VARIABLES TO KNOW

I  Simple interest

P  Principal, Present Value, Proceeds
   This is the amount of money that you put in
   the bank (or need to put in the bank) NOW.
   It’s also the amount of money that you
   borrow (or need to borrow) NOW.

r  interest rate

t  time (in years)

A  amount, Future Value
   This is the amount of money that you have
   in the bank (or need to have in the bank)
   LATER. It’s also the amount of money that
   you borrow (or need to borrow) LATER.

n  number of compounding periods per year

r_e  the effective interest rate

R  periodic payment (at the end of each period)
FORMULAS TO USE

\[ I = Prt \]
\[ A = P(1 + rt) \]

\[ A = P \left(1 + \frac{r}{n}\right)^{nt} \]
\[ A = Pe^{rt} \]

\[ r_e = \left(1 + \frac{r}{n}\right)^n - 1 \]
\[ A = Rn \left[\frac{(1 + \frac{r}{n})^{nt} - 1}{r}\right] \]

\[ P = Rn \left[1 - \left(1 + \frac{r}{n}\right)^{-nt}\right] \]
\[ R = \frac{Pr}{n\left[1 - \left(1 + \frac{r}{n}\right)^{-nt}\right]} \]