Shopping for a Mortgage

LESSON DESCRIPTION AND BACKGROUND

In this lesson, the students use a computer loan calculator to determine the monthly payment on different mortgage loans. Understanding how to use computer loan calculators is very important for mortgage calculations. There are many loan calculators on the Internet; many software packages, such as Quicken, also provide loan calculators.

Lesson 16 correlates with national standards for economics and personal finance as shown in Tables 1-2 in the introductory section of the publication.

ECONOMIC AND PERSONAL FINANCE CONCEPTS

• Amortization

• Mortgage loan

OBJECTIVES

At the end of this lesson, the student will be able to:

• Explain what it means to **amortize** a loan.

• Use a computer program to amortize several mortgages.

• Identify and explain ways to reduce the cost of buying a home on credit.

TIME REQUIRED

One 45-minute class period

MATERIALS

• A copy for each student of **Exercise 16.1** from the *Student Workbook*

• Student access to an Internet-connected computer, a computer lab, or a computer equipped with mortgage-calculation software

ADDITIONAL RESOURCES

To download visuals, find related lessons, correlations to state standards, interactives, and more visit http://fffl.councilforeconed.org/9-12/lesson16.

PROCEDURE

1. Introduce the lesson's focus on mortgage loans. Ask:

a. How many of you plan to be homeowners some day?

b. Do you know how much new homes cost? *(Discuss responses briefly. As necessary, supply cost figures from local real estate listings.)*

c. How do you plan to pay for your new homes? *(Discuss responses briefly. As necessary, explain that most people use a mortgage loan to purchase a new home.)*

2. Tell the students that not all mortgage loans are alike. They come in many shapes and sizes, with a variety of features that can be difficult to understand. Since the purchase of a home is one of the most important investments most people will ever make, it is critical that they understand their mortgage, especially the elements related to required monthly payments. Fortunately, several payment calculators are now available online or in the form of software; these calculators can help people understand how mortgage payments are computed. It is very important that borrowers understand how to make these calculations so that they are not completely dependent on the computations and explanations of bankers and mortgage brokers.

3. Give each student a copy of **Exercise 16.1**. Ask the students to read the exercise and complete the table. The exercise will provide practice in using a mortgage calculator and an amortization table. The exercise references mortgage calculators at www.bankrate.com,

but other online calculators (there are several) may also be used. You may wish to demonstrate how such a calculator can be used and show the students what the amortization table associated with the calculator looks like. In addition, you may wish to demonstrate the use of a mortgage APR calculator. These can be found on the Internet; they can be important for prospective borrowers who want to compare costs for loans with substantially different characteristics. You should note that the Truth in Lending Act requires that the APR for any given mortgage be identified, and this calculation must include such costs as closing costs and PMI (Private Mortgage Insurance).

When the students have completed their work, discuss their answers.

Answers to Exercise 16.1:

a. If you buy a home and make a relatively small down payment, what happens to the monthly payment and total payment for your loan? *(With a small down payment, the monthly payment and the total payment will be higher than they would have been with a larger down payment. Also, the buyer will have to pay for mortgage insurance if the down payment is below 20 percent.)*

b. What happens to the monthly payment and total payment for a loan with a lower annual interest rate? *(Both the monthly payment and the total payment are less.)*

c. What happens to the monthly payment and total payment if the term of the mortgage is 15 years rather than 30 years? *(The buyer pays more each month, which can be tough on the budget. However, the buyer saves a lot on interest, so the total payment is less.)*

Answers to Exercise 16.1

	Mortgage 1	**Mortgage 2**	**Mortgage 3**	**Mortgage 4**
Home price	$175,000	$175,000	$175,000	$175,000
Down payment %	20%	5%	20%	20%
Down payment $	*$35,000*	*$8,750*	*$35,000*	*$35,000*
Principal	$140,000	$166,250	$140,000	$140,000
Interest rate	*7%*	*7%*	*6%*	*5.5%*
Term	*30 years*	*30 years*	*30 years*	*15 years*
Monthly payment	*$931.42*	*$1,106.07*	*$839.37*	*$1,143.92*
Total interest	*$195,312.46*	*$231,933.54*	*$162,173.46*	*$65,905.03*
Closing costs and PMI	$4,200	$4,987 + $13,133 (PMI)	$5,000	$4,200
APR	7.295%	8.058%	6.331%	5.958%
Total payment, down payment, principal, interest, closing costs, and PMI	*$374,512.46*	*$425,053.54*	*$342,173.46*	*$245,105.03*

d. What is the trade-off if you get a 15-year mortgage rather than a 30-year mortgage? *(With a 15-year mortgage, you pay lower total interest but you make higher monthly payments.)*

e. How does calculating APR help you compare the two 30-year loans that have a 7 percent interest rate? *(While both loans have interest rates of 7 percent, the 5 percent down-payment loan has higher fees associated with it. When all the costs of both loans are put into the APR calculations, the loan with the smaller down payment has an APR that is about 0.8 percent higher than the other loan.)*

f. How can you reduce your total payment when buying a home? *(Increase the down payment, get a lower mortgage rate, pay the mortgage off faster, have lower closing costs, find a lower APR.)*

CLOSURE

Conclude the lesson by noting that, for many people, the purchase of a home will be one of the most important investments they will ever make. Finding the right home in the right location is very important. What is often overlooked, however, is the importance of using the appropriate instrument to finance a home. These days, borrowers must consider many different characteristics of mortgage loans before making a final decision on purchasing a home. Whether to use a fixed-rate or adjustable-rate loan will depend, among other things, on how long the buyer plans to live in the home. The decision may also be influenced by the outlook for future rates. This lesson helps students take a first step toward understanding mortgage finance. The topic is sure to come up again in most students' personal lives.

ASSESSMENT

Have the students create their own mortgage-calculation problems by creating a table and scenarios similar to those that appear in

Exercise 16.1. Make sure they structure the problem correctly and provide the completed table as an answer to the assessment exercise. They should also ask (and provide answers for) questions. Give bonus points to students who are able to use an online calculator to determine the APR for their mortgage loans. In addition, make sure they include results from an amortization table in their questions and answers.

EXTENSION

Ask the students to interview an older adult about the homes he or she has lived in. How many times has the interviewee moved? What were some of these homes like? What price did the interviewee pay for the homes? How did the interviewee finance the purchases? What were the mortgage interest rates? What were the terms (30 years? 15 years?) of the mortgages? Were any of them adjustable rate mortgages? Did the interviewee ever refinance a home? What tax advantages does the interviewee get from owning his or her home?