CHAPTER 20

Demand

★ CITIZENSHIP AND YOU ★

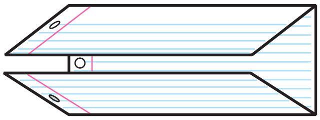
When you buy something, do you ever wonder why it sells at that particular price? Few individual consumers feel they have any influence over the price of an item. In a market economy like ours, however, all consumers individually and collectively have an influence on the price of all goods and services. One way Americans influence prices in the marketplace is through demand. If you are interested in the prices you pay for goods and services, or why some people earn higher salaries than others, you will be interested in learning how demand works.

To learn more about demand, view the ***Economics & You*** video lesson 5: What Is Demand?

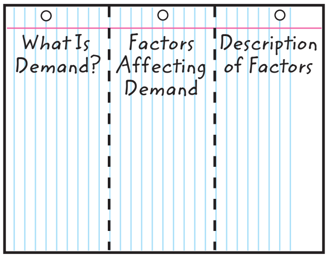
FOLDABLES™ Study Organizer

Organizing Information Study Foldable *Make the following foldable to help you organize information about demand in a market economy.*

Step 1 *Fold a sheet of paper into thirds from top to bottom.*



Step 2 *Turn the paper horizontally, unfold, and label the three columns as shown.*



Reading and Writing *As you read the chapter, record your thoughts and the information you learn about demand in a market economy in the appropriate columns of your foldable.*

Demand—shown by these people waiting to buy tickets—is the willingness to buy a product at a particular price.

Michele Burgess/Stock Boston

CIVICS Online

Chapter Overview Visit the *Civics Today* Web site at civ.glencoe.com and click on **Chapter Overviews—Chapter 20** to preview chapter information.

SECTION 1

What Is Demand?

GUIDE TO READING

Main Idea

You express your "demand" for a product when you are willing and able to purchase it.

Key Terms

demand, demand schedule, demand curve, law of demand, market demand, utility, diminishing marginal utility

Reading Strategy

Analyzing Information
As you read the section, complete the diagrams below to illustrate the law of demand.

Prices		Quantity Demanded
Rise	→	
Fall	→	

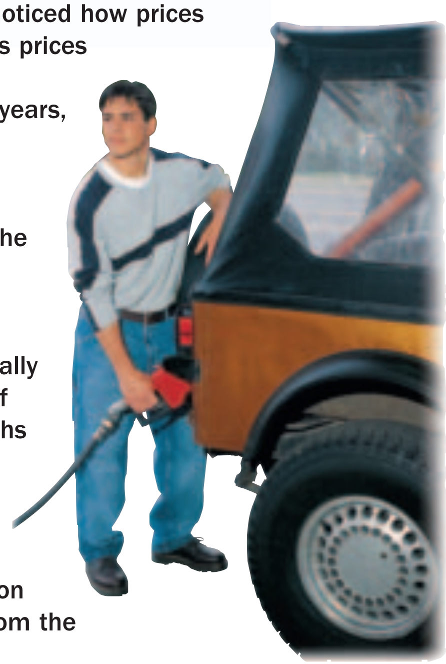
Read to Learn

- What does it mean when demand rises or falls?
- What does the law of demand state?

Interactive Graphic Organizer

Americans in Action

Have you ever noticed how prices affect the things we buy? Gas prices have been up and down dramatically in the past five years, and they affect the types of vehicles that we buy. A May 2004 article in *The Christian Science Monitor* tells about the impact of high gas prices on one American icon - the gas guzzling SUV: "Could the ultimate soccer-mom icon really be on its way out? Reports of falling sales for the behemoths of the road . . . have fueled speculation that Americans may finally be shifting away from the biggest-is-best mentality. . . . In April, sales on large SUVs fell 15 percent from the same period a year ago, . . ."



Motorist faces high gas prices

An Introduction to Demand

The story above illustrates a key feature of the American economy. In the United States, demand is affected by the price we pay. To understand prices, you have to understand both supply and demand. We will study demand in this chapter, seeing how it affects price and why it changes. In the next chapter, we will study supply more closely. Then we will see how supply and demand work together to set prices.

What is demand? The word **demand** has a specific meaning in economics. It refers to the desire, willingness, and ability to buy a good or service. For demand to exist, a consumer must *want* a good or service. Second, the consumer has to *be willing* to buy that good or service. Finally, the consumer must *have the resources* available to buy it.

Aaron Haupt

The Individual Demand Schedule

A **demand schedule** is a table that lists the various quantities of a product or service that someone is willing to buy over a range of possible prices. Look at the demand schedule on this page. It shows how many video games George would be willing to buy at different prices. For example, George would not purchase any video games if they cost $50 each. If the price were only $20 per game, though, he would be willing to buy two.

The Individual Demand Curve

Demand can also be shown graphically. A **demand curve** is a graph that shows the amount of a product that would be bought at all possible prices in the market. The curve is drawn with prices on the vertical axis and quantities on the horizontal axis. Each point on the curve shows how many units of the product or service an individual will buy at a particular price.

Look at the demand curve on this page. Notice that each point matches the quantity listed in the demand schedule. George would buy five video games if the price were $5 each, three games at $10 each, and so on.

The Law of Demand

Look at the graph again. As you see, demand curves usually slope downward because people are normally willing to buy less of a product if the price is high and more of it if the price is low. According to the **law of demand,** quantity demanded and price move in opposite directions.

Of course, this is just common sense. Think about your own buying habits. Aren't you more interested in buying more of something when the price is lower than when the price is higher?

Reading Check **Comparing** Describe the relationship between the demand schedule and the demand curve.

Individual vs. Market Demand

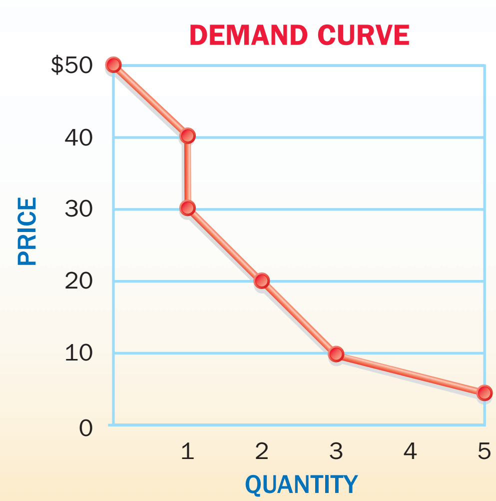
So far we have been looking at only one person's demand for a product or service. Companies hope to sell to many, many people, though. They have to take into account the demand of all those people. They are interested in the **market demand**—the total demand of all consumers for their product or service.

An Individual Buyer's Demand

In Motion

Demand Schedule

Price	Quantity
$50	0
$40	1
$30	1
$20	2
$10	3
$5	5



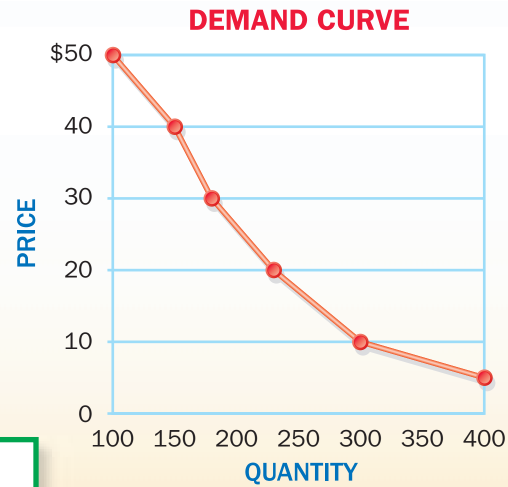
Analyzing Graphs and Charts

Demand is illustrated on a schedule or a curve. **How many video games would George be willing to purchase at a price of $10 each?**

CONTENTS

Market Demand

Demand Schedule	
Price	**Total Quantity Demanded**
$50	100
$40	150
$30	180
$20	230
$10	300
$5	400



Analyzing Graphs and Charts

The demand curve is the graphic representation of the law of demand. Why does the demand curve slope downward?

Market demand can also be shown as a demand schedule or as a demand curve. See the examples at the top of this page.

Demand Illustrated

A knowledge of demand is essential to understand how a market economy works. As you read in Chapter 18, in a market economy people and businesses act in their own best interests to answer the WHAT, HOW, and FOR WHOM questions of production. Knowledge of demand is also important for sound business planning.

To illustrate, imagine you are opening a bicycle repair shop. Before you begin, you need to know where the demand is. You will want to set up your shop in a neighborhood with many bicycle riders and few repair shops. After you identify an area in which to locate the shop, how do you measure the demand for your services? You may visit other shops and gauge the reactions of consumers to different prices. You may poll consumers about prices and determine demand from this data. You could study data compiled over past years, which would show consumer reactions to higher and lower prices. All of these methods would give you a general idea as to the desire, willingness, and ability of people to pay.

Diminishing Marginal Utility

Almost everything that we buy provides **utility,** meaning the pleasure, usefulness, or satisfaction we get from using the product. The utility of a good or service may vary from one person to the next. For example, you may get a great deal of enjoyment from a home computer, but your friend may get very little. Your friend may love pepperoni pizza, but you may not. A good or service does not have to have utility for everyone, only utility for some.

The utility we get from consumption usually changes as we consume more of a particular product. For example, when eating pizza, you may be very hungry before you eat the first slice, and so it will give you the most satisfaction. Because you are not quite as hungry after consuming the first slice, you receive less *marginal utility,* or less *additional satisfaction,* from each additional slice that you eat. This illustrates **diminishing marginal utility**—the principle that our additional satisfaction, or our marginal utility, tends to go down as more and more units are consumed.

The concept of diminishing marginal utility helps explain why the demand curve in the figure on page 450 slopes downward. For example, when we buy something, we usually ask ourselves if the marginal utility we will get from a purchase is worth the money we have to give up to get it. This is exactly the type of cost-benefit analysis we examined in the last chapter. If the extra benefits (the marginal utility) to be gained are greater than the marginal cost (the money given up), then we make the purchase. If the additional benefits are less than the extra costs, we do not make the purchase and we keep the money instead.

Because our marginal utility diminishes when we consume more and more of a product, it stands to reason that we would not be as willing to pay as much for the second item as we did for the first. Likewise, we would not be willing to pay as much for the third item as we did for the second. When the demand curve slopes downward, it simply tells us that we would be willing to pay the highest price for the first unit we consume, a slightly lower price for the next, and an even lower price for the third—and so on.

$ Economics and You

Buyer's Market

When an abundance of goods exists, buyers can afford to be selective. In a "buyer's market," sellers usually have to lower prices to lure customers. Such a market often develops at the end of a season or holiday when the demand for particular items goes down. Watch for sales in your local newspaper. Clip ads that show price cuts because of seasonally linked changes in demand.

Reading Check **Comparing** What is the difference between individual demand and market demand?

SECTION 1 ASSESSMENT

Study Central™ To review this section, go to civ.glencoe.com and click on **Study Central™**.

Checking for Understanding

1. **Key Terms** Use each of these terms in a complete sentence that helps explain its meaning: demand, demand schedule, demand curve, law of demand, market demand, utility.

Reviewing Main Ideas

2. **Explain** What is the term for a line plotted on a graph showing the quantities demanded of a good or service at each possible price?
3. **Explain** According to the law of demand, what would happen in a situation in which the average price of concert tickets rose from $40 to $80?

Critical Thinking

4. **Making Predictions** You sell popcorn during your school's football games. Knowing that people usually buy more when the price is lower, how would you price your popcorn after halftime?
5. **Making Predictions** On a diagram like the one below, identify a relatively rare good or service today that you think will be in very high demand in 20 years. Provide at least two reasons for your prediction.

Good or Service → Reason:
Good or Service → Reason:

Analyzing Visuals

6. **Interpret** Study the schedule and graph illustrating market demand on page 450. What is the quantity demanded at $30? What happens to total quantity demanded as the price increases?

★BE AN ACTIVE CITIZEN★

7. **Research** Interview a local merchant to determine the demand for a particular product over a specific period of time. Present your findings in graph form. Write a paragraph explaining what factors most affected demand for the product.

Interactive Graphic Organizer

CONTENTS

SECTION 2

Factors Affecting Demand

GUIDE TO READING

Main Idea

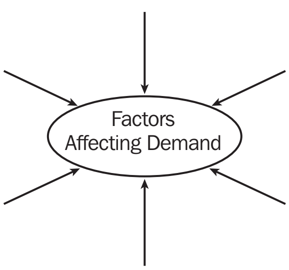
Several factors can cause demand to either increase or decrease.

Key Terms

substitute, complement, demand elasticity

Reading Strategy

Organizing Information As you read the section, complete a diagram like the one below by identifying six factors that affect demand.



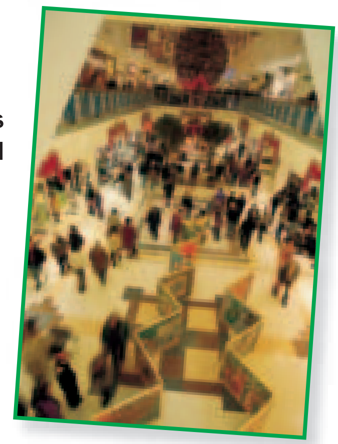
Read to Learn

- What does it mean when the demand curve shifts?
- What factors can cause a change in demand?

Interactive Graphic Organizer

Americans in Action

Many factors influence the demand for goods and services. One of these is changes in income. When your income goes up, you can afford to buy more goods and services. A TIME article described what happened in November 2001 when income fell: "Surveys find that households are planning to spend some $28 less than 2000's $490 average [on holiday presents]. . . . Retail Forward Inc. forecasts a drop of 1.5 percent in the season's sales of apparel, furniture, consumer electronics, and other general merchandise over last season's. . . . The reason for all the gloom and doom is obvious: Unemployment numbers are rising . . . and the current pop psychology says folks will be thinking more about spending time with friends and family than throwing a lot of money at them."



Buying fewer gifts this year

Changes in Demand

The demand for any product or service is not the same over time. Sometimes people are willing to buy higher quantities of a product or service at a particular price. At other times they are less willing to do so. As a result, demand can go up or down.

Several factors cause market demand to change. Market demand can change when more consumers enter the market. Market demand can also change when the incomes, tastes, and expectations of the consumers in the market change. Finally, changes in the prices of related goods affect demand.

These changes can all be graphed using a market demand curve. When demand goes down, people are willing to buy fewer items at all possible prices (see the graph showing a decrease in demand on page 453). In this case, the demand curve shifts to the left. When demand goes up, people are willing to buy more of the same item at any given price. This pushes the entire demand curve to the right. Look at the graph on page 453 that shows an increase in demand.

John Eastcott/Yva Momatiuk/Woodfin Camp & Assoc.

Changes in the Number of Consumers

Demand for a good in a particular market area is related to the number of consumers in the area. The more consumers, the higher the demand; the fewer consumers, the lower the demand. Suppose a company puts up a new apartment building and the building is soon filled with families. These new residents begin to buy products and services from area businesses. As a result, demand for gasoline, food, and video rentals in this area will go up. In this case, the demand curve will shift to the right.

The same factor can cause a change in the opposite direction. When many people move out of an area, demand for goods and services goes down. Here the demand curve shifts to the left.

The number of consumers in a particular market area may change for a number of reasons. A higher birthrate, increased immigration, or the migration of people from one region to another increases the number of consumers. Factors such as a higher death rate or the migration of people out of a region can also cause the number of consumers to fall.

Changes in Consumers' Income

Demand also changes when consumers' income changes. When the economy is healthy, people receive raises or move to better-paying jobs. With more money to spend, they are willing to buy more of a product at any particular price.

Again, the opposite can happen, too. In economic hard times, people lose their jobs. They have less income to spend, and so demand goes down.

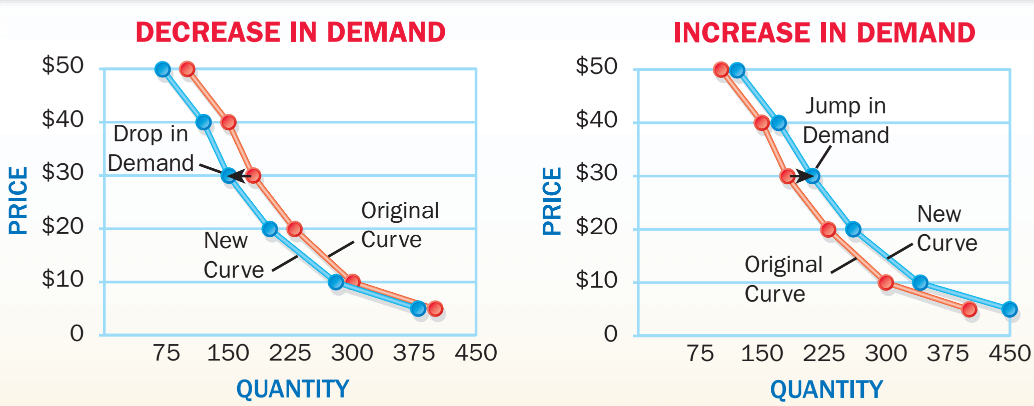
Changes in Consumers' Tastes

Changing tastes can affect demand as well. When a product becomes popular, perhaps through an advertising campaign, the demand curve shifts to the right. More people are willing to buy the product at a particular price. We often see this during the holiday shopping season when a new product becomes the "must-buy" of the year.

Many products, though, fade in popularity over time. When that happens, the demand curve shifts to the left. This shows that people are less willing to spend money on those products.

A Change in Demand

In Motion



Analyzing Graphs

A change in demand means that a different quantity is demanded at each and every possible price in the market.
What happens to the demand curve when demand increases?

Changes in Consumers' Expectations

"Expectations" refers to the way people think about the future. For example, suppose that a leading maker of audio products announces a technological breakthrough that would allow more music to be recorded on a smaller disk at a lower cost than before. Even if the new product might not be available for another year, some consumers might decide to buy fewer music CDs today simply because they want to wait for the new product. Expectations also affected demand in the Americans in Action article that began this section. People were worried about hard times in late 2001. As a result, they were less willing to spend money on holiday gifts. The demand for goods was reduced.

Expectations can also force demand higher. If people expect a shortage of something, such as gasoline, demand increases. This shifts the demand curve to the right.

Changes in Substitutes

Demand can be influenced by changes in the price or quality of related products. The demand for older computers falls when new models with faster processors come out. The demand for a certain brand of tire may increase when another tire has safety problems.

Competing products are called **substitutes** because consumers can use one in place of the other. When two goods are substitutes, a change in the price of one good causes the demand for the other good to move in the *same* direction. For example, for many people, butter is a substitute for margarine. If the price of margarine increases, the demand for butter also increases (shifts to the right) as people substitute butter for the higher-priced margarine. Other examples of substitutes include coffee and tea, pens and pencils, and Ford cars and Chrysler cars.

Changes in Complements

Some products are **complements,** meaning that they are used together. For example, computers and software are complements. With complementary goods, the demand for one moves in the opposite direction as the price of the other. So if computer prices rise, fewer computers will

American Biographies

Beulah Louise Henry (1887–1973)

When asked why she designed so many new products, Beulah Henry declared, "I invent because I can't help it." Born in Memphis, Tennessee, in 1887, Henry came from a family of artists. However, instead of drawing landscapes or portraits, she sketched gadgets.

Henry went on to invent more than 100 items, earning 49 patents. For the home, she designed the first bobbinless sewing machine and a vacuum (sealed) ice cream maker. For the office, she created continuously attached envelopes for mass mailings and an early photocopier—a typewriter that made multiple copies without copier paper. For children, she invented the Kiddie Klock to teach time and a doll with a radio inside.

Henry became known as the "Lady Edison," after Thomas Alva Edison. Like Edison, Henry not only invented, she thought of innovative ways to market her products. If a new machine was needed to manufacture an item, she invented it. If she needed a company to produce the goods, she founded it. By age 37 Henry could boast, "I have inventions patented in four different countries, and I am president of two newly incorporated companies."

Illustrator: H. Mitchell

Elastic Demand A new car may be considered a luxury. Medicine is a necessity. **The demand for which of these two items is more likely to be elastic?**

be demanded, and the demand for computer software will go down. Because people are buying fewer new computers, they need less new software.

You can also see the same effect when the price goes down instead of up. When the price of DVD players goes down, more DVD players are demanded, which also results in an increase in the demand for DVDs. Other examples of complements (or complementary goods) include cars and gasoline, videotapes and VCRs, lightbulbs and lamps, and tennis rackets and tennis balls.

Reading Check **Comparing** Are butter and margarine substitute goods? Why or why not?

Elasticity of Demand

The law of demand states that price and quantity demanded move in opposite directions. If price goes up, quantity demanded goes down; and if price goes down, quantity demanded goes up.

Now suppose price goes up from $1 to $1.25, a 25 percent rise. We know that quantity demanded will go down, but we don't know by how much. Quantity demanded could go down by 25 percent, by less than 25 percent, or by more than 25 percent.

All products and services are not affected by these factors in the same way. Economists call this phenomenon demand elasticity. **Demand elasticity** is the extent to which a change in price causes a change in the quantity demanded.

Elastic Demand

For some goods and services, demand is elastic. This means that each change in price causes a relatively larger percentage change in quantity demanded. For example, when automakers reduce car prices modestly, the quantity sold goes up greatly. When they raise the price of their cars, the quantity sold goes down a great deal.

When there are attractive substitutes for a good or service, demand tends to be elastic. That is because consumers can choose to buy the substitute. Expensive items generally have elastic demand. That is because consumers are less willing to pay even more for goods that are expensive in the first place. Finally, demand is usually elastic when a purchase can be postponed until later. In this case,

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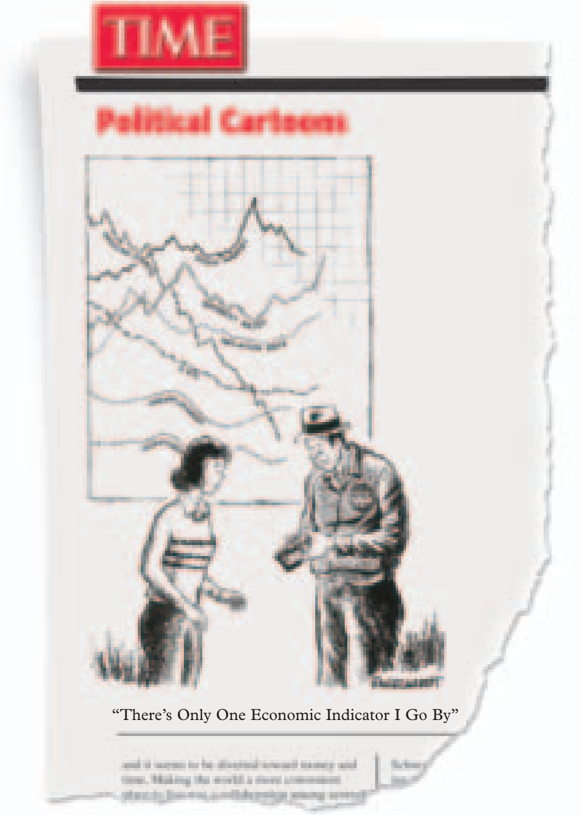
Student Web Activity Visit civ.glencoe.com and click on **Student Web Activities—Chapter 20** to learn more about demand for products.

(l)Peter Southwick/Stock Boston, (r)Joan Slatkin/Omni-Photo Communications



"There's Only One Economic Indicator I Go By"

Analyzing Visuals **To monitor the health of the economy, the government keeps track of a wide range of indicators. What is the cartoonist implying about the relationship between economic indicators and consumers' purchasing decisions?**

consumers delay buying the good or service in the hopes that the price will go down.

Inelastic Demand

For other goods and services, demand is inelastic. This means that price changes have little effect on the quantity demanded. For example, the demand for turkey at Thanksgiving tends to be inelastic. Many people make turkey a central part of their Thanksgiving meal. If supermarkets slightly raise the price of turkey, they would probably not lose many customers. At another time of year, higher turkey prices might cause consumers to purchase other meat products instead.

The demand for goods with very few or no substitutes, like pepper, electricity, and some medicines, is likely to be inelastic. Heart medicine, for example, has relatively few substitutes; many people must have it to stay well. Even if the price of heart medicine doubled, quantity demanded probably would not fall by much.

Reading Check **Inferring** Why is the demand for insulin, a medicine for people with diabetes, inelastic?

SECTION 2 ASSESSMENT

CIVICS Online **Study Central**™ To review this section, go to civ.glencoe.com and click on **Study Central**™.

Checking for Understanding

1. **Key Terms** Write a paragraph in which you use each of these terms correctly: substitute, complement, demand elasticity.

Reviewing Main Ideas

2. **Explain** How do we show on a demand curve an increase in the demand for a good?
3. **Describe** What is the term that describes the relationship between a change in price and the resulting change in the number sold?

Critical Thinking

4. **Making Generalizations** Will products that are very important to us and that have no close substitutes have elastic or inelastic demand?
5. **Understanding Cause and Effect** Create a chart like the one below to show how a change in the price of substitutes influences quantity demanded.

Price	Effect
Increases	
Decreases	

Analyzing Visuals

6. **Infer** Study the graphs showing change in demand on page 453. Would a decrease in income cause an increase or a decrease in demand? How would a decrease in the price of cameras affect the demand for film?

★BE AN ACTIVE CITIZEN★

7. **Research** Find an example of the law of demand or elasticity of demand in a newspaper or magazine article or advertisement. Share your findings with the class.

Tom Engelhardt

Interactive Graphic Organizer

CONTENTS

Critical Thinking

SKILLBUILDER

Reading a Line Graph

Why Learn This Skill?

What is the status of consumer demand for fuel-efficient automobiles? Is the labor market as strong this year as it was last year? Industries and governments routinely collect statistics that answer these kinds of questions. Such statistics are often arranged on line graphs. A line graph condenses a large amount of information into a visual format. Reading line graphs can help you make comparisons and trace trends.

Learning the Skill

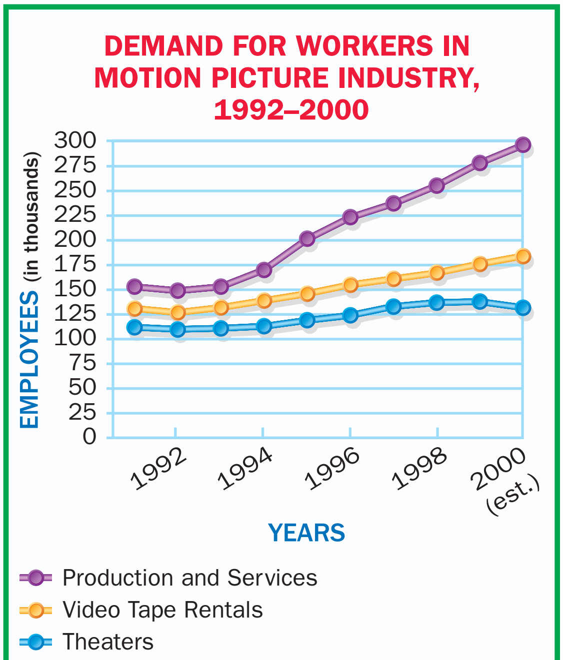
To read a line graph, follow these steps:

- Read the title. The title of the graph tells you what kind of information the graph presents.
- Read the key. The key lists specific categories of data displayed. It also shows the symbol or device used to represent each category.
- Examine the labeling along the vertical and horizontal axes. Determine the area of information shown on each axis and determine how the graph grid is divided.
- Locate specific points where the line intersects with the grid. Identify the single fact indicated at that point.
- Look for relationships. Compare patterns among the different areas shown on the graph. Trace graph lines to identify trends over time.

Practicing the Skill

On a separate sheet of paper, answer the following questions about the line graph on this page.

1. What is the subject of this graph?
2. Into what three categories are the statistics grouped?
3. What information is shown along the vertical axis?



4. In which sector of the motion picture industry was the demand for workers the lowest?
5. Did the overall demand for workers in the motion picture industry rise or fall in the 1990s?

Applying the Skill

Use newspapers or magazines to locate a line graph showing some current economic statistics. Record at least two specific points of information and one trend you note after reading the graph.

Practice key skills with Glencoe's **Skillbuilder Interactive Workbook CD-ROM, Level 1.**

Assessment & Activities

Review to Learn

Section 1

- You express demand for a product when you are both willing and able to purchase it.
- Demand can be summarized in a demand schedule.
- Demand can also be shown graphically in a downward-sloping demand curve.

Section 2

- A change in demand means that people have changed their minds about the amounts they would buy at each and every price.
- Change in consumer incomes, tastes, expectations, and the price of related goods causes a change in demand.
- Elasticity is a measure of responsiveness to an increase or a decrease in price.

FOLDABLES™ Study Organizer

Using Your Foldables Study Organizer
After you have completed your foldable, pair up with a classmate. One person should name a factor that affects demand. The other person should describe how that factor affects demand. Take turns in the same manner until you have named all of the factors.

Reviewing Key Terms

Write the key term that best matches each definition below.

1. an economic rule stating that the quantity demanded and price move in opposite directions
2. the desire, willingness, and ability to buy a product
3. a product related to another product in such a way that an increase in the price of one reduces the demand for both
4. a downward-sloping graph that shows the quantities demanded at each possible price
5. a situation in which consumers demand different amounts at every price, causing the demand curve to shift to the left or right
6. a product that can be used in place of another product
7. a listing that shows the quantities demanded of a product at various prices
8. a situation in which the rise or fall in a product's price greatly affects the amount that people are willing to buy

Reviewing Main Ideas

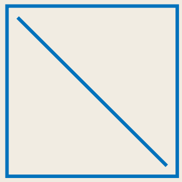
9. What is the law of demand?
10. What does a demand curve show?
11. What happens to quantity demanded of a product when the price goes down?
12. How do we show in a graph an increase in the demand for a good?
13. What is the difference between elastic and inelastic demand?
14. What is the term for a good that is often used with another product?
15. Butter and margarine are substitutes. What happens to the demand for butter as the price of margarine rises?
16. What does it mean when a demand curve shifts to the right? To the left?

(t)Jonathan Nourok/PhotoEdit, (b)Mike Yamashita/Woodfin Camp & Assoc.

Critical Thinking

17. Summarizing Information Why is the demand for a product with many substitutes elastic?

18. Understanding Cause and Effect Recreate the diagram at right. Use arrows to indicate the direction of movement of the demand curve for the statements below.



- the demand curve for CDs if all wages increased by 20 percent
- the demand curve for chicken if the price of beef falls

Analyzing Visuals

Study the table below; then answer the following questions.

Price of Cassettes	Olivia	Gabriel	June	Market Demand
$1.00	9	6	1	16
$1.50	8	5	1	14
$2.00	7	4	0	11
$2.50	6	3	0	9
$3.00	5	2	0	7

19. At a price of $3, how many cassettes does each person demand?

20. Does the data suggest that, at lower prices, new demanders enter the market? Explain.

Practicing Skills

21. Reading a Line Graph Analyze the line graph on page 457. What are the three categories of workers shown? What category made up the largest number of motion picture workers in 2000? The smallest?

CIVICS Online

Self-Check Quiz Visit the *Civics Today* Web site at civ.glencoe.com and click on **Self-Check Quizzes—Chapter 20** to prepare for the chapter test.

Economics Activity

22. For each of the cases below, identify the factor that is causing demand to change.

- The demand for snow tires in Chicago increases when a weather forecast predicts a blizzard.
- The demand for tea decreases when the price of coffee falls.

★ CITIZENSHIP COOPERATIVE ACTIVITY ★

23. Working in a team of four, interview four students in the school, asking the following questions: Do any recent purchases represent a change in your buying habits? If so, what factors caused the change?

After completing the interviews, summarize your information and draw conclusions.

Standardized Test Practice

Directions: Choose the *best* answer to the following question.

When a demand curve shifts to the right, it means

F an increase in price will lower total revenue.
G the product has few substitutes.
H buyers are willing and able to buy more units of the good at all prices.
J buyers are willing and able to buy fewer units at all prices.

Test-Taking Tip

Read all the answer choices carefully before you select an answer.