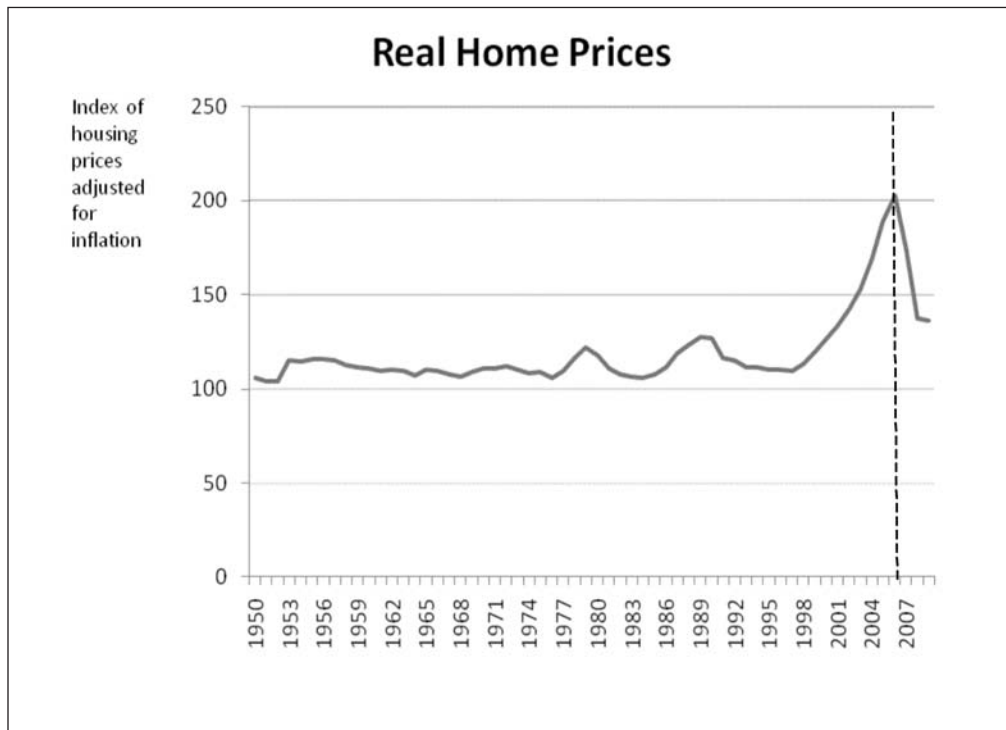


## ACTIVITY 1 HOUSING PRICES

The following graph displays data on an index of real (adjusted for inflation) housing prices in the United States for the years 1950 through 2009.



Source: Case-Shiller Home Price Index,  
[www.irrationalexuberance.com](http://www.irrationalexuberance.com)

- Describe the general trend in real home prices from 1950 through 1997.
- Describe the general trend in real home prices from 1997 through 2006.
- Describe the general trend in real home prices from 2006 through 2009.
- Predict what the value of the real home price index would have been in 2009 if the general trend in prices had continued at the 1950 to 1997 pace.
- What might be some reasons for the observed trend in real home prices from 1997 through 2006?
- What might be some reasons for the observed trend in real home prices from 2006 through 2009?

## ACTIVITY 2

### TAKING OUT A MORTGAGE

In order to understand the role of housing in the financial crisis of 2007 to 2009, it is important to know how the mortgage market works. A house is the most expensive purchase most people ever make. Very few people can afford to pay the entire price of a house out of their savings. Therefore, almost all homebuyers borrow money by taking out a mortgage from a bank or another financial institution. There are many different types of mortgages, but all function in basically the same way. An individual borrows money and uses this to pay the previous owner of the house. The borrower makes a monthly payment, which can cover part of the principal (the original amount borrowed) and the interest (the payment to compensate the lender for the use of the funds).

In some cases, homeowners are unable to make the mortgage payment. After the borrower has missed a few payments, the loan is referred to as “delinquent.” If the borrower stops paying altogether the loan is said to be in “default” and eventually the lending institution will put the house in “foreclosure.” At this point, the financial institution takes ownership of the house and will attempt to sell it to another buyer.

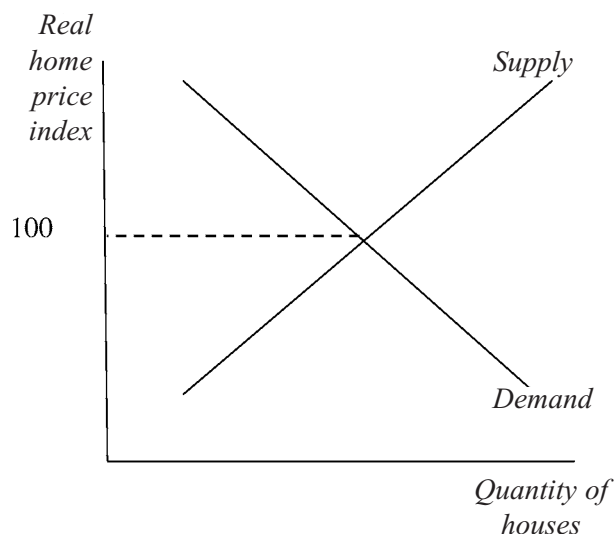
The conditions under which mortgages are given have changed significantly over the last few decades. The chart below compares some of the important features of prime and subprime mortgages. Many people still take out prime mortgages, but during the dramatic run up in housing prices from 1997 to 2006, subprime mortgages increased significantly.

	Prime	Subprime
Down payment	People save before purchasing a house and usually pay an amount equal to 20 percent of the purchase price. This means that the typical mortgage equals 80 percent of the purchase price.	People purchase a house with little or no down payment. This means that the mortgage may equal 100 percent of the purchase price.
Interest rate	The interest rate is fixed at the time the mortgage is taken out and remains unchanged throughout the term of the loan (usually 20 to 30 years). This means that homeowners will have the same monthly mortgage payment for the life of the loan.	The interest rate is adjustable. This means that the interest rate on the loan can go up or down depending on economic conditions. Adjustable rate mortgages often come with a “teaser rate,” a low introductory rate that “resets” to a higher adjustable rate after two to five years. With adjustable rate mortgages, the monthly mortgage payment will vary and can eventually be significantly higher than when the loan was originally taken out.
Documentation	Individuals who want to borrow money from banks to purchase a house have to show that they are good credit risks. This means showing that they have a steady stream of income and a good record of paying off other debt, such as car loans and credit card bills.	Individuals are able to take out mortgages even if they have credit problems and are unable or unwilling to provide documentation on work history and income levels. Often banks and mortgage brokers accept “self-reported” information on these factors instead of contacting employers and creditors.



### ACTIVITY 3

## THE RISE IN HOUSING PRICES



- A. Between 1997 and 2006, housing prices increased dramatically. Would an increase or decrease in demand cause this? Is this illustrated by a rightward or leftward shift of the curve?
  
- B. Between 1997 and 2006, housing prices increased dramatically. Would an increase or decrease in supply cause this? Is this illustrated by a rightward or leftward shift of the curve?
  
- C. Between 2007 and 2009, housing prices fell dramatically. Would an increase or decrease in demand cause this? Is this illustrated by a rightward or leftward shift of the curve?
  
- D. Between 2007 and 2009, housing prices fell dramatically. Would an increase or decrease in supply cause this? Is this illustrated by a rightward or leftward shift of the curve?
  
- E. Housing prices increased between 1997 and 2006 and then decreased between 2007 and 2009. How might changes in expectations of future price changes affect demand for housing?

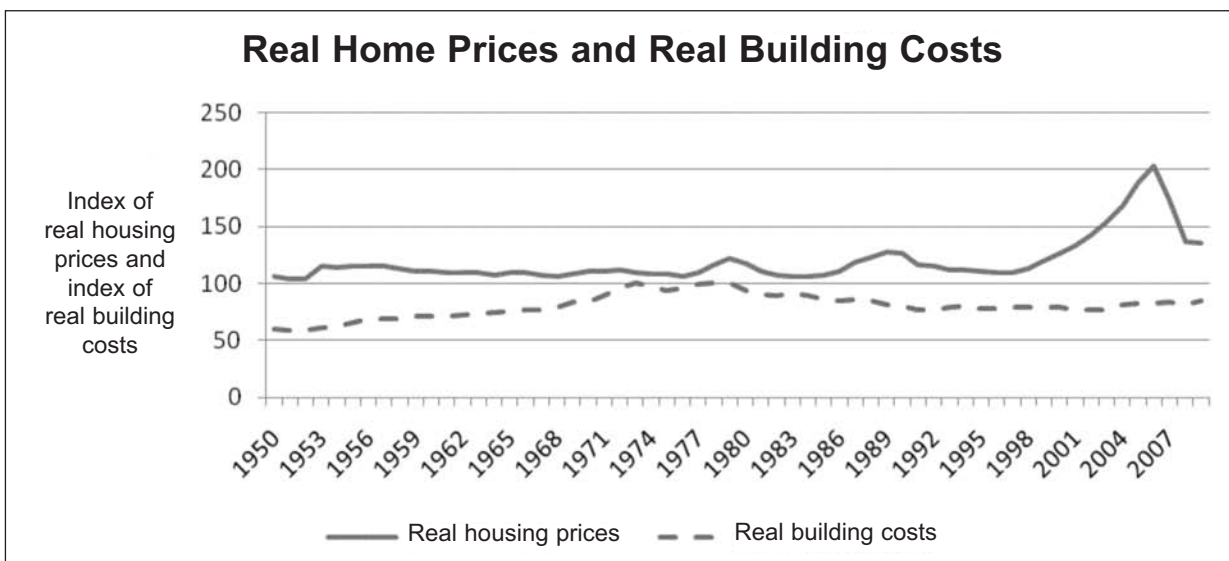
## ACTIVITY 3, CONTINUED

### THE RISE IN HOUSING PRICES

F. Each of the following has been suggested as a potential cause of the increase in housing prices from 1997 to 2006. For each, determine whether this would affect the supply curve or the demand curve for housing.

- 1) An increase in population.
- 2) An increase in building costs.
- 3) A decrease in interest rates.
- 4) Changes in expectations of prices of housing.

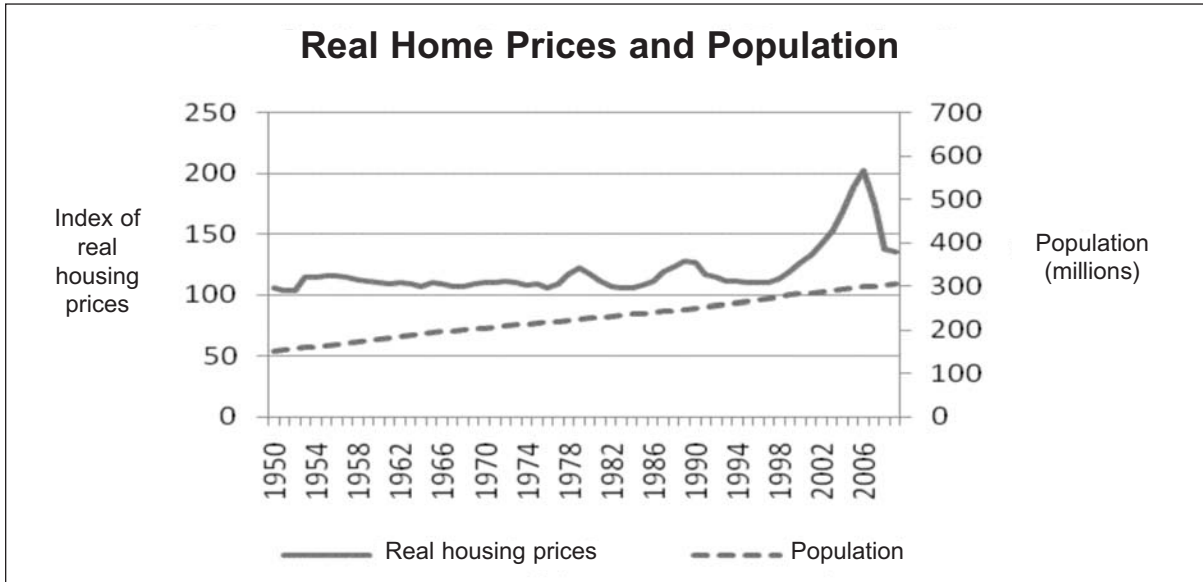
G. The graphs below show the relationship between real home prices and other relevant data from 1950 through 2009. Answer the question that follows each graph.



Source: [www.irrationalexuberance.com](http://www.irrationalexuberance.com)

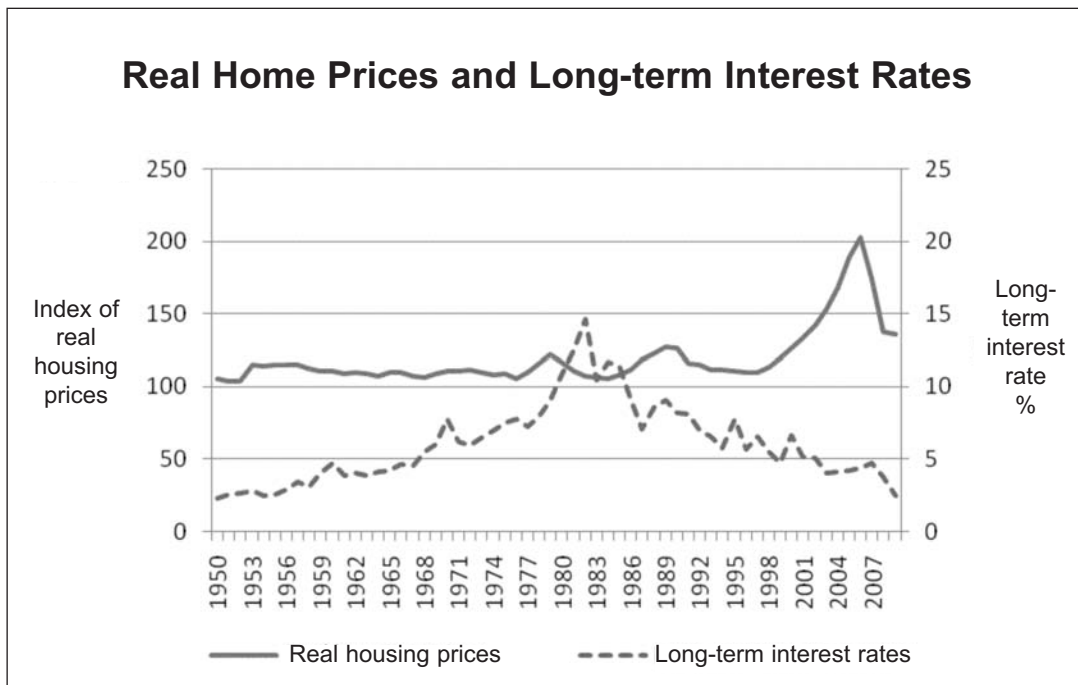
- 1) Does the graph support the view that increases in real home prices from 1997 to 2006 were justified by increases in building costs?

ACTIVITY 3, CONTINUED  
**THE RISE IN HOUSING PRICES**



Source: [www.irrationalexuberance.com](http://www.irrationalexuberance.com)

- 2) Does the graph support the view that increases in real home prices were justified by increases in population?

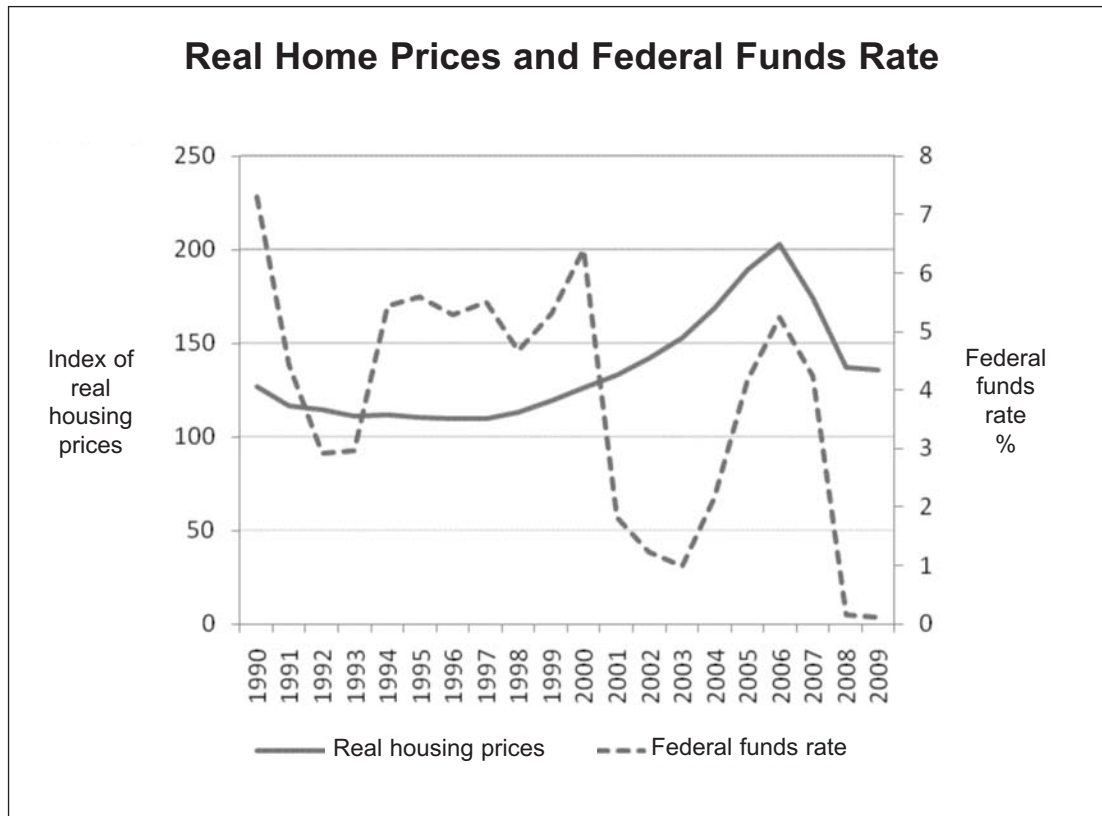


Source: [www.irrationalexuberance.com](http://www.irrationalexuberance.com)

- 3) Does the graph support the view that increases in real home prices were justified by changes in long-term interest rates?

### ACTIVITY 3, CONTINUED

## THE RISE IN HOUSING PRICES



Source: [www.irrationalexuberance.com](http://www.irrationalexuberance.com)  
[www.federalreserve.gov](http://www.federalreserve.gov)

- 4) Does the graph support the view that increases in real home prices were justified by changes in short-term interest rates?





## ACTIVITY 5 LEVERAGING

It is 90 degrees and sunny and you are at your brother's Little League game. There are hundreds of people in attendance. After a few innings, the water fountain at the field stops working and people are getting hot and thirsty. You remember that there is a convenience store around the corner where you could buy water for \$1 a bottle. After asking around, you figure you could sell water for \$1.10 per bottle. You have \$10 in your wallet. You figure that you will have time to make only one trip to the store and back.

Fill in the chart below to show the amount of profit or loss you can make by selling bottled water. Assume that you are able to sell all of the bottles you purchase.

Total money available	Cost per bottle at store	# of bottles bought	Total cost (cost per bottle x # bottles)	Selling price per bottle at game	Total revenue (# bottles x price)	Profit

While the situation will make you a small profit, you wish that you had remembered to bring more money to the field. You have \$50 in your piggy bank and that would have allowed you to make a much bigger profit. Just then, one of your mother's friends offers to lend you \$90 to go to the store and buy water. All you have to do is pay him back \$91 before the game ends. Use the chart below to calculate your expected profit or loss if you accept the offer and can sell all of the bottles of water for \$1.10 each.

Total money available	Cost per bottle at store	# of bottles bought	Total cost (cost per bottle x # bottles) + interest of \$1	Selling price per bottle at game	Total revenue (# bottles x price)	Profit

So you make the deal, run to the convenience store and return with 100 bottles of water. Unfortunately when you return you discover that the water fountains are now working. Because of this, people are only willing to pay you 80 cents for a bottle of water. Use the chart to calculate your expected profit or loss.

Total money available	Cost per bottle at store	# of bottles bought	Total cost (cost per bottle x # bottles) + interest of \$1	Selling price per bottle at game	Total revenue (# bottles x price)	Profit

ACTIVITY 6

**EVENTS LINKING HOUSING PRICES TO THE FINANCIAL CRISIS**

<b>HOUSING PRICES RISE</b>
Interest rates are low.
Standards are lowered to allow more people to qualify for mortgages.
<b>INVESTORS AND FINANCIAL INSTITUTIONS ADOPT FINANCIAL INNOVATIONS</b>
Individual mortgages are pooled and securitized.
Institutions leverage their funds at 30 to 1.
<b>HOUSING PRICES PEAK AND BEGIN TO FALL</b>
Interest rates begin to rise.
Developers build houses speculating that they will be bought.
<b>MORTGAGE DELINQUENCIES AND FORECLOSURES RISE</b>
Adjustable rate mortgages reset to higher rates for millions of homeowners.
Subprime mortgage holders have difficulty making mortgage payments.
<b>INVESTORS AND FINANCIAL INSTITUTIONS SUFFER MAJOR LOSSES</b>
Mortgage-backed securities lose value.
Institutions scramble for funding.