1. A bank deposit paying simple interest at the rate of 5%/year grew to a sum of $3100 in 10 mo. Find the principal
2. RETIREMENT FUNDS: Five and a half years ago, Chris invested $10,000 in a retirement fund that grew at the rate of 10.82%/year compounded quarterly. What is his account worth today?
3. SAVINGS ACCOUNTS: If Jackson deposits $100 at the end of each month in a savings account earning interest at the rate of 8%/year compounded monthly, how much will he have on deposit in his savings account at the end of 6 years, assuming that he makes no withdrawals during that period.
4. PURCHASING A HOME: The Johnsons have accumulated a nest egg of $40,000 that they intend to use as a down payment toward the purchase of a new home. Because their present gross income has placed them in a relatively high tax bracket, they have decided to invest a minimum of $24000/month in a monthly payment (to take advantage of the tax deduction) toward the purchase of their house. However, because of other financial obligations, their monthly payments should not exceed $3,000. If local mortgage rates are 8%/compounded monthly for a conventional 30-year mortgage, what is the price range of houses that they should consider?
5. Find the periodic payment R required to amortize a loan of P dollars over t yr with interest charged at the rate %/year compounded m times a year….P=80,000, r=10.5, t=15, m=12
6. LOAN AMORTIZATION: What monthly payment is required to amortize a loan of $30,000 over 10 yr if interest at the rate of 12%/year is charged on the unpaid balance and interest calculations are made at the end of each month?
7. SINKING FUNDS: The management of Gibraltar Brokerage Services anticipates capital expenditure of $20,000 in 3 yr for the purchase of new computers and has decided to set up a sinking fund to finance this purchase. If the fund earns interest at the rate of 10%/year compounded quarterly, determine the size of each (equal) quarterly installment that should be deposited in the fund.
8. FINANCING A HOME: Sarah secured a bank loan of $200,000 for the purchase of a house. The mortgage is to be amortized through monthly payments for a term of 15 yr, with an interest rate of 6%/year compounded monthly on the unpaid balance. She plans to sell her house in 5 years. How much will Sarah still owe on her house?