Activity 8.1
A Marginal Play

Stockbroker Luke, Katie, and Jeremy are sitting around a desk near a sign labeled "Brokerage Office." The Moderator is standing in front of the classroom.

Jeremy: Last year the Dow Jones Average was up 30 percent. I think this year looks just as good. The bull market is roaring. How can I make the most of this?

Stockbroker Luke: First, you need to buy quality companies. Second, don't forget that stock prices can go down.

Katie: Jeremy, don't be too greedy. You know the stock market can be risky.

Jeremy: I just want to take full advantage of a bull market.

Moderator: Jeremy and Katie are about to learn how buying on margin can increase their returns on their stock purchases, as well as their risks.

Katie: What exactly is "buying on margin"?

Stockbroker Luke: Buying on margin is buying stock on credit (or leverage). It's similar to borrowing money to buy a car or a house. Only instead of borrowing to buy goods and services, you borrow to buy more stock.

Jeremy: Could you give me an example of buying on margin?

Stockbroker Luke: Suppose a person wants to buy 100 shares of stock at $100 per share, for a total cost of $10,000. Unfortunately, the person has only $5,000. She could still buy these 100 shares by borrowing money from a brokerage company. Borrowing money from a brokerage company in order to buy stocks is called buying stocks on margin.

Katie: Can you borrow as much as you want?

Stockbroker Luke: No. You can only borrow 50 percent or one half of the money needed to buy stock. This is true for all brokerage firms. The limit is set by the Federal Reserve Board, which has the authority to determine this margin requirement.

Moderator: The Federal Reserve is the central bank that regulates all banks and many other financial institutions in the United States. Many people call it "the Fed."

Jeremy: How do we buy on margin?

Stockbroker Luke: For an investor to buy stocks on margin, the stock broker must set up a margin account for that investor in a brokerage office. A margin account is an account that allows a buyer to buy stock on credit.

Katie: Don't brokerage firms worry that stock buyers won't pay back the money they have borrowed?

Stockbroker Luke: Brokerage firms limit their risk by requiring collateral. Collateral consists of shares of stock or cash that can be used to repay the loan.

Moderator: Whenever an individual borrows large sums of money in the real world, the lender often asks for collateral. Collateral is something of value that a borrower uses to back up his promise to repay the loan. The borrower signs a legal agreement allowing the lender to take the collateral if the loan isn't repaid. A house is often signed over as collateral for a mortgage loan. A car is often signed over as collateral for a car loan. In a margin account, cash and stocks already owned are held as collateral by the brokerage firm for loans made to buy stock.

Jeremy: Do brokerage firms charge anything for this service?

Stockbroker Luke: Yes. In addition to the fee for buying or selling the stock, the brokerage firm charges interest on the loan. The interest is deducted from the buyer's account.

Katie: What happens if you buy on margin and the value of the stock you bought goes down?

Stockbroker Luke: Then the value of your account goes down. If it goes down enough, you may have to put up more collateral. This is called a margin call. If you can't meet this margin call, your stock will be sold.

Moderator: We have seen that by borrowing the money to buy stock, stock buyers can increase their gains if the stock price rises. However, if the stock price falls, stock buyers can lose a greater proportion of their money than they would have lost if they paid cash for the stock.

ACTIVITY 8.2
MARGIN PROBLEMS

Names ____

The amount of collateral that the investor must deposit to open a margin account for buying stock is called the *initial margin requirement*. The initial margin requirement must be 50 percent (one half) of the total value of the stocks being purchased or sold short. For example: to make a $10,000 stock purchase on margin, the investor must put $5,000 worth of collateral into the margin account.

The investor's actual ownership in the account is called the *equity*. It is determined by subtracting the investor's debt (what is owed to the brokerage firm) from the value of the investor's stock (what is owned). Here is a sample margin account:

Current value of stock purchased	$10,000
Debt (money owed to broker)	– $5,000
Equity (amount owned by investor)	$5,000

Suppose the price of the stock increases. The market value of the stock will rise, and so will the investor's equity.

Current value of stock purchased	$11,000
Debt (money owed to broker)	– $5,000
Equity (amount owned by investor)	$6,000

Suppose the price of the stock falls. The market value of the stock will fall, and so will the investor's equity.

Current value of stock purchased	$9,000
Debt (money owed to broker)	– $5,000
Equity (amount owned by investor)	$4,000

Many stock market games and simulations allow students to buy stocks on margin. In these cases, the internet site will act as your broker and lend you a portion of the money you need to buy more stock. Since the initial margin requirement in most games is 50 percent, you can typically borrow up to one-half of the value of the stocks being purchased or sold short.

In many games this means that you can buy approximately $200,000 worth of stock (less the broker's fees). $100,000 will come from your beginning account balance, and the game or simulation will lend you $100,000. In this case, you have borrowed the greatest amount possible because of the 50 percent margin requirement ($200,000 worth of stock x 50 percent = $100,000 loan). The game or simulation will typically hold your $200,000 worth of stock as collateral for the loan.

Now see if you understand all of this by solving the following problems.

Margin Worksheet

Directions: Read each situation below and fill in the blanks.

Situation 1

Mrs. Smith buys 100 shares of Coca-Cola stock on margin at $30 per share.

a. The total market value of the stock Mrs. Smith buys is $_____

b. The amount of money that Mrs. Smith must pay for this purchase (her initial margin requirement) is $_____

c. The maximum amount of money that the brokerage firm could lend Mrs. Smith (her debt) is $_____

d. Mrs. Smith's equity is $_____

Situation 2

The value of Mrs. Smith's 100 shares of Coca-Cola rises to $40 per share. Calculate the following:

a. The market value of Coca-Cola shares in Mrs. Smith's account is now $_____

b. The amount of money she owes the brokerage firm (her debt) $_____

c. Mrs. Smith's equity is $_____

Situation 3

The value of Mrs. Smith's 100 shares of Coca-Cola falls to $20 per share. Calculate the following:

a. The market value of Coca-Cola shares in Mrs. Smith's account is now $_____

b. The amount of money she owes the brokerage firm (her debt) is $_____

c. Mrs. Smith's equity is $_____

ACTIVITY 8.3
GET SHORTY: A STOCK MARKET PLAY

Katie, Jeremy, and Stockbroker Luke are sitting around a desk near a sign labeled "Brokerage Office." The Moderator is standing in front of the classroom.

Katie: Hi, Luke. That stock you helped me buy last year has really done well. This is my brother, Jeremy. He's also interested in buying stock. [*Jeremy shakes hands with Stockbroker Luke.*]

Jeremy: We've heard there is a way to make money when the price of a stock goes down. Is this really possible? I think we're going into a bear market.

Stockbroker Luke: Yes, definitely. It's a strategy called "selling short." It is very risky. Are you sure you're interested?

Jeremy: I'm game. Give us the information on this short stuff.

Stockbroker Luke: Selling short reverses the regular way you buy and sell stock. In a normal trade, you buy stock first and sell later, just as Katie did when she bought some shares with me last year. Selling short, however, means that you sell stock first and buy it back later.

Katie: That sounds really weird. How can you sell stock that you don't own?

Moderator: Katie, like many other buyers of stocks, is confused. Perhaps Stockbroker Luke can make this process clearer.

Stockbroker Luke: Let me continue. As you said, Katie, selling short means selling stock you don't already own. Investors can do this simply by borrowing stock from a broker. Brokerage companies have a large number of stocks that they are holding for customers or that they own themselves. They are willing to lend these shares of stock to buyers of stock who are interested in selling short.

Jeremy: Do the short sellers get to keep the money from the short sale?

Stockbroker Luke: No. We stockbrokers aren't crazy. Investors who sell short must later buy back the stock and return it to the broker. The broker is only *lending* the stock to be sold. The broker holds the money collected from the sale of the stock for security on the loan of the stock shares.

Moderator: When the stock buyer buys back the stock to return it to the broker, that action is called a "short cover."

Katie: Well, if they don't get to keep the money, why would the stock buyers want to sell borrowed stock?

Stockbroker Luke: That's an easy one to answer. Stockholders sell short only when they think the price of the stock will fall. Short sellers must later buy back the stock and return it to the brokerage company, which is the short cover. Eventually, they must cover their shorts. They hope they can buy it back at a lower price.

Jeremy: So if I decided to short sell 100 shares of Coca-Cola, your firm would lend me the stock. You would sell it for me tomorrow at, say, $40 per share. You would hold the $4,000 in my account until I decide to buy back the Coca-Cola stock.

Katie: And if the price of the Coca-Cola stock falls to $30, then Jeremy could replace the borrowed stock at the lower price of $3,000 and make a gain of $1,000.

Moderator: The broker would use the $4,000 Jeremy received for the original short sale to buy back the stock (or the short cover). Since only $3,000 is needed to buy back the stock, Jeremy would make a gain of $1,000.

Jeremy: What happens if the price of the stock goes up?

Stockbroker Luke: In that case, you're in trouble if you are the short seller. Of course, if the price goes up, you must replace the shares at the higher price. This would cost you money. That's why selling short is so risky. There is no limit on how high the price can go.

Moderator: If the price of Coca-Cola goes up to $50 per share, Jeremy would have to buy it back (or short cover) for $5,000. Since Jeremy already had $4,000 in his account from the short sale, he would have to come up with an additional $1,000 to buy back the stock. In this case, Jeremy would lose money.

Katie: Obviously, you would only want to sell stock short if you thought the price was going to go down.

Jeremy: I have heard of several companies that are not doing so well lately. I think their stock prices might go down. Would you be willing to help me choose stocks to short sell? I know I need a broker to complete the trades involved.

Stockbroker Luke: Of course. However, I must tell you about the costs involved. Our company charges a fee for all short sales and short covers. The fees are determined by how much the stock sold for, or how much the short cover is worth.

Moderator: The broker's fee is called a commission. It is charged on all transactions: buys, sales, short sales, and short covers.

Katie: You mean that Jeremy would pay you a commission on the short sale and again on the short cover. That's what I did last month when I bought Walt Disney stock for the first time and then sold a few weeks later.

Stockbroker Luke: Since you two seem to understand this so well, I'd like to explain one more thing about selling short. A short seller must open a margin account and deposit at least 50 percent of the value of the short sale in the account. You may use cash to open this account, but the broker won't pay you interest on your deposit.

Moderator: The margin account is required by the Federal Reserve. It is a way of protecting brokerage firms. If the price of the stock sold short goes up too much, too fast, the short seller may not be able to buy it back to return it to the brokerage company.

Jeremy: Thank you so much for your time. I'll go home and do some research and call you next week.

Katie: Yes, thanks. I learned a lot, too. But I don't think short selling is for me. I'll stick to the regular way we've been buying and selling stock.

Activity 8.4
Margin Problems

Name ____

Directions: Read each situation below and fill in the blanks. Be sure to include the cost of the broker's fee in your calculations. The broker's fee is 2 percent for the short sale and 2 percent for the short cover. Show your work in the space provided.

Situation 1

A stock owner sells short 200 shares of stock at $50 per share. He buys them back for replacement (short cover) at $40 per share.

Did he make a gain or loss?______

How much?______

Situation 2

A stock owner sells short 100 shares of XYZ Corporation at $20 per share and has to short cover them at $40.

Did he make a gain or loss?_____

How much?_____

Situation 3

A stock owner sells short 100 shares of Apple Pie Corporation at $50 per share. The initial margin requirement is 50 percent.

How much money must be deposited in the margin account?______