + \frac{r}{n}\right)^{nt} = P(1 + i)^m$
- $Y = \left(1 + \frac{r}{n}\right)^n - 1$
- $F = P(1 + Y)^t$

Chapter 2 Equations

- $FA = PMT \frac{((1 + i)^m - 1)}{i}$
- $I = FA - m \times PMT$
- $PV = PMT \frac{(1 - (1 + i)^{-m})}{i}$
- $I = m \times PMT - PV$
- $PMT = \frac{FA \times i}{((1 + i)^m - 1)}$
- $PMT = \frac{PV \times i}{(1 - (1 + i)^{-m})}$
- monthly payment = $\frac{P + I}{m}$
- payoff amount = $PMT \frac{(1 - (1 + i)^{-k})}{i}$
- $m = -\frac{\log\left(1 - \frac{PV \times i}{PMT}\right)}{\log(1 + i)}$
- $m = \frac{\log\left(1 + \frac{FA \times i}{PMT}\right)}{\log(1 + i)}$