

Assume annual interest rate is 7%, compounded monthly, for 18 years.

1. If you borrowed \$100,000, what are your payments? Amortization

$$\text{Solve } P(1+i)^n = R \left[\frac{(1+i)^n - 1}{i} \right] \text{ for } R$$

$$A = S'$$

2. If your payments are \$500/month, how much did you borrow? Present Value of an Annuity.

$$\text{Solve } P(1+i)^n = R \left[\frac{(1+i)^n - 1}{i} \right] \text{ for } P$$

$$A = S'$$

3. If you want to have \$100,000 after 18 years, how much did you set aside, each month?

$$\text{Solve } 100,000 = R \left[\frac{(1+i)^n - 1}{i} \right] \text{ Sinking Fund}$$

for R

S' given. Find R .

4. If you receive \$500/month and bank it, how much is in the bank after 18 years?

$$\text{Find } S' = R \left[\frac{(1+i)^n - 1}{i} \right] \text{ Future Value of Annuity}$$

$$A = P(1+i)^n, \quad S' = R \left[\frac{(1+i)^n - 1}{i} \right]$$