

CHAPTER

6

SECTION 1

Seeking
Equilibrium:
Demand and
Supply

SECTION 2

Prices as Signals
and Incentives

SECTION 3

Intervention in
the Price System

CASE STUDY

Prices for
Concert Tickets

Demand, Supply, and Prices

CONCEPT REVIEW

Demand is the willingness to buy a good or a service and the ability to pay for it.

Supply is the willingness and ability to produce and sell a product.

CHAPTER 6 KEY CONCEPT

The **equilibrium price** is the price at which quantity demanded and quantity supplied are the same.

WHY THE CONCEPT MATTERS

You've been looking for a vintage concert T-shirt to buy. You see the shirt you want offered on an Internet site, but the price is too high. After exchanging several e-mails, you and the seller set a price. It's higher than you wanted to pay and lower than the seller wanted to receive, but it's acceptable to you both. In a market economy, the forces of demand and supply act in much the same way. They work together to set a price that buyers and sellers find acceptable.

Online Highlights

More at ClassZone.com

Economics Update

Go to **ECONOMICS UPDATE** for chapter updates and current news on ticketing companies' pricing practices. (See Case Study, pp. 186–187.) ▶

Animated Economics

Go to **ANIMATED ECONOMICS** for interactive lessons on the graphs and tables in this chapter.

Interactive Review

Go to **INTERACTIVE REVIEW** for concept review and activities.



Why have some rock bands questioned the pricing practices of certain ticketing companies? See the Case Study on pages 186–187.

Seeking Equilibrium: Demand and Supply

OBJECTIVES

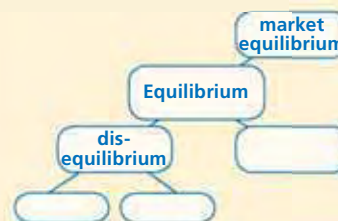
- In Section 1, you will
- explore market equilibrium and see how it is reached
 - explain how demand and supply interact to determine equilibrium price
 - analyze what causes surplus, shortage, and disequilibrium
 - identify how changes to demand and supply affect the equilibrium price

KEY TERMS

market equilibrium, *p.* 164
 equilibrium price, *p.* 164
 surplus, *p.* 167
 shortage, *p.* 167
 disequilibrium, *p.* 169

TAKING NOTES

As you read Section 1, complete a cluster diagram like the one shown using the key concepts and other helpful words and phrases. Use the Graphic Organizer at [Interactive Review @ ClassZone.com](http://InteractiveReview@ClassZone.com)



The Interaction of Demand and Supply

KEY CONCEPTS

In Chapters 4 and 5, you learned about how demand and supply work in the market. Recall that a market is any place or situation in which people buy and sell goods and services. Since the market is the place where buyers and sellers come together, it is also the place where demand and supply interact.

As buyers and sellers interact, the market moves toward **market equilibrium**, a situation in which the quantity demanded of a good or service at a particular price is equal to the quantity supplied at that price. **Equilibrium price** is the price at which the quantity of a product demanded by consumers and the quantity supplied by producers are equal.

EXAMPLE Market Demand and Supply Schedule

Let's look at an example of how this concept works in a particular market. Karen runs a sandwich shop near an office park. Recently, she decided to offer a new product at lunchtime—prepared salads. On the first day, she makes up 40 salads and offers them at \$10 each. She is disappointed when she sells only 10 and has to throw the rest away. The next day she is more cautious. She lowers



QUICK REFERENCE

Market equilibrium occurs when the quantity demanded and the quantity supplied at a particular price are equal.

Equilibrium price is the price at which the quantity demanded and the quantity supplied are equal.

the price to \$4 each and makes only 15 salads. She discovers that 35 customers wanted her salads at the lower price. How can Karen find the right price?

Over the course of a week, Karen experiments with different combinations of price and quantity of salads supplied until she discovers market equilibrium at \$6 per salad. At that price, she is willing to offer 25 salads for sale, and she sells all of them. When she has either too many or too few salads, she is motivated to change her price. Market equilibrium is the point at which quantity demanded and quantity supplied are in balance.

FIGURE 6.1 KAREN'S MARKET DEMAND AND SUPPLY SCHEDULE

Price per Salad (\$)	Quantity Demanded	Quantity Supplied
10	10	40
8	15	35
6	25	25
4	35	15
2	40	10

- a** At prices above \$6, quantity supplied exceeds quantity demanded.
- b** At the price of \$6, the quantity demanded and the quantity supplied are equal.
- c** At prices below \$6, the quantity demanded exceeds the quantity supplied.

Only at the **equilibrium price** of \$6 are the quantity demanded and the quantity supplied equal.

ANALYZE TABLES

1. What is the difference between quantity supplied and quantity demanded when the price is \$10? What is the difference when the price is \$2?
2. How does this market demand and supply schedule illustrate the laws of demand and supply?



Use an interactive market demand and supply schedule and curve at ClassZone.com

Look at Figure 6.1 to see the information that Karen gathered from her first week selling prepared salads. This table is a combined market demand and supply schedule that shows the quantities of salads supplied and demanded at various prices. Notice that quantity demanded and quantity supplied are different at every line of the schedule except one. That line represents market equilibrium and shows the equilibrium price of \$6. When Karen offers salads at prices above \$6, she produces more salads than she can sell and has to throw some away. When she offers salads at prices below \$6, there is unmet demand because people want more salads than Karen is willing to offer at those prices.

Karen's experience shows how the laws of demand and supply interact in the market. She wants to offer more salads at higher prices than at lower prices because she wants to earn more profit. Her costs would make it impossible to earn much, if any, profit if she were to sell the number of salads that the office workers would like to buy at the lower prices. In a similar way, while the office workers may like the idea of fresh salads for lunch, they are not willing to buy the quantity of salads that Karen wants to sell at higher prices.

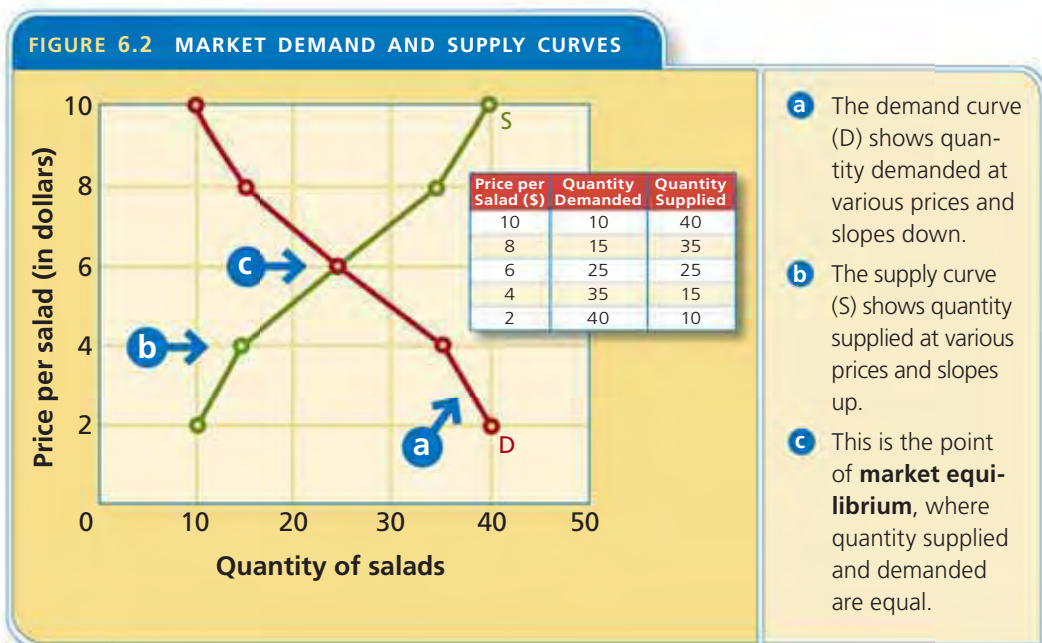


Find an update on market equilibrium at ClassZone.com

EXAMPLE Market Demand and Supply Curve

Just as it is possible to convert a market demand schedule to a market demand curve or a market supply schedule to a market supply curve, it is possible to graph a combined market demand and supply schedule.

Figure 6.2 portrays Karen's market demand and supply schedule on a combined graph. On the graph, the vertical axis shows the various prices at which salads are offered for sale and bought. The horizontal axis shows the quantity of salads, whether it is the quantity demanded or the quantity supplied. The demand curve (D) is plotted using the prices and the quantities demanded (Figure 6.1, columns 1 and 2). The supply curve (S) is plotted using the prices and the quantities supplied from the combined schedule (Figure 6.1, columns 1 and 3). You can read each individual curve the same way that you did in Chapters 4 and 5, when demand and supply were shown on separate graphs. Each point on the demand curve shows the intersection of price and quantity demanded. Each point on the supply curve shows the intersection of price and quantity supplied.



ANALYZE GRAPHS

1. What is the quantity supplied at \$8? What is the quantity demanded at \$8?
2. How do these market demand and supply curves illustrate the concept of equilibrium price?

Look at Figure 6.2 again and notice that the two curves intersect at only one point; this is the point of market equilibrium. It occurs when quantity demanded and quantity supplied are the same—25 salads at \$6. Showing the two curves together allows you to see the interaction of demand and supply graphically.

APPLICATION Applying Economic Concepts

- A.** Create a combined market demand and supply schedule for pizza at prices of \$25, \$20, \$15, \$10, and \$5, where \$10 is the price at which there is equilibrium.

Reaching the Equilibrium Price

KEY CONCEPTS

It's clear from the example of Karen's salads that markets don't arrive at equilibrium price instantly; they often require a process of trial and error. The market may experience a **surplus**, which is the result of quantity supplied being greater than quantity demanded, usually because prices are too high. Or a **shortage** may occur, the result of quantity demanded being greater than quantity supplied, usually because prices are too low.

EXAMPLE Surplus, Shortage, and Equilibrium

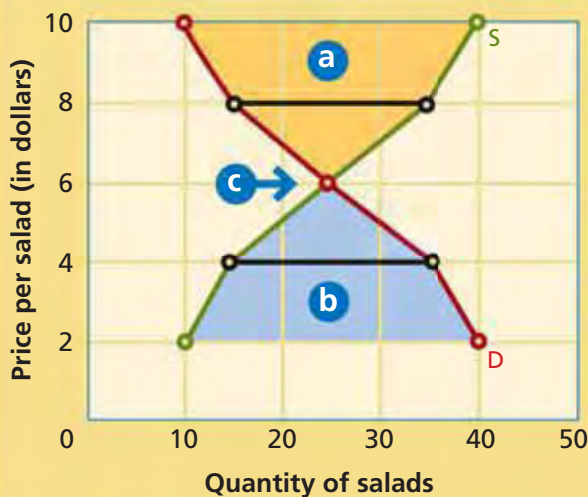
In Figure 6.3, we can see how Karen's experience demonstrates the concepts of surplus and shortage. It also shows that equilibrium occurs when there is neither a surplus nor a shortage, because quantity demanded and quantity supplied are equal.

QUICK REFERENCE

Surplus is the result of quantity supplied being greater than quantity demanded.

Shortage is the result of quantity demanded being greater than quantity supplied.

FIGURE 6.3 SURPLUS, SHORTAGE, AND EQUILIBRIUM



- a When the price is above \$6, quantity supplied exceeds quantity demanded, and there is a **surplus** (shaded in orange).
- b When the price is below \$6, quantity demanded exceeds quantity supplied, and there is a **shortage** (shaded in blue).
- c At the equilibrium price, there is neither a surplus nor a shortage.

ANALYZE GRAPHS

1. Is there a surplus or a shortage when the price is \$10? How big is that surplus or shortage? How great is the surplus or shortage when the price is \$2?
2. What does this graph illustrate about surplus, shortage, and equilibrium price?

In Figure 6.3, there is a surplus in the area shaded orange. As Karen discovered when she tried to sell salads at prices above \$6, she had too many and had to throw some away. The amount of surplus is measured by the horizontal distance between the two curves at each price. For example, at the price of \$8, the distance shown by the black line between 15 and 35 shows a surplus of 20 salads.

When there is a surplus, prices tend to fall until the surplus is sold and equilibrium is reached. Producers might also choose to cut back their production to a quantity that is more in line with what consumers demand at the higher prices.

The blue area in Figure 6.3 represents where there is a shortage. When Karen decided to charge less than \$6, she had too few salads and lots of unhappy customers who weren't able to get the salads they wanted. As with the surplus, the amount of shortage is measured by the horizontal distance between the two curves at each price. For example, at the price of \$4, the distance shown by the black line between 15 and 35 salads shows a shortage of 20 salads.

When there is a shortage, producers raise prices in an attempt to balance quantity supplied and quantity demanded. Producers may also try to increase quantity supplied to meet the quantities demanded at the lower prices.



Holiday Shortages

Consumer tastes often cause spikes in demand for certain items during the holidays.

EXAMPLE Holiday Toys

The concepts of surplus and shortage and the move to equilibrium are active in many markets at different times. Perhaps they are most visible in the market for toys during the holiday shopping season. Toys are often fads, and children's tastes change rapidly. It is difficult for marketers to know how much to supply and at what price to best meet the quantities demanded by consumers. Sometimes they overestimate a toy's popularity and end up with a surplus. If they underestimate popularity, they are faced with a shortage.

In 1996, for example, Tyco Toys Inc. introduced Tickle Me Elmo. The toy included a microchip that made the toy laugh when it was touched. Tyco expected the toy to be popular and ordered about 500,000 for the holiday season. It was priced around \$30.

Sales started slowly, and stores thought they might have a surplus. But after several popular television personalities promoted it, Tickle Me Elmo became the hottest toy of that holiday season, and a shortage developed. Even when prices increased markedly, buyers were undeterred. They continued to purchase the toys until they were all gone.

Tyco tried to increase its supply, but the factories that made Tickle Me Elmo were located in Asia, and the shortage persisted throughout the holiday season. By spring, the quantity supplied had doubled. By then, however, the height of the fad was over. Initially, stores tried to sell the toys at the same high prices charged during the holiday season. But consumers were reluctant

to buy, and a surplus resulted. Eventually, the market reached equilibrium at a price of about \$25.

When you see suppliers reducing prices, it is often because they have a surplus of products to sell. Consider, for example, what happens to the prices of clothing items that are out of season or no longer in fashion. On the other hand, if an item becomes particularly popular or is in short supply for some other reason, suppliers will raise prices. The market does not always reach equilibrium quickly, but it is always moving toward equilibrium.

SMART Grapher

Create a demand and supply curve at ClassZone.com

APPLICATION Applying Economic Concepts

- B. Look back at the market demand and supply schedule you created for Application A on p. 166. Use it to create a graph showing the interaction of demand and supply and mark it to show surplus, shortage, and equilibrium.

Equilibrium Price in Real Life

KEY CONCEPTS

In theory, the relationship between demand and supply in the market seems straightforward. The real world, however, is more complex. In earlier chapters, you learned that there are several factors that can cause demand and supply to change. When there is an imbalance between quantity demanded and quantity supplied, a state of **disequilibrium** exists, and the process of finding equilibrium starts over again.

EXAMPLE Change in Demand and Equilibrium Price

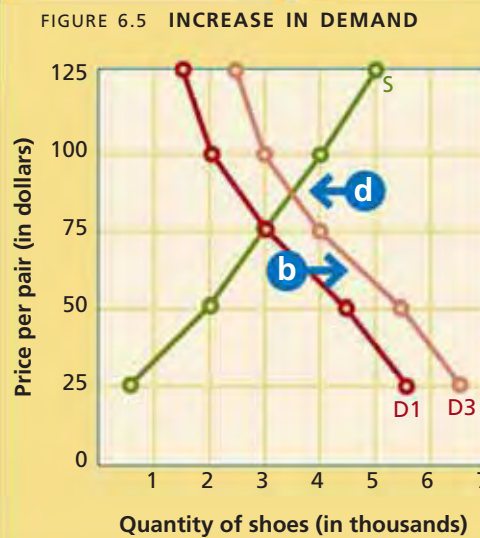
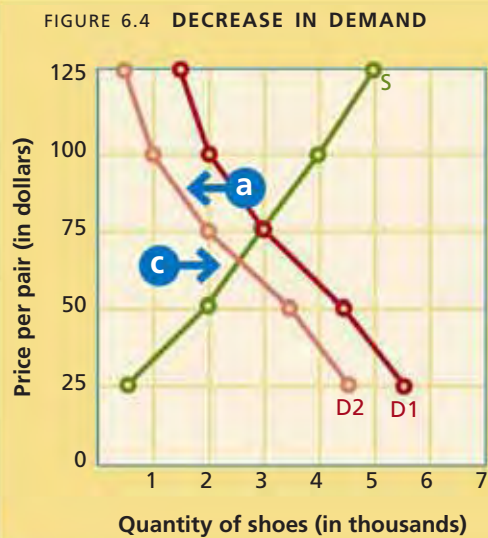
Let's take a look at how the market moves from disequilibrium by considering the effect of changes in demand on the equilibrium price for athletic shoes. Recall that a change in demand occurs when one of six factors—income, consumer taste, consumer expectations, market size, substitutes, and complements—prompts consumers to change the quantity demanded at every price.

In Figures 6.4 and 6.5, the intersection of the demand curve (D1) and the supply curves (S) shows an equilibrium price of \$75, with quantity demanded and supplied of 3,000 pairs of shoes. When a change in consumer taste causes a decrease in demand for athletic shoes at every price, the demand curve shifts to the left, as shown in Figure 6.4. Notice that this new demand curve (D2) intersects the supply curve at a lower price, around \$65. This becomes the new equilibrium price. At this

QUICK REFERENCE

Disequilibrium occurs when quantity demanded and quantity supplied are not in balance.

FIGURES 6.4 AND 6.5 CHANGES IN DEMAND AND EQUILIBRIUM PRICE



- a** In Figure 6.4, demand decreases; the demand curve shifts left and intersects the supply curve at a lower point.
- b** In Figure 6.5, demand increases; the demand curve shifts right and intersects the supply curve at a higher point.
- c** When demand decreases (Fig. 6.4), the equilibrium price falls to about \$65.
- d** When demand increases (Fig. 6.5), the equilibrium price rises to about \$90.

ANALYZE GRAPHS

- What happens to quantity demanded at \$100 when demand decreases? What happens to quantity demanded at \$100 when demand increases?
- Does change in demand have a direct or inverse relationship to equilibrium price? Explain your answer.



Use an interactive market demand and supply curve to see changes in demand, supply, and equilibrium price at ClassZone.com

new, lower equilibrium price, the quantity demanded decreases to 2,500 pairs of shoes. In other words, when consumers demand fewer goods and services at every price, the equilibrium price will fall and suppliers will sell fewer units—even though the price is lower.

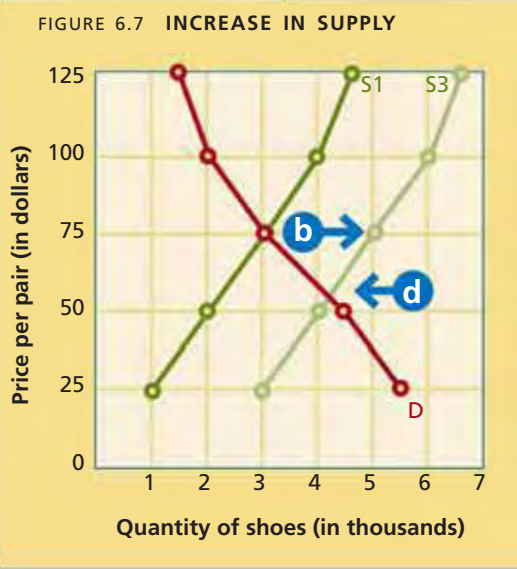
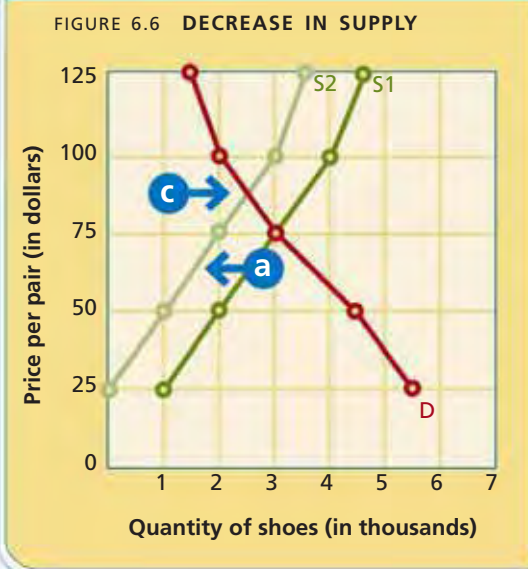
Suppose that an increase in the number of young adults causes demand for athletic shoes to increase. When there is an increase in demand, the demand curve shifts to the right, as shown in Figure 6.5. Notice that the new demand curve (D3) intersects the supply curve at a higher price, around \$90. As the equilibrium price increases to this higher level, the quantity demanded also increases to 3,500 pairs of shoes. When consumers demand more goods and services at every price, equilibrium price will rise and suppliers will sell more, even at higher prices.

EXAMPLE Change in Supply and Equilibrium Price

Now let's consider how changes in supply might affect equilibrium price. Recall that a change in supply occurs when something in the market prompts producers to offer different amounts for sale at every price. Remember from Chapter 5 that the six factors that can change supply are input costs, productivity, technology, government action, producer expectations, and number of producers.

In Figures 6.6 and 6.7, the intersection of the supply curve (S1) and the demand curve (D) shows an equilibrium price of \$75, with quantity supplied and demanded of 3,000 pairs of shoes. If the price of the raw materials needed to produce athletic shoes increases, the result is a decrease in supply of these shoes at every price.

FIGURES 6.6 AND 6.7 CHANGES IN SUPPLY AND EQUILIBRIUM PRICE



- a** In Figure 6.6, supply decreases; the supply curve shifts left and intersects the demand curve at a higher point.
- b** In Figure 6.7, supply increases; the supply curve shifts right and intersects the demand curve at a lower point.
- c** When supply decreases (Fig. 6.6) the equilibrium price rises to about \$90.
- d** When supply increases (Fig. 6.7) the equilibrium price falls to about \$55.

ANALYZE GRAPHS

1. What happens to quantity supplied at \$100 when supply decreases? What happens to quantity supplied at \$100 when supply increases?
2. How do these graphs illustrate the relationship between change in supply and change in equilibrium price?

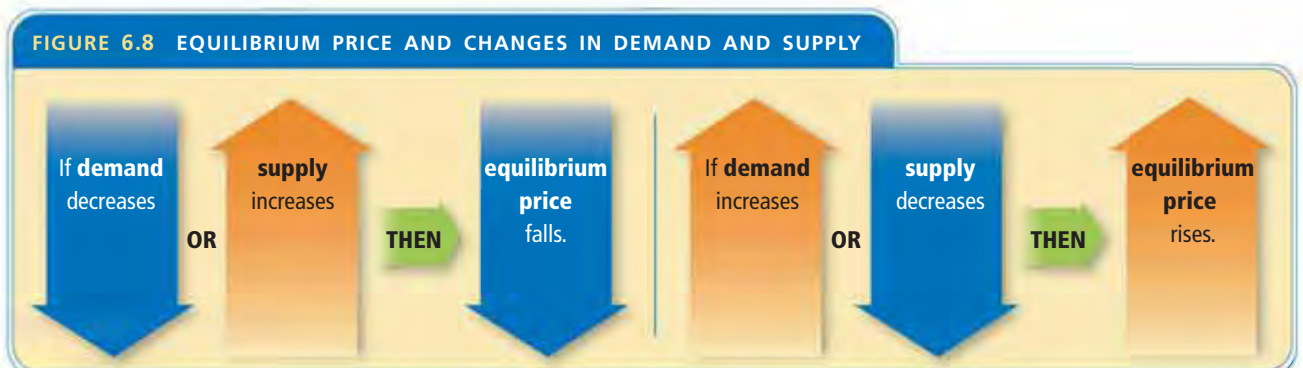
In this situation, the supply curve shifts to the left, as shown in Figure 6.6. Notice that the new supply curve (S_2) intersects the demand curve at a higher price, around \$90. This is the new equilibrium price. Because of this increase in price, the quantity demanded at equilibrium decreases to 2,500 pairs of shoes. In other words, when there are fewer goods and services available at every price, equilibrium price will rise.

When new technology allows the manufacturer to produce shoes more efficiently, supply increases, and the supply curve shifts to the right, as shown in Figure 6.7. Notice that the new supply curve (S_3) intersects the demand curve at a lower price, about \$55. This is the new equilibrium price. Because of this decrease in price, the quantity demanded at equilibrium increases to about 4,100 pairs of shoes. In other words, when there are more goods and services available at every price, equilibrium price will fall.

Look at Figures 6.4, 6.5, 6.6, and 6.7 once more and notice which situations cause equilibrium price to fall and which cause equilibrium price to rise. The relationships between changes in demand or supply and changes in equilibrium price are illustrated in Figure 6.8. Equilibrium price falls when there is a decrease in demand or an increase in supply. Equilibrium price rises when there is an increase in demand or a decrease in supply. In other words, when consumers want less or producers supply more, prices will fall. When consumers want more or producers supply less, prices will rise.



Technology Both supply and equilibrium price are affected when technology improves the manufacturing process.



APPLICATION Analyzing Effects

- C. If one of the three pizza parlors in your neighborhood closes, what will happen to the supply of pizza? How will that affect the equilibrium price of pizza?



For more on interpreting graphs, see the Skillbuilder Handbook, page R29.

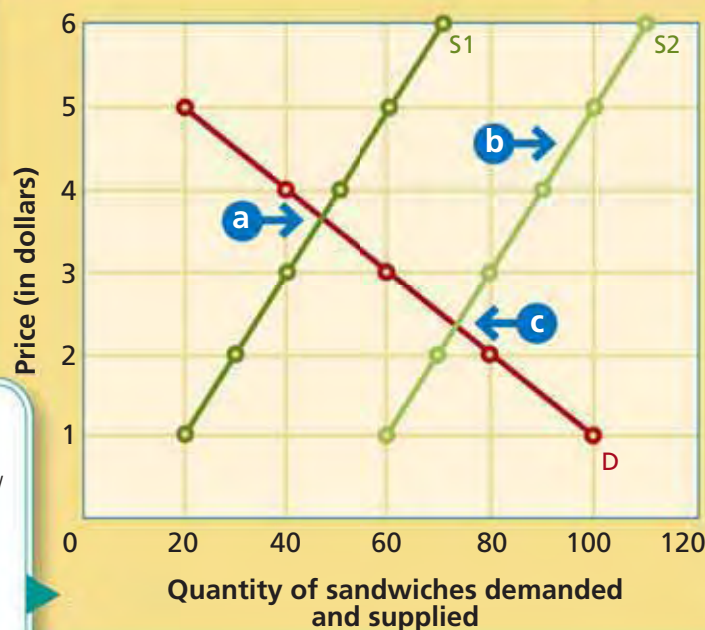
Interpreting Graphs: Shifting Curves

Graphs show statistical information in a visual manner. A graph that shows a shifting curve should immediately alert the reader to one of the following: a change in quantity demanded at every price, or a change in quantity supplied at every price. In Figure 6.9, a change in the number of producers has caused an increase in supply at every price. The sandwich shop across the street from Forest View High School now has a competitor.

TECHNIQUES FOR ANALYZING SHIFTING CURVES Use the following strategies, along with what you learned throughout Section 1, to analyze the graph.

Use the title to identify the main idea of the graph. If supply has shifted, then we know that quantity supplied at every price has either increased or decreased.

FIGURE 6.9 SHIFT IN SUPPLY OF SANDWICHES



Use the annotations to find key elements of the graph. Annotation **a** shows the equilibrium price where curve S1 meets curve D.

- a** This is the initial equilibrium price.
- b** Curve shifts to the right.
- c** This is the new equilibrium price.

Notice that **b** shows a shift to the right. An increase in supply always shows a rightward shift; a decrease in supply always causes a leftward shift.

Notice the new equilibrium price, **c**. An increase in supply results in a lower equilibrium price.

Read the axis labels carefully. When both quantity supplied and demanded are present, look for an intersection to find equilibrium price.

THINKING ECONOMICALLY Analyzing

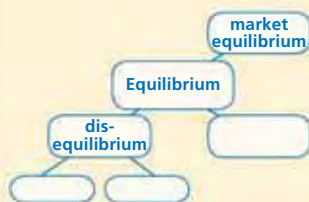
1. What are the pre-shift and post-shift equilibrium prices for a sandwich? Will an increase in quantity supplied at every price always result in a lower equilibrium price? Why?
2. Imagine that instead of an increase in supply, there is a decrease in demand. How will the equilibrium price change? Why?
3. On a separate sheet of paper, sketch intersecting quantity supplied and demanded curves with an equilibrium price of \$4 at 80 sandwiches. How have the curves shifted from those that appear in Figure 6.9?

SECTION 1 Assessment

REVIEWING KEY CONCEPTS

1. Explain the differences between the terms in each of these pairs:
 - a. *market equilibrium* b. *surplus*
disequilibrium *shortage*
2. How are surplus and shortage related to equilibrium price?
3. Why is equilibrium price represented by the intersection of the supply and demand curves in a particular market?
4. Why do changes in demand or supply cause disequilibrium?
5. Why is the market always moving toward equilibrium?

6. Using Your Notes How is equilibrium price related to market equilibrium? Refer to your completed cluster diagram. Use the Graphic Organizer at **Interactive Review @ ClassZone.com**



CRITICAL THINKING

7. **Analyzing Data** Look at Figures 6.4, 6.5, 6.6, and 6.7 again. What happens to surplus and shortage as equilibrium price changes in each graph? What general conclusions can you draw from this information?
8. **Analyzing Causes** Suppose that the federal government decides to increase the excise tax on cellular phone services by 0.1 percent. Why will this action cause the equilibrium price of cellular phone services to rise?
9. **Applying Economic Concepts** Between 2003 and 2005, there was huge growth in the market for premium blue jeans priced at \$200 or more per pair. The growth was largely fueled by popular magazines showing celebrities wearing certain brands. Then, in the summer of 2005, major department stores started cutting prices on the jeans; they were also found on Web sites that offer jeans at discount prices. Use the economic concepts that you learned in this section to describe what is happening in this market.
10. **Challenge** Study Figures 6.4, 6.5, 6.6, and 6.7 again. What would happen if a change in consumer taste caused an increase in demand for athletic shoes and more suppliers entered the market at the same time? Assume that the increases in demand and in supply are proportionately the same. How would this result be different if each of these changes happened separately?

ECONOMICS IN PRACTICE



Finding Equilibrium Price

Suppose that you are a manufacturer of a new mini refrigerator for college dorm rooms. You expect your product to be popular because of its compact size and high tech design. After a few weeks in the market you are able to develop the following market demand and supply schedule.

Price per Refrigerator (\$)	Quantity Demanded	Quantity Supplied
225	500	6,000
200	1,000	4,500
175	1,500	3,500
150	2,500	2,500
125	4,000	1,500

Create a Demand and Supply Curve

Use this market demand and supply schedule to create a market demand and supply curve and determine the equilibrium price.

Challenge Calculate surplus or shortage at every price and suggest ways the manufacturer could try to eliminate the surplus and raise the equilibrium price.

Prices as Signals and Incentives

OBJECTIVES

- In Section 2, you will
- analyze how the price system works
 - explain how prices provide information about markets
 - describe how prices act as incentives to producers

KEY TERMS

competitive pricing, *p.* 174
incentive, *p.* 176

TAKING NOTES

As you read Section 2, complete a chart like the one shown to keep track of how each key concept affects producers and consumers. Use the Graphic Organizer at [Interactive Review @ ClassZone.com](http://InteractiveReview@ClassZone.com)

	Producers	Consumers
Competitive pricing		
Incentive		

How the Price System Works

KEY CONCEPTS

To better understand how price works in the market, let's look at how one kind of change in supply affects the equilibrium price. More producers in a market increases supply, which leads to increased competition and a lower equilibrium price.

Competitive pricing occurs when producers sell goods and services at prices that best balance the twin desires of making the highest profit and luring customers away from rival producers. By entering a market at a lower price, a new supplier can add to its customer base while it maintains overall profits by selling more units.

EXAMPLE Competitive Pricing

Let's look at an example of competitive pricing. As winter approaches, Elm Street Hardware prices its snow shovels at \$20. But Uptown Automotive sees an opportunity to take some customers (mostly for tools, which both stores sell) from Elm Street. Uptown enters the snow shovel market, raising the overall supply. It also prices the shovels at \$13. Uptown has a lower profit margin per shovel, but hopes to sell hundreds of them in order to maintain overall profit. Elm Street can choose to lower its prices as well or risk losing customers.



QUICK REFERENCE

Competitive pricing occurs when producers sell products at lower prices to lure customers away from rival producers, while still making a profit.

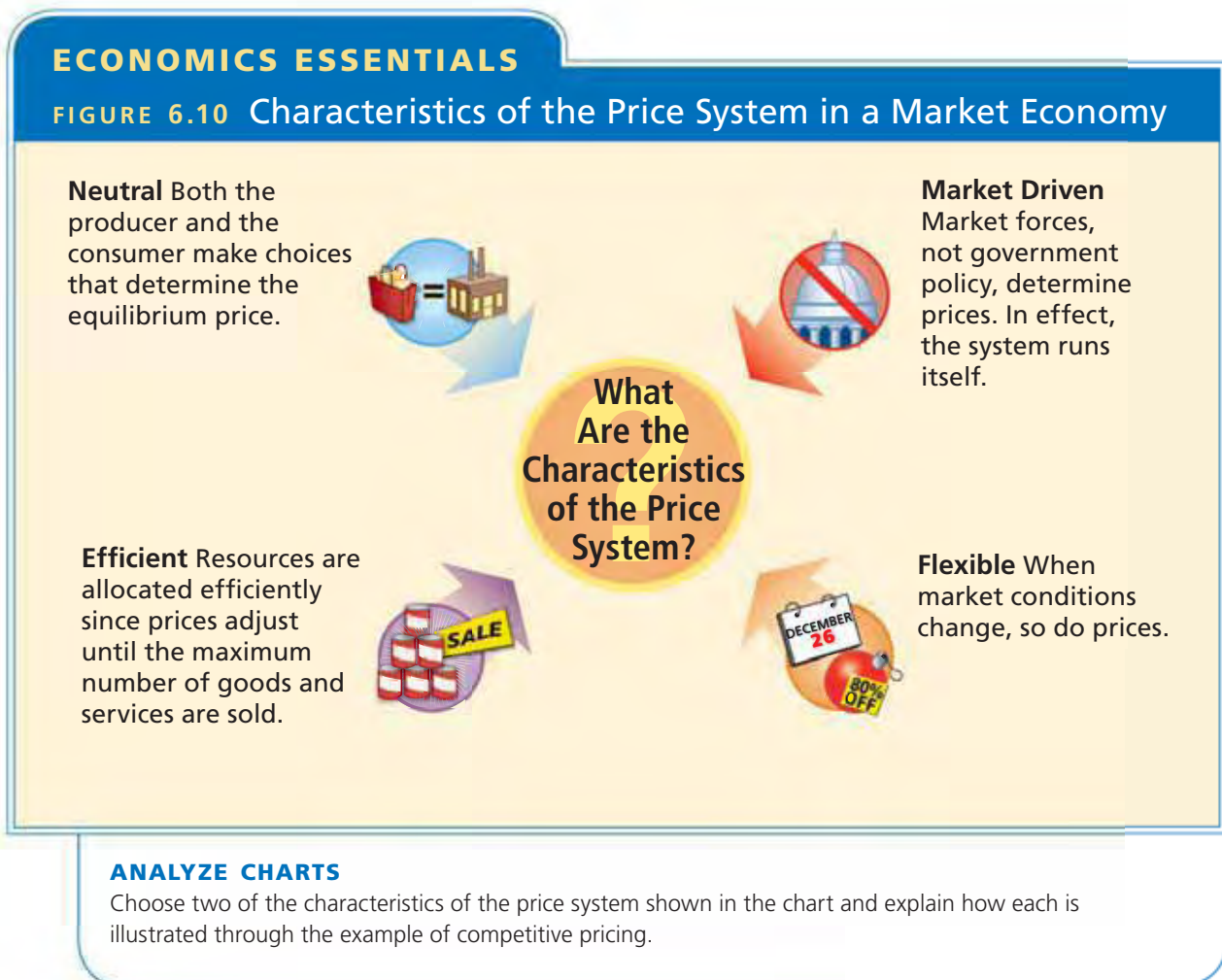
EXAMPLE Characteristics of the Price System

In a market economy, the price system has four characteristics.

- 1. It is neutral.** Prices do not favor either the producer or consumer because both make choices that help to determine the equilibrium price. The free interactions of consumers (who favor lower prices) and producers (who favor higher prices) determines the equilibrium price in the market.
- 2. It is market driven.** Market forces, not central planning, determine prices, so the system has no oversight or administration costs. In other words, the price system runs itself.
- 3. It is flexible.** When market conditions change, prices are able to change quickly in response. Surpluses and shortages motivate producers to change prices to reach equilibrium.
- 4. It is efficient.** Prices will adjust until the maximum number of goods and services are sold. Producers choose to use their resources to produce certain goods and services based on the profit they can make by doing so.

ECONOMICS ESSENTIALS

FIGURE 6.10 Characteristics of the Price System in a Market Economy



APPLICATION Analyzing and Interpreting Data

- A.** If Karen sold 25 salads at \$6 each, how many would she need to sell at \$5.50 to make at least the same amount of total revenue?

Prices Motivate Producers and Consumers

KEY CONCEPTS

The laws of demand and supply show that consumers and producers have different attitudes toward price. Consumers want to buy at low prices; producers want to sell at high prices. Therefore, prices motivate consumers and producers in different ways. You learned in Chapter 1 that an **incentive** is a way to encourage people to take a certain action. Here, you'll learn that in the price system, incentives encourage producers and consumers to act in certain ways consistent with their best interests.

QUICK REFERENCE

An **incentive** encourages people to act in certain ways.

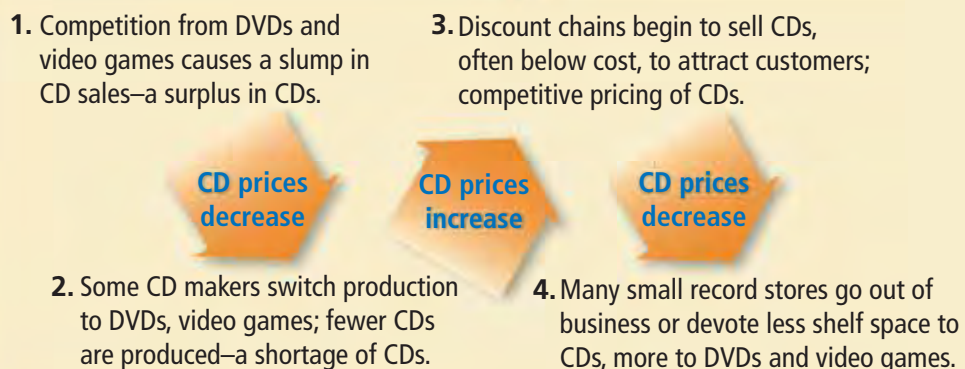
EXAMPLE Prices and Producers

For producers, the price system has two great advantages: it provides both information and motivation. Prices provide information by acting as signals to producers about whether it is a good time to enter or leave a particular market. Rising prices and the expectation of profits motivate producers to enter a market. Falling prices and the possibility of losses motivate them to leave a market.

A shortage in a market is a signal that consumer demand is not being met by existing suppliers. Recall that a shortage often occurs because prices are too low relative to the quantities demanded by consumers. Producers will view the shortage as a signal that there is an opportunity to raise prices. Higher prices act as an incentive for producers to enter a market. In other words, the prospect of selling goods at higher prices encourages producers to offer products for that market.

As more producers are motivated by high prices to enter a market, quantity supplied increases. When prices are too high relative to consumer demand, a surplus occurs. Producers can respond to a surplus either by reducing prices, or by reducing production to bring it in line with the quantity demanded at a particular price. Either way, falling prices signal that it is a good time for producers to leave the market. Sometimes, less efficient producers leave a market completely, as increased competition and lower prices drive them out of business. More often, producers shift their business to focus on opportunities in markets with higher potential profits.

FIGURE 6.11 CD PRICES AND PRODUCERS



Competitive pricing in the market often informs the choices made by producers. When a market is growing, and when there is unmet demand, a producer may decide to enter the market with a price that is lower than its competitor's. The new producer can still, however, earn a profit by selling more units at the lower price. So, while prices are the signals that are visible in the market, it is the expectation of profits or the possibility of losses that motivates producers to enter or leave a market.

EXAMPLE Prices and Consumers

Prices also act as signals and incentives for consumers. Surpluses that lead to lower prices tell consumers that it is a good time to buy a particular good or service. Producers often send this signal to consumers through advertising and store displays that draw consumers to certain products. Producers may also suggest that the low prices won't last, encouraging consumers to buy sooner rather than later.

High prices generally discourage consumers from buying a particular product and may signal that it is time for them to switch to a substitute that is available at a lower price. A high price may signal that a particular product is in short supply or has a higher status. Brand marketers rely on the consumer perception that a certain logo is worth a higher price.

Recall what you learned about normal and inferior goods in Chapter 4. Most consumers prefer to buy normal goods at the best possible price. They will buy inferior goods only when they cannot afford something better. While price is a powerful incentive to consumers, the other factors that affect demand also influence consumers' buying habits.

YOUR ECONOMIC CHOICES

PRICES AND CONSUMERS

How Does Price Affect Your Decision?

A new digital video camera with state-of-the-art features costs \$500, but you've saved only \$250. You can either buy a less expensive substitute with the money you have now, or you can save up to buy the advanced camera later. If other consumers also choose to wait to buy the new camera, a surplus may develop, and the price may decrease.



▲ Buy now

▲ Save for later

APPLICATION Making Inferences

- B. A cup of gourmet coffee commands a higher price than a regular coffee. How will this fact influence the take-out coffee market?

Michael Dell: Using Price to Beat the Competition

FAST FACTS

Michael S. Dell

Title: Chairman of Dell Inc.

Born: February 23, 1965, Houston, Texas

Major Accomplishment: Pioneered the direct sale of personal computers to consumers

Key Product Lines: Desktop PCs, notebook computers, workstation systems, servers, printers, flat-screen TVs, PDAs

Honors: Youngest CEO of a Fortune 500 company (1992), America's Most Admired Company (2005)

Personal Fortune: \$16 billion (2005)

Employees: 65,200 (2006)

High-tech entrepreneur Michael Dell saw an opportunity to use competitive pricing to take business away from much larger companies. By 2005, IBM Corporation, Compaq Computer Corporation, and others had either left the PC market or were facing major problems. How did Dell thrive as its competitors struggled?

Lowering Costs to Reduce Prices

Michael Dell began assembling and selling computers as a freshman in college. He became so successful that he quit college in 1984 to focus on his business. He had sales worth \$6 million in his first year.

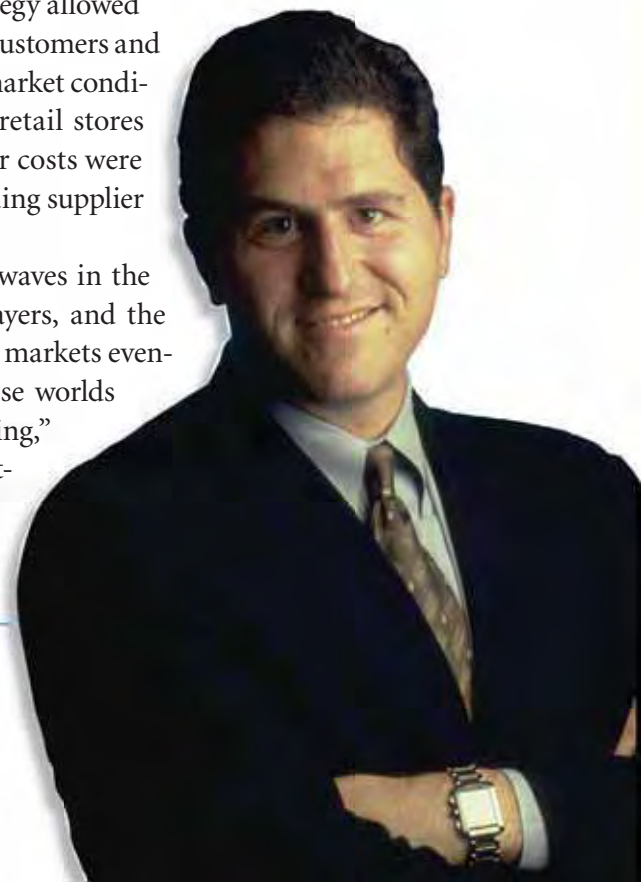
Dell's success was largely due to his approach to marketing and production. He bypassed computer retailers and sold over the telephone directly to knowledgeable computer users in business and government. Each computer was built to customer requirements and assembled after it was ordered. In this way, Dell lowered his costs significantly and became the low-price leader in the market. The company's sales grew from \$69.5 million in 1986 to almost \$258 million in 1989.

Dell was also a pioneer in recognizing the potential for sales via the Internet. This strategy allowed the company to maintain close contact with its customers and to adjust its prices frequently, up and down, as market conditions dictated. Competitors who sold only in retail stores found it hard to compete on price because their costs were much higher. By 2005, Dell was the world's leading supplier of PCs, with annual sales of almost \$50 billion.

Now Dell is using his experience to make waves in the consumer electronics (flat-panel TVs, MP3 players, and the like) market. He sees the line between these two markets eventually fading. "The whole new ballgame is these worlds [computing and consumer electronics] converging," Dell believes, "and that's a world we're comfortable in."



In Dell's TechKnow program, students learn to assemble and upgrade a computer, which they can then keep.



APPLICATION Drawing Conclusions

- C. What incentive did Michael Dell have to sell computers at lower prices than his competitors?

Economics Update

Find an update on Michael Dell at ClassZone.com

SECTION 2 Assessment

REVIEWING KEY CONCEPTS

1. Use each of the two terms below in a sentence that illustrates the meaning of the term:
a. *competitive pricing* **b.** *incentive*
2. Explain the four characteristics of the price system.
3. Why is the price system an efficient way to allocate resources?
4. How do prices serve as signals and incentives to producers to enter a particular market? to leave a certain market?
5. How does the story of Dell Inc. demonstrate the effects of competitive pricing?

6. Using Your Notes How does competitive pricing affect consumers? Refer to your completed chart. Use the Graphic Organizer at **Interactive Review @ ClassZone.com**

	Producers	Consumers
Competitive pricing		
Incentive		

CRITICAL THINKING

- 7. Making Inferences** A local supermarket decides to sell a premium brand of meats and cheeses in its deli department. This brand is priced about \$2 more per pound than the store brand. About 80 percent of the space in the deli display cases is devoted to the premium brand and 20 percent to the store brand.
 - a.** How did price serve as an incentive to the supermarket?
 - b.** What kind of signals is the supermarket sending to its customers with this pricing strategy?
- 8. Applying Economic Concepts** A candy company whose products sold in supermarkets for about \$3 a bag decided to enter the growing gourmet chocolate market. It purchased two small companies that made premium chocolates that sold for much higher prices. How does this story reveal the way the price system works as an incentive for producers while allocating resources efficiently?
- 9. Challenge** A large discount store has built its reputation on offering consumers low prices. However, its customers come from many different income levels. Recently, the store began offering higher priced jewelry and consumer electronics products. What signal might this send to producers of other premium products who have never sold in discount stores before?

ECONOMICS IN PRACTICE



Using Prices as Incentives

As you've learned in Section 2, prices motivate producers to act in certain ways. What actions do producers take in response to rising prices? How about falling prices?

Identify Price Incentives Consider each situation that follows. Decide whether the scenario described is associated with rising prices or with falling prices.

- A farmer switches to organic methods when a report says organic foods are healthier.
- To maintain market share, a car wash adjusts its prices to meet a competitor's.
- After a hot, dry spring, a landscaper decides to get out of the business.
- A retailer decides to begin selling this holiday season's must-have toy.

Challenge Which of the above situations describes a case of competitive pricing? What might happen to the producer if it did not take the action described?

Intervention in the Price System

OBJECTIVES

- In Section 3, you will
- explain how government uses price ceilings to keep prices from rising too high
 - describe how government uses price floors to keep prices from going too low
 - discuss how government uses rationing to allocate scarce resources and goods

KEY TERMS

price ceiling, *p. 180*
 price floor, *p. 182*
 minimum wage, *p. 182*
 rationing, *p. 183*
 black market, *p. 183*

TAKING NOTES

As you read Section 3, complete a hierarchy diagram like this one to track main ideas and supporting details. Use the Graphic Organizer at [Interactive Review @ ClassZone.com](http://InteractiveReview@ClassZone.com)



Imposing Price Ceilings

QUICK REFERENCE

A **price ceiling** is the legal maximum price that sellers may charge for a product.

KEY CONCEPTS

You've seen how prices adjust to changes in demand and supply as the market constantly strives for equilibrium. Sometimes, however, people think it is a good idea to interfere with the free market mechanism in order to keep the price of a good or service from going too high. An established maximum price that sellers may charge for a good or service is called a **price ceiling**. The price ceiling is set below the equilibrium price, so a shortage will result.

EXAMPLE Football Tickets and Price Ceilings

Let's look at an example of a price ceiling in ticket prices for college football. The Trenton University Tigers are a winning team with many loyal fans. The university prints 30,000 tickets for every game and sells them for \$15 each. At that price, 60,000 fans want to buy the tickets, so there is a shortage of 30,000 tickets for every game.

The university could resolve the shortage by letting the price rise until quantity demanded and quantity supplied are equal. When this solution is proposed, the university president says she would rather keep the tickets affordable for students. Indeed many students get tickets for \$15. On game day, however, ticket scalpers stand outside the stadium and sell some tickets for \$50 or more.



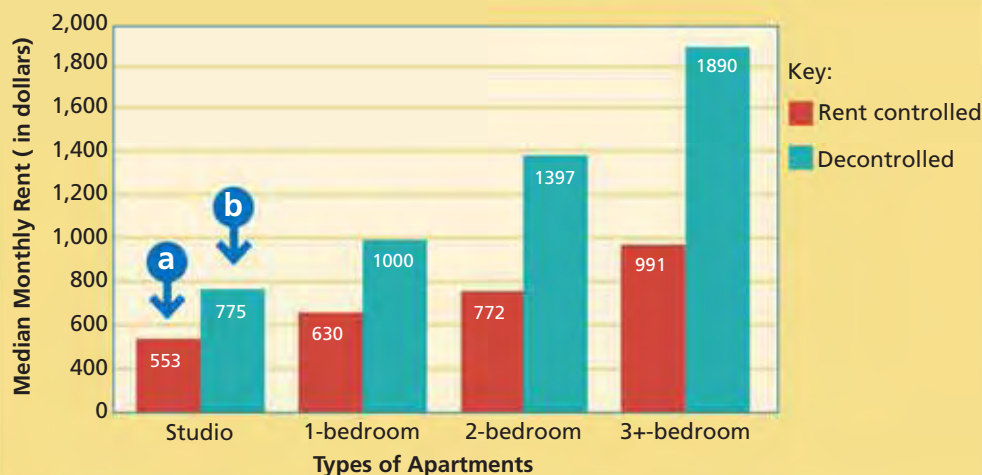
EXAMPLE Rent Control as a Price Ceiling

In the past, many cities passed rent control laws in an effort to keep housing affordable for lower-income families. These laws control when rents can be raised and by how much, no matter what is going on in the market. Of course, the people who live in rent-controlled housing appreciate the lower price in the short term.

But rent control can have unexpected consequences. Without the possibility of raising rents to match the market, there is no incentive to increase the supply of rental housing, and a shortage soon develops. In addition, landlords are reluctant to increase their costs by investing money in property maintenance, so housing conditions often deteriorate. By 2005, rent control was becoming far less common as most cities realized it made housing shortages worse in the long run.

Santa Monica, California, is an example of a city that had strict rent control laws. In the late 1990s, state legislators passed a law that changed the way local communities could regulate rental housing. As a result, property owners in Santa Monica could let the market determine the initial rent when a new tenant moved in, although the city's rent control board still regulated yearly rent increases thereafter. Figure 6.12 illustrates what happened to rents when the new law fully took effect. Rents increased by 40 to 85 percent, showing that the apartments had been priced artificially low. The increases reflect the shortage that rent control had created.

FIGURE 6.12 RENT CONTROL IN SANTA MONICA



Source: Santa Monica Rent Control Board, April 13, 1999

- a The red bars show the median rent for each type of apartment when rent control was in effect.
- b The blue bars show the median rent for each type of apartment when the new law allowed the market to set the rent for new tenants.

The graph shows that rent control had kept the rate lower than what the market would bear.

ANALYZE GRAPHS

1. What happened to the rent for one-bedroom apartments when the new law ended rent control?
2. Who would be more in favor of the changes that happened in the rental market in Santa Monica, landlords or tenants? Why?

APPLICATION Applying Economic Concepts

- A. Create a demand and supply graph for Trenton University football tickets showing how the price ceiling of \$15 is below the equilibrium price.

Setting Price Floors

KEY CONCEPTS

QUICK REFERENCE

A **price floor** is a legal minimum price that buyers must pay for a product.

The **minimum wage** is a legal minimum amount that an employer must pay for one hour of work.

Economics Update

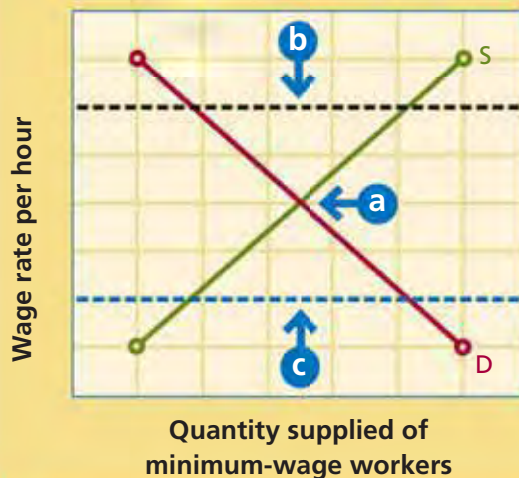
Find an update on the minimum wage at ClassZone.com

Sometimes the government decides to intervene in the price system to increase income to certain producers. A **price floor** is an established minimum price that buyers must pay for a good or service. For example, the government has used various programs designed to provide price floors under corn, milk, and other agricultural products. The goal of these price floors is to encourage farmers to produce an abundant supply of food.

EXAMPLE Minimum Wage as a Price Floor

One well-known example of a price floor is a minimum wage. A **minimum wage** is the minimum legal price that an employer may pay a worker for one hour of work. The United States government established its first minimum wage in 1938. The 1930s were a period of low wages, and the government hoped to increase the income of workers. If the minimum wage is set above the equilibrium price for certain jobs in a market, employers may decide that paying the higher wages is not profitable. As a result, they may choose to employ fewer workers, and unemployment will increase. If the minimum wage is set below the equilibrium price, then it will have no effect.

FIGURE 6.13 MINIMUM WAGE AS A PRICE FLOOR



- a** This point shows the equilibrium price for a labor market.
- b** The black dotted line shows a minimum wage set above the equilibrium price.
- c** The blue dotted line shows a minimum wage set below the equilibrium price.

The length of black dotted line that falls between the demand curve and the supply curve represents a surplus—in other words, unemployment.

ANALYZE GRAPHS

1. Assume the minimum wage is set at the dotted black line. What are the costs and benefits of increasing it?
2. Is the minimum wage set at the dotted blue line an effective price floor? Why?

APPLICATION Analyzing Effects

- B. Suppose that the Trenton University Tigers were so bad that only 10,000 people want to buy tickets for \$15. What effect would keeping \$15 as a price floor have?

Rationing Resources and Products

KEY CONCEPTS

The market uses prices to allocate goods and services. Sometimes in periods of national emergency, such as in wartime, the government decides to use another way to distribute scarce products or resources. **Rationing** is a system in which the government allocates goods and services using factors other than price.

The goods might be rationed on a first-come, first-served basis or on the basis of a lottery. Generally, a system is set up that uses coupons allowing each person a certain amount of a particular item. Or the government may decree that certain resources be used to produce certain goods. When such a system is used, some people try to skirt the rules to get the goods and services they want, creating what is known as a black market. In a **black market**, goods and services are illegally bought and sold in violation of price controls or rationing.

QUICK REFERENCE

Rationing is a government system for allocating goods and services using criteria other than price.

The **black market** involves illegal buying or selling in violation of price controls or rationing.

EXAMPLE Rationing Resources

During World War II, the United States government empowered the Office of Price Administration, which was established in 1941, to ration scarce goods. The hope was that these goods would be distributed to everyone, not just those who could afford the higher market prices born of shortages. It also allocated resources in ways that favored the war effort rather than the consumer market. Figure 6.14 shows some of the goods that were rationed. Rationing also led consumers to look for substitutes. Margarine, a butter substitute, was purchased in huge quantities during the war.



Rationing for All The U.S. government's World War II rationing program affected nearly every household in the United States.

FIGURE 6.14 RATIONED GOODS DURING WORLD WAR II

Food	Other Goods
sugar	automobile tires
meat	gasoline
butter, fats, and oils	fuel oil
most cheese	clothing, especially silk and nylon
chocolate	shoes
coffee	

Rationing in China

Shortages of tofu, a staple of the Chinese diet, led to rationing in 1989.



North Korea maintained a strict rationing system between 1946 and 2002. Most importantly, staple foods—meat, rice, and cabbage—were strictly rationed. However, the system was plagued by inefficiency and corruption. The amount of your ration was generally determined by who you knew, where you lived, and what your occupation was. Government officials in the largest cities often received more than their allotment, while the majority of people got by with less (or received less-nutritious substitutes). Some families had meat or fish only a few times a year.

Between 1996 and 2000, widespread famine in North Korea made the situation desperate. Ration coupons were still distributed, but in most cases, the rations were not. As many as a million people died due to the famine. In response, people established unofficial markets where they traded handicrafts for food. In 2002, the government officially legalized these market activities, and prices rose sharply. Wages also increased. Skeptical of markets, however, the leaders of North Korea were, in 2005, considering a return to the rationing system that failed them in the past.

EXAMPLE Black Markets—An Unplanned Result of Rationing

When rationing is imposed, black markets often come into existence. During World War II, black markets in meat, sugar, and gasoline developed in the United States. Some people found ways, including the use of stolen or counterfeit ration coupons, to secure more of these scarce goods.

During the height of North Korea's rationing system, free trade in grain was expressly forbidden, and most other markets were severely restricted. Prices were very high at the markets that did exist. In 1985, it cost half of the average monthly salary of a typical North Korean to buy a chicken on the black market. Even after the government began allowing some market activities in 2002, the black market flourished because many forms of private property, including homes and cars, were still illegal. Some people started smuggling clothes, televisions, and other goods from China to sell in North Korea. (You'll read more about the black market in the discussion of the underground economy in Chapter 12.)

APPLICATION Making Inferences

- C. How does the example of rationing during World War II show that the price system is a more efficient way to allocate resources?

SECTION 3 Assessment

REVIEWING KEY CONCEPTS

- Explain the relationship between the terms in each of these pairs.
 - price floor
minimum wage
 - rationing
black market
- What is the difference between a price floor and a price ceiling?
- What kind of surplus might be created by the minimum wage?
- How does the existence of the black market work against the intended purpose of rationing?
- Aside from turning to the black market, how do consumers make up for goods that are rationed?

- 6. Using Your Notes** What is the usual result of a price ceiling? Refer to your completed diagram. Use the Graphic Organizer at **Interactive Review @ ClassZone.com**



CRITICAL THINKING

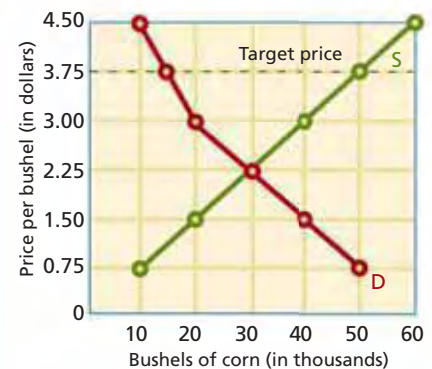
- Analyzing Causes** Opponents of rent control cite comparisons of cities that regulate rents with cities that do not. Their evidence shows that there is more moderately priced housing available in cities that let the market set the rates for rent. What would account for the differences in availability?
- Making Inferences** The percentage of workers who were paid the minimum wage or less decreased from 6.5 percent in 1988 to 3 percent in 2002 to 2.7 percent in 2004. What does this trend tell you about the relationship of the minimum wage to the equilibrium wage for those kinds of work?
- Applying Economic Concepts** In the wake of sharply rising gasoline prices in the summer of 2005, several states considered putting a ceiling on the wholesale price of gasoline. What would be the likely result of such a price control? Would it be an effective strategy for lowering gas prices?
- Challenge** Many states have laws against so-called price gouging. These laws make it illegal to sell goods and services at levels significantly above established market prices following a natural disaster. What economic argument might be used against such laws?

ECONOMICS IN PRACTICE



Understanding Price Floors

In agriculture, price floors are known as price supports. The government sets a target price for each crop, and if the market price is below that target, it will pay farmers the difference. Suppose that you are a farmer with 400 acres planted in corn. The following graph shows the supply and demand for your crop.



Calculate the Effect of the Price Support How many bushels of corn will you sell at the equilibrium price? How much revenue will you make? How many bushels do you want to sell at the target price? How many bushels are consumers willing to buy at that price? What is the difference? How much will the government have to pay you for that surplus?

Challenge What changes in supply or demand would move the market equilibrium price closer to the target price?

Prices for Concert Tickets

Background Americans spend billions of dollars on concert tickets yearly—an estimated \$3 billion in 2005. With ticket prices for the most popular acts averaging more than \$50, most younger or less affluent fans can no longer afford to attend many live concerts. And yet, remarkably, forecasters believe that concert ticket prices have yet to peak.

Ticket prices reflect a number of costs. Performers must cover expenses such as travel, costumes, instruments, and equipment before they reap a profit. Venues, or places where concerts are held, also seek to make a profit, as do ticket distributors. However, in the United States, the sale of concert tickets, along with most other goods and services, is driven by three basic elements of a market economy—demand, supply, and pricing.

What's the issue? How do demand, supply, and pricing affect the concert ticket market? Study these sources to discover the factors that affect demand and supply, and their impact on the price of concert tickets.

A. Congressional Transcript

Pearl Jam believed that TicketMaster Corporation, their ticket distributor, was setting too high a price on the band's concert tickets. This statement, submitted to Congress along with oral testimony on June 30, 1994, explains Pearl Jam's stance.

Pearl Jam Tries to Place Ceiling on Ticket Prices

To keep ticket prices affordable, Pearl Jam appeals to Congress.

Many of Pearl Jam's most loyal fans are teenagers who do not have the money to pay the \$50 or more that is often charged today for tickets to a popular concert. Although, given our popularity, we could undoubtedly continue to sell out our concerts with ticket prices at that premium level, we have made a conscious decision that we do not want to put the price of our concerts out of the reach of many of our fans. . . .

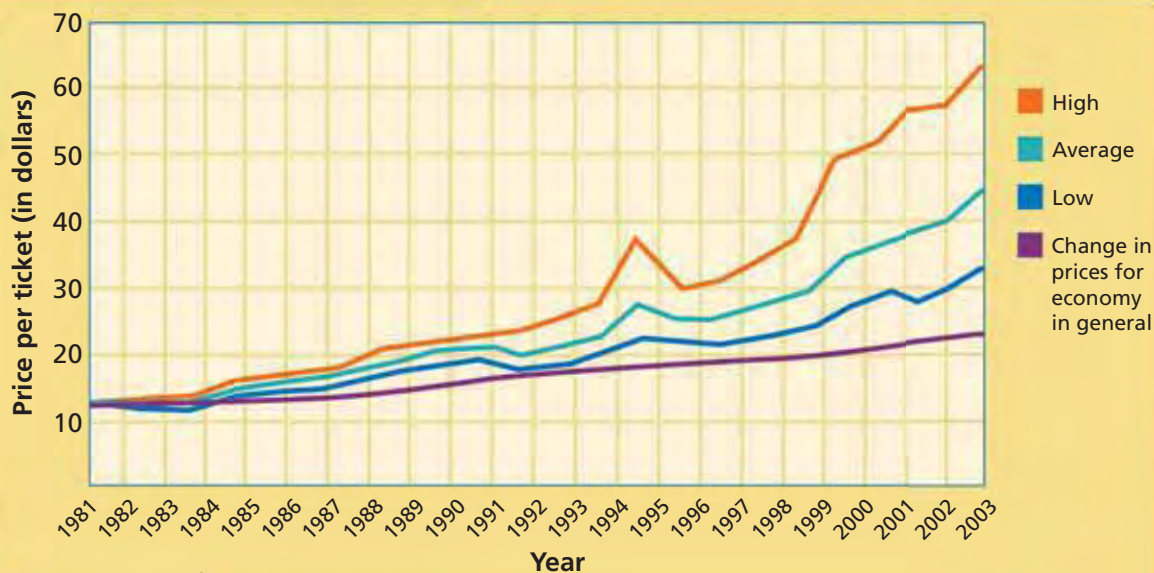
For these reasons, we have attempted to keep the ticket prices to our concerts to a maximum of \$18. . . . Even where a service charge is imposed, our goal is . . . that no one will pay more than \$20 to see a Pearl Jam concert.

Our efforts to try to keep prices . . . to this low level and to limit the possibility of excessive service charge mark-ups have put us at odds with TicketMaster . . . a nationwide computerized ticket distribution service that has a virtual monopoly on the distribution of tickets to concerts in this country.



Thinking Economically How would placing a ceiling on the price of Pearl Jam concert tickets have affected demand and supply? Explain your answer based on the information in the document.

FIGURE 6.15 CONCERT TICKET PRICES



Source: Journal of Labor Economics, 2005.

B. Academic Study

Marie Connolly and Alan Krueger, of Princeton University, compiled these data on concert ticket prices for their study “Rockonomics: The Economics of Popular Music.”

Thinking Economically In what three years was the high price per ticket about the same as the low price in 2003?

C. Online Newspaper Article

TicketMaster hoped to increase profits by auctioning tickets online. This article discusses the program’s potential effect on ticket prices.

TicketMaster Plans to Launch Ticket Auction

The sky’s the limit, as bidders compete for the best seats in the house.

Fed up with watching ticket scalpers and brokers rake in the huge bucks for prime seats at their venues, TicketMaster plans to debut an online auction program for choice seats to selected concerts and sports events later this year.

The move may drive up the price of front row seats when they start going to the highest bidder, but some analysts say the impact would likely be minimal. . . .

Princeton University economics professor Alan B. Krueger . . . called the open auction a “positive development.”

“For the top artists, tickets are still sold below what the market would bear, even though prices have shot up over the last six years,” Krueger told POLLSTAR. “This is especially the case for the best seats in the most expensive cities.

“If the auction is widely used, I suspect price variability will increase; we will see greater dispersion in prices across artists, across cities and seats for the same artist.” . . .

Source: Pollstar.com

Thinking Economically How might TicketMaster’s online auction program lead to market equilibrium for the best tickets?

THINKING ECONOMICALLY Synthesizing

1. Do you think TicketMaster’s plan in document C would help or harm Pearl Jam’s wish “that no one will pay more than \$20” to see them (document A)? Explain your answer.
2. What do you think happened to quantity supplied of tickets over the span of the graph in document B? Why?
3. In what year in Figure 6.15 did the high price for concert tickets hit \$50—the high price that Pearl Jam speaks of in document A? What year was it \$20—the desired price they mention?

Review this chapter using interactive activities at **ClassZone.com**

- Online Summary
- Quizzes
- Vocabulary Flip Cards
- Graphic Organizers
- Review and Study Notes

Online Summary

Complete the following activity either on your own paper or online at **ClassZone.com**

Choose the key concept that best completes the sentence. Not all key concepts will be used.

black market	minimum wage
competitive pricing	price ceiling
disequilibrium	price floor
equilibrium price	rationing
incentive	shortage
market equilibrium	surplus

1 is a situation that occurs when quantity demanded and quantity supplied at a particular price are equal. The price at which that situation occurs is the 2. If quantity supplied is greater than quantity demanded, a 3 occurs. If quantity demanded exceeds quantity supplied, then a 4 occurs.

When a producer enters a market at a lower price (hoping to increase its customer base while maintaining profits by selling more units), it is engaging in 5. Rising prices are 6 that draws producers into markets.

Sometimes government intervenes in the price system. A 7 is the legal maximum that producers may charge for certain goods or services. A 8 is the legal minimum amount that may be paid for a particular good or service.

When certain goods or resources are scarce, the government may institute a system of 9, using some criteria besides price to allocate resources. An unplanned consequence of this action by the government is the development of a 10, where goods are bought and sold illegally.

REVIEWING KEY CONCEPTS

Seeking Equilibrium: Demand and Supply (pp. 164–173)

1. How does the concept of market equilibrium reflect the interaction of producers and consumers in a market?
2. Why are surpluses and shortages examples of disequilibrium?

Prices as Signals and Incentives (pp. 174–179)

3. How are producers and consumers equally involved in the price system?
4. When do prices serve as signals and incentives for producers to enter a market?

Intervention in the Price System (pp. 180–187)

5. What is the usual result of a price floor?
6. What motivates producers and consumers in the black market?

APPLYING ECONOMIC CONCEPTS

Look at the table below showing prices and sales figures for VCRs between 1998 and 2003.

7. Why did dollar sales increase between 1998 and 1999?
8. What is the trend in the average unit price of VCRs between 1998 and 2003? What does this trend signal?

FIGURE 6.16 VCR SALES TO DEALERS

	Unit Sales (in thousands)	Sales (in millions \$)	Average Unit Price (\$)
1998	18,113	2,049	113
1999	22,809	2,333	102
2000	23,072	1,869	81
2001	14,910	1,058	71
2002	13,538	826	61
2003*	11,916	727	61

* projected

Source: *Consumer Electronics Association Market Research*, January, 2003

CRITICAL THINKING

9. Creating Graphs Suppose that you are the owner of a toy store. Create demand and supply curves for three products that you expect will sell well during the upcoming holiday shopping season. Then consider the following scenarios: one product becomes much more popular than you expected, one is much less popular than you expected, and the third loses half of its production capacity when a factory is leveled by an earthquake. Draw an additional curve on each of your graphs to show the change in demand or supply represented by these scenarios. Under each graph write a caption explaining the change shown and the effect on the equilibrium price.

Use  **SMARTGrapher** @ **ClassZone.com** to complete this activity.

10. Analyzing Effects Consumer concerns about nutrition and obesity contribute to a decrease in white bread sales and an increase in sales of whole wheat bread. This change in consumer taste prompts a major manufacturer known for its white bread to enter the market with a whole wheat bread product. What effect will this action have on the supply and equilibrium price of whole wheat bread?

11. Using Economic Concepts In 2004, the price of U.S. butter imports increased by more than 30 percent compared to the previous year. In 2003, Canada and New Zealand together supplied more than 80 percent of the butter imported into the United States. In 2004, their combined market share decreased to about 67 percent. What happened in the market to cause this change? How did price serve as a signal and incentive to producers?

12. Analyzing Effects How would U.S. government price supports for U.S.-made tennis rackets affect producers and consumers?

13. Challenge How would elasticity of demand help producers decide whether competitive pricing is a good strategy for their businesses?

SIMULATION

Find the Best Price

Step 1 Form a group with five other students. Imagine that together you are the market for jeans. Three are buyers and three are sellers, according to the following table. Your goal is to bargain with one another for a pair of jeans. Buyers try to get the lowest price possible, without going above their maximum, and sellers try to get the highest price possible, without going below their minimum.

SIX-PERSON JEANS MARKET			
		Price (\$)	
Buyers	A	20	Maximum price you are willing to pay for a pair of jeans
	B	30	
	C	40	
Sellers	D	15	Minimum price you are willing to sell a pair of jeans for
	E	25	
	F	35	

Step 2 Choose a letter to determine your role. On a piece of paper write your letter and name, identify yourself as a buyer or seller, and show the dollar amount from the table.

Step 3 Keep track of each proposed transaction in order on a sheet of paper. Recall what you know about demand, supply, and competitive pricing as you bargain to see who will buy and sell jeans and at what price. Bargaining ends when you reach equilibrium. What is quantity and price at equilibrium?

Step 4 Use the information on the chart to create a demand and supply curve for this market. Does the curve reflect your group's bargaining experience?

Step 5 As a class, discuss what you learned from this exercise about how markets reach equilibrium.

Use  **SMARTGrapher** @ **ClassZone.com** to complete this activity.