Chapter 3
Interest and Equivalence

- Interest results in Time Value of Money
- Types of Interest
  - Simple Interest – Only the original amount (Not common)
  - Compound Interest – Interest on top of interest (Typical)
- Equivalence
  - Present sum = series of future sum

Single Payment Compound Interest Formulas

\[ F = P(1+i)^n = P(F/P,i,n) \]
\[ P = F(1+i)^{-n} = F(P/F,i,n) \]

Example (homework #1)

If you deposit $2,500 into your bank account now, what will be the balance in your account 20 years from now, assuming an annual interest rate of 4.5%.

Question: What if the interest is compounded quarterly?
Single Payment Compound Interest Formulas

Example

Solve for \( P \) assuming 12% interest using the interest table.