$\qquad$
$\qquad$
$\qquad$

## Chapter 16 The Finances of Housing

## SOFTWARE <br> ACTIVITY <br> (OPTIONAL)

## Spreadsheet Application

## Comparing Housing Alternatives

Objective: Effectively compare and analyze the financial implications involved in a buy-versus-rent decision.

## Practice Situation

The following data represents two housing alternatives. Alternative 1 presents the costs associated with renting an apartment. Alternative 2 offers data related to the purchase of a home. Calculate the annual total expenses required for each option, then answer the questions on the next page.

Alternative 1: An apartment is available at a monthly rent of $\$ 750$. Renters insurance will cost $\$ 75$ per quarter. A $\$ 1,000$ security deposit is required on the apartment.
Alternative 2: The cost of a home is $\$ 95,000$. You are considering a 30 -year conventional fixed-rate mortgage. The mortgage interest rate is 8 percent and you plan to pay a down payment of $\$ 9,500$. The monthly payment will be $\$ 627$. You will pay approximately $\$ 6,800$ in mortgage interest for the first year. You anticipate that closing costs will be $\$ 2,000$. The annual property taxes are estimated to be $\$ 2,500$, and homeowners insurance has been computed to be $\$ 500$. You anticipate spending approximately 1.5 percent of the cost of the home per year for its maintenance. Assume that homes in your geographic area appreciate at approximately 3 percent of their cost annually.

For both alternatives, assume an after-tax savings interest rate of 5 percent and a tax rate of 30 percent.

## Spreadsheet Directions

1. Start your spreadsheet software program and open problem SA07.xls. Use the information presented for each alternative and enter the data into the spreadsheet. Remember to use formulas to calculate annual amounts. Note: Format all dollar amounts to Currency, $\underline{2}$ decimals.
2. Insert the formulas to compute tax savings for mortgage interest and property taxes by multiplying the payments by the tax rate.
3. Insert the formulas to compute the Total Annual Cost of Renting and the Total Annual Cost of Buying.
4. Perform your calculations and complete the spreadsheet, then save your work to a new file labeled SA07***.xls. (Replace ${ }^{* * *}$ with your initials.)
5. Print out a copy of your work if your teacher has instructed you to do so.
$\qquad$ Date $\qquad$ Class $\qquad$

## Interpreting Results

1. What is the total annual cost associated with each housing alternative?
2. Based on your calculations for alternative 2 , what actual total cash outlay would be required in the first year of the purchase?
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## Drawing Conclusions

1. Based upon your computations, which scenario would be the favorable decision based on financial considerations? Explain.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
2. What other nonfinancial advantages and disadvantages should be considered for each alternative?
$\qquad$
$\qquad$
$\qquad$
$\qquad$
