

- Complete the loan amortization table for a 1-year, \$3,500 loan at 6% interest compounded monthly for 1 years.

Payment Period	Payment	Interest Paid	Principal Paid	Balance
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

- The Atkinsons wish to purchase an \$80,000 home.

Length of Mortgage	Interest Rate (Compounded Monthly)	Payment	Total Amount of Interest Paid
30	5%		
20	5%		
15	5%		
10	5%		
30	10%		
30	2.5%		

What happens to the total amount of interest paid when we double the length of the loan from 10 to 20 years? from 15 to 30 years? What happens to the payment when we double the length of the loan from 10 to 20 years? from 15 to 30 years? What happens to the total amount of interest paid when we double the percentage rate from 5% to 10%? from 2.5% to 5%?

- The following problem is exercise #37 on page 177 of your text.

In purchasing a house, the buyers sometimes have the option of paying some extra money up front in order to lower the interest rate they will pay for their mortgage. The money paid up front is called the *points*, and each point costs the buyer 1% of the total amount of the mortgage.

In August 1997, Merit Mortgage offered home mortgages at a rate of 7.65% with no points or 7.25% with one point. The interest in both cases was compounded monthly, and the loan was to be paid back with monthly payments for 30 years. Suppose a man borrows \$95,000 from Merit Mortgage to purchase a home when these rates are in effect.

- (a) If the loan is to be held for the entire 30 years, how much will paying the point save in payments over the life of the loan?
- (b) If the loan is to be held for the entire 30 years, should the man pay the point?
- (c) Suppose the man plans to sell the house after only 2 years. How much will paying the points save in payments over the 2 years?
- (d) What is the balance of the loan after 2 years if the point is paid?
- (e) What is the balance of the loan after 2 years if the point is not paid?
- (f) If the man plans to sell the house in 2 years, should he pay the point?