8.7 The Cost of Home Ownership

# Objective 1: Compute the monthly payment and interest costs for a mortgage

A **mortgage** is a long-term installment loan for the purpose of buying a home. The property is pledged as security for payment. The **down payment** is the portion of the sale price of the home that the buyer initially pays to the seller. The **amount of the mortgage** is the difference between the sale price and the down payment. Monthly payments are calculated the same way as for car loans and other installment loans.

Mortgages can have a fixed interest rate or a variable interest rate. **Fixed-rate mortgages** have the same monthly payment during the entire time of the loan. **Variable-rate mortgages** have payment amounts that change from time to time depending on changes in the interest rate.

Most lending institutions require the buyer to pay one or more **points** at the time of closing—that is, the time at which the mortgage begins. A point is a one-time charge that equals 1% of the loan amount. For example, two points means that the buyer must pay 2% of the loan amount at closing.

**LOAN PAYMENT FORMULA FOR FIXED INSTALLMENT LOANS**

The regular payment amount, *PMT*, required to repay a loan of *P* dollars paid *n* times per year over *t* years at an annual rate *r* is

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# Objective 2: Prepare a partial loan amortization schedule

When a loan is paid off through a series of regular payments, it is said to be **amortized**. The interest is computed using the simple interest formula . The principal, *P*, is equal to the balance of the loan which changes each month. The interest rate, *r,* is the annual mortgage rate and *t* is 1/12 of a year. A document showing how the payment each month is split between interest and principal is called a **loan amortization schedule**.

Table 8.8 below is an example of a loan amortization schedule.

**Annual % Rate: 9.5%**

**Amount of Mortgage: $130,000**

**Number of Monthly Payments: 180**

**Monthly Payment: $1357.50**

**Term: Years 15, Months 0**

| **Payment Number** | **Interest Payment** | **Principal Payment** | **Balance of Loan** |
| --- | --- | --- | --- |
| 1 | $1029.17 | $328.33 | $129,671.67 |
| 2 | $1026.57 | $330.93 | $129,340.74 |
| 3 | $1023.96 | $333.54 | $129,007.22 |
| 4 | $1021.32 | $336.18 | $128,671.04 |
| 30 | $944.82 | $412.68 | $118,931.35 |
| 31 | $941.55 | $415.95 | $118,515.52 |
| 125 | $484.62 | $872.88 | $60,340.84 |
| 126 | $477.71 | $879.79 | $59,461.05 |
| 179 | $21.26 | $1336.24 | $1347.74 |
| 180 | $9.76 | $1347.74 | $0 |

| **Payment**  **Number** | **Interest** | **Principal** | **Loan**  **Balance** |
| --- | --- | --- | --- |
| **1** |  |  |  |
| **2** |  |  |  |
| **3** |  |  |  |

# Objective 3: Determine what you can afford to spend for a mortgage

Many financial advisors recommend spending no more than 28% of gross monthly income for mortgage payments and no more than 36% of gross monthly income for total monthly debt including mortgage payments, car payments, credit card bills, student loans, and medical debt.

# Objective 4: Understand the pros and cons of renting vs. buying

Renting is generally less costly than buying a home when staying in it for fewer than three years. When looking at a seven-year time frame, the total cost of renting (monthly rent, renter’s insurance, and loss of potential interest on a security deposit) can be more than twice the total cost of buying for homeowners who itemize their tax deductions.

| **BENEFITS OF RENTING** | **BENEFITS OF BUYING** |
| --- | --- |
| * No down payment or points are required. Security deposit is generally refundable. * Easy to relocate when lease expires. * Does not tie up money that might be invested more safely and lucratively elsewhere. * May involve lower monthly expenses. * Avoids the risk of falling housing prices. * Home repair, maintenance, and landscaping are generally landlord responsibilities. * There are no property taxes. | * Peace of mind and stability. Allows for freedom to remodel, landscape, and redecorate. * Provides significant tax advantages, including deduction of mortgage interest and property taxes. * There is no chance of rent increasing over time. * As the mortgage is paid off, the homeowner builds equity in the house. * The possibility of home appreciation is a potential source of cash in the form of home equity loans. |