

There are other variations on loan repayment schedules that are sometimes used, but they are fairly rare. When borrowing money be sure to ask the loan officer about how the interest and principal will be repaid. If the answer is

“simple interest payable on the balance,” i.e., a fixed payment consisting of interest owed on the balance with the remaining part of the payment applied to the principal,

then we can use the standard amortization table described in this section.

Notice that none of the examples dealt with mortgages; are these loans somehow different? No! They are usually payable monthly for 10 or more years, so the number of payments will be large. We wouldn't want to do such tables by hand. Fortunately, spreadsheets are designed to make building these tables easier.

Exercises

You may assume the standard loan repayment rules apply in the problems below, unless specifically told otherwise.

- 1) Jimmy buys a house for \$232,000. He makes a down payment of \$20,000 and finances the balance. How much are his monthly payments if the current interest rate is 8% and it is a fifteen year loan?
- 2) Dwight buys a \$3,000 engagement ring for his fiancée. He agrees to repay the money in one year at 14% interest. How much will his monthly payments be?
- 3) Terry wants to buy that awesome red car that costs only \$23,000. If he puts 10% down and finances the rest for 4 years at 12.4%, what will his monthly payments be? How much will he have paid for the car in the end?
- 4) Sam and Sue are buying a house that's for sale for \$90,000. They put \$10,000 down and plan to finance the balance. Compare the pros and cons of the 15 and 30 year mortgages (length of the loan) if their interest rate is 7.5% and they make monthly payments.
- 5) Nat and Bethany want to buy some land that costs \$40,000. They put \$4800 down and plan to finance the balance. Compare the pros and cons of a 5 year loan versus a 10 year loan at 9.6% interest, making monthly payments.
- 6) Linda buys a car for \$12,000. She pays \$1500 down and finances the rest, paying interest on the unpaid balance. The bank suggests a four year loan at 11.24%. If Linda agrees, how much would her monthly payments be?
- 7) A local business decides to invest in a new copier costing \$3600. They pay \$500 down and agree to pay the balance in annual payments over the next three years, paying 14% on the unpaid balance. Make an amortization schedule for this loan.
- 8) Christa is buying a house costing \$54,000. The lowest interest rate is 8.25%. Find her monthly payments if she gets a thirty year loan. What are her payments if she gets a fifteen year loan? How much money will she save with the fifteen year loan?
- 9) Jerry is buying a car which is priced at \$21,225. He puts 10% down and finances the rest at 12%, committing to monthly payments over the next 5 years. Prepare the first four payments of an amortization schedule for Jerry's loan.
- 10) Ashleigh decided to buy that beautiful 10 acres just off the Blue Ridge Parkway. She can purchase the land for \$42,000, and the owner has agreed to allow her to make payments each quarter for the next 5 years at 10% interest on the unpaid balance. Prepare the first four payments of an amortization schedule for the loan. How