Supplemental Instruction Handouts
Business Math
Chapter 14:
Loan Amortization;
Mortgages

1. Max is purchasing a new television for $1,250 and will be paying for it by making monthly payments for the next six months. If the interest rate is 12.25% compounded monthly, construct the full amortization table for the debt. Calculate the total interest paid.

2. Max purchased a new television for $1,250 and will be paying for it with monthly payments of $250 with an interest rate of 12.25% compounded monthly. Construct the full amortization table for the debt. Calculate the total interest paid.

3. A loan of $25,000 requires end of quarter payments over the next 10 years at an interest rate of 10% quarterly.

   a) Calculate the interest component of payment 22.
   b) Calculate the principal component of payment 12.
   c) Calculate the interest paid in year 4.
   d) Calculate the principal paid in payments 4 – 12 inclusive.

4. A loan of $10,000 requires semi – annual payments of $1,300 at an interest rate of 9.57% semi – annually.

   a) What is the principal component of payment 3?
   b) What is the interest component of payment 8?
   c) What is the principal reduction in the 4th year?
   d) How much interest was paid by payments 2 – 5 inclusive?
   e) What is the size of the final payment?

5. How much would you have to pay per month for a $200,000 mortgage over 25 years if the stated interest rate is 8.9% compounded monthly?

6. If you were able to keep the same payment that you just calculated in the previous question, how much of a mortgage would you be able to afford over the next 25 years if the interest rate dropped by 1 point?

7. The interest rate for the first three years of a $125,000 mortgage is 9.45% compounded monthly. If the monthly payments are calculated over a 25 year period, how much has to be paid at the end of each month?

8. If, from the previous question, the new interest rate was 9.85% compounded monthly, what would be the size of the new payments for the next three years?