## Microeconomics: Prices and Markets

| UNIT PACING CHART |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Chapter 4 | Chapter 5 | Chapter 6 | Chapter 7 |
| Day 1 | Unit Opener Chapter Opener Section 1 | Chapter Opener Section 1 | Chapter Opener Section 1 | Chapter Opener Section 1 |
| Day 2 | BusinessWeek Newsclip Section 2 <br> Profiles in Economics | Case Study <br> Section 2 <br> Profiles in Economics | Case Study <br> Section 2 <br> BusinessWeek Newsclip | Profiles in Economics <br> Section 2 <br> BusinessWeek Newsclip |
| Day 3 | Section 3 Case Study | Section 3 <br> BusinessWeek Newsclip | Section 3 <br> Profiles in Economics | Section 3 Case Study |
| Day 4 | Review <br> Chapter Assessment | Review <br> Chapter Assessment | Review <br> Chapter Assessment | Review <br> Chapter Assessment |
| Day 5 | The Global Economy \& You |  | Debates in Economics |  |

## Teacher to Teacher



Erin Johnston South Caldwell High School Hudson, North Carolina

The Model J Materials: 1 yardstick (the chassis); 1 empty garbage bin (the engine); 1 chair (the driver's seat); 4 large cans (the tires); 2 soft drink cans, flattened lengthwise (the gas and brake pedals); 4 paper cups (the headlights and taillights); 1 paper plate (the steering wheel); 1 stop watch and someone to keep "production time" (middle management); tape (nuts and bolts).
The workforce assembles the Model J as follows: (1) Lay the yardstick on the floor. (2) Place empty bin at one end to indicate front of car. (3) Place chair over opposite end of yardstick.
(4) Place large cans in location of wheels.
(5) Place brake and gas pedals on proper side of the chassis. (6) Tape taillights to top of seat.
(7) Tape headlights to front of engine. Tell students that to stop the clock, one member of their "workforce" must sit in the seat, hold the steering wheel, and make a horn sound.
Have a student record the production time for each round. Then have two different students work together to produce a Model J in round 2. Do not give them instructions on how to divide the labor. For round 3, assign 13 students a specialized task. Make sure that students follow the same order for each round. Students should see that the production time goes down with each round, although you may have to add "governmental" controls to ensure that this happens. Discuss the differences in production time.

## Introducing

## Author Note

## Dear Economics Teacher:

Economists love the free enterprise system. In fact, there is no better way to organize the way in which we use our scarce resources. The free enterprise system, along with its demand, supply, competition, prices, and private ownership of property, is the most prolific wealth-
 generating system in the world!

One of the most fascinating things about our economy is that it seems to almost run itself. Little coordination and direction are needed once the basic foundation is in place-a foundation typified by a large number of buyers and sellers, plenty of information, and generally adequate competition.

You might be interested to know that the free enterprise system we have today is not something that economists-or anyone else for that matteractually invented. Instead, the system is one that more or less evolved. Changes have been so slow that they are almost imperceptible. Capitalism, for example, has what economists would call "large-scale tendencies"meaning that firms tend to merge in an attempt to grow, which in turn reduces the number of firms needed for competition. We see this in almost every industry, from automobiles to banking to retail.

Economists may warn that increased industry concentration is hindering competition, yet this is often offset by business community announcements that profits are going up. Which view is correct, and should anything be done about it?

This is where economics comes in. If we can understand how the economy actually works, we can introduce changes that influence some of the evolutionary direction. As you go through the chapters, you'll discover that I try to describe how things work, and then provide enough background so that you and your students can make your own decisions. This is the task of this book, and I hope it is one that appeals to you as well.


Gary Clayton, Ph.D.
Author

## Unit Objectives

After studying this unit, students will be able to:

- Discuss demand and the factors that cause changes in it.
- Explain the concept of supply and the theory of production.
- Explain how supply and demand interact to determine price.
- Describe how competition and different market structures affect prices.


## Unit Overview

Unit 2 examines major markets with respect to the degree of competition within each type and how this affects buyers and sellers.

Chapter 4 explains the concept of demand.

Chapter 5 discusses supply, the theory of production, and profit maximization.

Chapter 6 brings supply and demand together in a relationship focusing on prices and explains how the price system operates.

Chapter 7 introduces competition and market structures. It also discusses market failures and the government's role in the economy.

## CHAPTER 4

Demand

## CHAPTER 5

Supply

## CHAPTER 6

Prices and Decision Making

## CHAPTER 7

Market Structures

> Buyers and sellers in a music store show how supply and demand play out in the market.

88 UNIT 2


## Activity: Launching the Unit

Local Competition Ask students to select a business in their community that they patronize. Have them write a short analysis of the business by responding to the following questions: (1) What is the name and location of the business? (2) Why do you purchase from this business? (convenience, price, service, quality of product) (3) What is the competition for the business? (stores nearby, malls, mail
order) (4) How does the business compete? (price competition, sales, advertising, special service) Have students share their analyses with the class.OL


## Making It Relevant

Ask: How much does a baseball glove cost? Answers should vary, suggesting that prices for baseball gloves differ widely. Discuss with students the possible reasons for the different prices. (Possible answers: brand name, type of glove, type of store, quality of leather)

Suggest to students that the price of a baseball glove depends on demand for that glove relative to supply. In turn, the other factors can influence demand. For example, advertising may increase demand for a particular brand name, thus affecting the price. OL

## BusinessWeek ON/LINE

To find up-to-date news and analysis on the economy, business, technology, markets, entrepreneurs, investments, and finance, have students search feature articles and special reports on the BusinessWeek Web site, www.businessweek.com.

## Extra Credit Project

Have students research and write about a product or service for which they believe there will be a high demand in the twentyfirst century. Students should explain why they think such a high demand will exist and use the Internet and financial magazines
to make predictions about the product or service's potential growth. Have students create charts and graphs to support their positions. AL

## In

| Key to Ability Levels |  |  |
| :--- | :--- | :---: |
| BL | Below level |  |
| OL | AL Above level |  |
| On level | ELL English |  |
|  |  |  |


| Key to Teaching Resources |  |  |  |
| :---: | :---: | :---: | :---: |
| Print Material | DVD |  |  |
| CD-Rom | Transparency |  |  |


| Levels |  |  |  | Resources |  | Chapter Opener | Section 1 | Section 2 | Section 3 | Chapter Assess |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BL | OL | AL | ELL |  |  |  |  |  |  |  |
| FOCUS |  |  |  |  |  |  |  |  |  |  |
| BL | OL | AL | ELL | B | Daily Focus Skills Transparencies |  | 10, 11 | 3, 9 | 12 |  |
| TEACH |  |  |  |  |  |  |  |  |  |  |
| BL | OL |  | ELL | $\square$ | Guided Reading Activities* |  | p. 10 | p. 11 | p. 12 |  |
| BL | OL | AL | ELL | $\square$ | Economic Content Vocabulary Activities* |  | p. 4 | p. 4 | p. 4 |  |
|  | OL | AL |  | $\square$ | Critical Thinking Activities |  |  | p. 4 |  |  |
| BL | OL |  | ELL | $\square$ | Reading Essentials and Note-Taking Guide* |  | p. 28 | p. 31 | p. 34 |  |
|  |  | AL |  | $\square$ | Enrichment Activities |  |  | p. 4 |  |  |
| BL | OL | AL | ELL | $\square$ | Primary and Secondary Source Readings |  | pp. 5, 7 | p. 7 | p. 9 |  |
| BL | OL | AL | ELL | $\square$ | Economic Cartoons |  | p. 5 | p. 8 |  |  |
| BL | OL | AL | ELL | $\square$ | Math Practice for Economics |  |  | p. 6 | p. 4 |  |
| BL | OL |  | ELL | $\square$ | High School Reading in the Content Area Strategies and Activities | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| BL | OL | AL | ELL | B | High School Writing Process Transparencies | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| BL | OL | AL | ELL | $\square$ | Writer's Guidebook | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| BL | OL | AL | ELL | (3) | StudentWorks Plus CD-ROM | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| BL | OL | AL | ELL | (3) | Vocabulary PuzzleMaker CD-ROM | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |

[^0]
## Planning Guide

- Interactive Lesson Planner
- Differentiated Lesson Plans
- Interactive Teacher Edition
- Fully editable blackline masters
- Economics \& You videos
- Printable reports of daily assignments
- Standards tracking system

| Levels |  |  |  | Resources |  | Chapter Opener | Section 1 | Section 2 | Section 3 | Chapter Assess |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BL | OL | AL | ELL |  |  |  |  |  |  |  |
| TEACH (continued) |  |  |  |  |  |  |  |  |  |  |
| BL | OL | AL | ELL | $\square$ | Economics \& You Video Program DVDWhat is Demand? | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| BL | OL | AL | ELL | (3) | Graph Coach CD-ROM | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
| Teacher Resources |  |  |  | $\square$ | Differentiated Instruction Strategies | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  |  |  | $\square$ | Success with English Learners | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |
|  |  |  |  | (3) | Presentation Plus! CD-ROM | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |


| ASSESS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BL | OL | AL | ELL | $\square$ | Section Quizzes and Chapter Tests | p. 45 | p. 46 | p. 47 | $\begin{aligned} & \text { pp. 49, } \\ & 53 \end{aligned}$ |
| BL | OL | AL | ELL | $\square$ | Authentic Assessment Strategies and Activities | p. 4 | p. 4 |  |  |
| BL | OL | AL | ELL | (3) | ExamView ${ }^{\text {® }}$ Assessment Suite CD-ROM | 4-1 | 4-2 | 4-3 | Ch. 4 |
| BL | OL | AL | ELL | (3) | Interactive Tutor Self-Assessment CD-ROM | 4-1 | 4-2 | 4-3 |  |
| CLOSE |  |  |  |  |  |  |  |  |  |
| BL |  |  | ELL | $\square$ | Reteaching Activities* | p. 4 | p. 4 | p. 4 |  |
| BL | OL |  | ELL | $\square$ | Reading and Study Skills Foldables | p. 51 | p. 51 | p. 51 |  |
| BL | OL | AL | ELL | 㫫 | Graphic Organizer Transparencies | p. 29 |  |  |  |

[^1]
## Researching Using Keyword

## Technology Product

CyberScout is a convenient and dynamic search engine that provides several easy ways to locate information outside the McGraw-Hill Learning Network. CyberScout only searches Web sites that have been reviewed by teachers, so the information students find is always appropriate and accurate.

## Objectives

After students learn using CyberScout, they will be able to

- research topics and issues in economics using CyberScout;
- exercise research and study skills;
- practice writing skills.


## Steps

- From the McGraw-Hill Learning Network home page (www.mhln.com), click on For Students.
- Choose CyberScout below Homework Help.
- Enter a keyword or phrase in the Keyword field and click on the Go button.
- Click on the link to a Web site of interest.
- Students will be redirected to the Web site in a new window.
- Students navigate through the chosen Web site to gain information on their topic and take notes.

| Economics |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Student | Teacher | Parent |
|  | $\bullet$ | $\bullet$ | $\bullet$ |
| Beyond the Textbook | $\bullet$ | $\bullet$ | $\bullet$ |
| Chapter Overviews | $\bullet$ |  | $\bullet$ |
| ePuzzles and Games | $\bullet$ |  | $\bullet$ |
| Concepts in Motion | $\bullet$ |  | $\bullet$ |
| Multi-Language Glossaries | $\bullet$ |  | $\bullet$ |
| Online Student Edition | $\bullet$ |  | $\bullet$ |
| Self-Check Quizzes | $\bullet$ |  | $\bullet$ |
| Student Web Activities | $\bullet$ |  | $\bullet$ |
| Study CentralT |  |  | $\bullet$ |
| Time Current Events | $\bullet$ | $\bullet$ | $\bullet$ |
| Teaching Today |  | $\bullet$ | $\bullet$ |
| Vocabulary eFlashcards |  |  | $\bullet$ |
| Web Activity Lesson Plans |  | $\bullet$ |  |

[^2]
## Additional Chapter Resources



- Timed Readings Plus in Social Studies helps students increase their reading rate and fluency while maintaining comprehension. The 400 -word passages are similar to those found on state and national assessments.
- Reading in the Content Area: Social Studies concentrates on six essential reading skills that help students better comprehend what they read. The book includes 75 high-interest nonfiction passages written at increasing levels of difficulty.
- Reading Social Studies includes strategic reading instruction and vocabulary support in Social Studies content for both ELLs and native speakers of English. www.jamestowneducation.com


Use this database to search more than 30,000 titles to create a customized reading list for your students.

- Reading lists can be organized by students' reading level, author, genre, theme, or area of interest.
- The database provides Degrees of Reading Power ${ }^{\text {TM }}$ (DRP) and Lexile ${ }^{T M}$ readability scores for all selections.
- A brief summary of each selection is included.

Leveled reading suggestions for this chapter: For students at a Grade 10 reading level:

- Exploring Careers, by U.S. Department of Labor

For students at a Grade 11 reading level:

- The Success of the Navajo Arts and Crafts Enterprise, by Lenora Begay Trahant
For students at a Grade 12 reading level:
- Business Builders in Fast Food, by Nathan Aaseng
* Review suggested books before assigning them.


National Council on Economic Education

## Voluntary Standards Emphasized in Chapter 4

Content Standard 8 Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

## Resources Available from NCEE

- Virtual Economics ${ }^{\circledR}$ : An Interactive Center for Economic Education Version 3.0
- Capstone: The Nation's High School Economics Course
- Focus: High School Economics, Second Edition
- Mathematics and Economics: Connections for Life, Grades 9-12

To order these materials, or to contact your State Council on Economic Education about workshops and programs, call 1-800-338-1192 or visit the NCEE Web site at store.ncee.net.

## The BIG Idea

As students study the chapter, remind them to consider the chapter-based Big Idea. The Essential Question in the chapter launch activity below ties in to the Big Idea and helps students think about and understand important chapter concepts. In addition, the HandsOn Chapter Project relates the content from each section to the Big Idea. The steps in each section build on each other and culminate in the Wrap-Up Activity on the Visual Summary page.

## Economics \& You Video

To generate student interest and provide a springboard for class discussion, access the Economics \& You Topic 4 video, What is Demand?, at glencoe.com or on the video DVD.
three-dimensional, interactive graphic organizers that help students practice basic writing skills, review key vocabulary terms, and identify main ideas. Have students complete this chapter's Foldable activity or activities in Dinah Zike's Reading and Study Skills Foldables booklet. OL

## Economics Onuine

Introduce students to chapter content and key terms by having them access Chapter 4 -Chapter Overviews at glencoe.com.

## Demand

## Why It Matters

Think about the items you bought during the past two months. What influenced your purchases? Did you need the items, or did you buy them because you wanted them? Make a list of the items, and next to each one write why you bought it. Then add for each item whether you would have bought more if the price had been lower, or fewer had the price been higher. Read Chapter 4 to learn how economists interpret your actions.

## The BIG Idea

Markets exist when buyers and sellers interact, and market prices are set by the interaction of demand and supply.

When prices go down for products, such as the computers in this computer store, consumers
demand more of them.

90 UNIT 2

## Activity: Launching the Chapter

Predicting Have students research and write about two products: one that they expect to increase in popularity in the next few years and one that they expect to decrease in popularity. For each product, students should explain why they expect the popularity of the product to change in the way they predict.
Essential Question: What causes desire, or demand, for a product to rise or fall? (Possible answers: changing tastes and preferences;
changes in income; increase or decrease in how many people want a product) Students may also use Internet resources and financial magazines to make predictions about the two products. Have students create charts and graphs to support their positions. OL

## Focus

## Bellringer

Daily Focus Transparency 10


## GUIDE TO READING

Answers to Graphic: the desire, ability, and willingness to buy a product; involves the variables of price and quantity; quantity demanded varies inversely with price Woman-esque cuffs. . . . Other popular choices include wide, flexible "liquid metal" (a la chain mail) and oversize bangles strung with colored beads or seashells-or even bottle caps or typewriter keys. Meanwhile, those slim bangles from years past shouldn't be tossed: A piling of 8,10 , or more easily makes the wearer a member of the bigger-is-better bracelet brigade.

W
hen we talk about the "demand" for a product, we mean more than the desire to simply have or to own the item. In order for demand to be counted in the marketplace, desire must be coupled with the ability and willingness to pay for it. Only those people with demand-the desire, ability, and willingness to buy a product-can compete with others who have similar demands.

Demand, like many of the other topics discussed in Unit 2, is a microeconomic concept. Microeconomics is the part of economic theory that deals with behavior and decision making by individual units, such as people and firms. Collectively, our microeconomic concepts help explain how prices are determined and how individual economic decisions are made.
demand combination of desire, ability, and willingness to buy a product
microeconomics part of economics that studies small units, such as individuals and firms

CHAPTER 4 Demand 91

Resource
Manager

|  | Critical Thinking |
| :---: | :---: |
| Teacher Edition <br> - Act. Prior Know., p. 92 <br> Additional Resources <br> - Guid. Read. Act., p. 10 <br> - Read. Ess. \& NoteTaking Guide, p. 28 <br> - Pri./Sec. Source Read., p. 5 | Teacher Edition <br> - Det. Cause/Effect, p. 93 <br> - Theorizing, p. 95 <br> Additional Resources <br> - Authentic Assess., p. 4 <br> - Quizzes and Tests, p. 45 |

## D Differentiated Instruction

Teacher Edition

- ELL, p. 92
- Logical/Math., p. 93

Additional Resources

- Reading and Study Skills Fold., p. 51
- Econ. Cartoons, p. 5



## Writing Support

Teacher Edition

- Expository Writing, p. 94
- Persuasive Writing, p. 96


## Additional Resources

- Writer's Guidebook

Teacher Edition

- Using Tables and Charts, p. 92
- Using Line Graphs, p. 94


## Additional Resources

- Graph. Org. Trans., p. 29
- Daily Focus Trans. 10, 11


## Teach

## R Reading Strategy

Activating Prior Knowledge
Ask: What are the three basic questions? (WHAT, HOW, and FOR WHOM) What is their purpose? (Answering the questions helps people make careful decisions about using limited resources.)

## D Differentiated Instruction

## English Language Learners

Explain that variables is a math term referring to quantities that may change. Often, in a relationship between variables, one is unknown and changes as the other variable changes. Give students the example of height varying with age. ELL

## S Skill Practice

Using Tables and Charts
Ask: How many CDs does the consumer demand at a price of \$20? (1) \$5? (8) BL

Economic Analysis
Answer: As the price of the CDs decreases, the quantity demanded increases.
market economy economic system in which people and firms make all economic decisions (also see page 37)
demand schedule a table that lists how much of a product consumers will buy at all possible prices

## An Introduction to Demand

MAIN Idea Demand is a concept specifying the different quantities of an item that will be bought at different prices.

Economics \& You Do you buy more of an item when the price goes down, or less of it when the price goes up? Read on to see how this behavior illustrates the concept of demand.
[ In a market economy people and firms act in their own best interests to answer the basic WHAT, HOW, and FOR WHOM questions. Demand is central to this process, so an understanding of the concept of demand is essential if we are to understand how the economy works.

## Demand Illustrated

[
Fortunately, the concept of demand is easy to understand because it involves only two variables-the price and quantity of a specific product at a given point in time. For example, we might want to know how
many people would want to see a movie on a given afternoon if the price was $\$ 5$. Or we might want to know how many would want to view it if the price was $\$ 10$.

The answers would depend on a number of things, including the number of people living in the area, the number and types of other movies that were playing at the same time, and of course the popularity of the movie itself. But in the end, everything would be measured in terms of prices and quantities.

## The Individual Demand Schedule

To see how an economist would analyze demand, look at Panel A in Figure 4.1. It shows the amount of a product that a consumer, whom we'll call Mike, would be willing and able to purchase over a range of possible prices that go from $\$ 5$ to $\$ 30$. The information in Panel A is known as a demand schedule. The demand schedule shows the various quantities demanded of a particular product at all prices that might prevail in the market at a given time.

Figure 4.1 > The Demand for Compact Digital Discs

| A Demand Schedule |  |
| :---: | :---: |
| Price | Quantity demanded |
| $\$ 30$ | 0 |
| 25 | 0 |
| 20 | 1 |
| 15 | 3 |
| 10 | 5 |
| 5 | 8 |



The demand schedule and the demand curve both show the quantity of CDs an individual consumer demands at every possible price. Note how the three CDs demanded at a price of $\$ 15$ are plotted as point a on the demand curve.
Differentiated Instruction

## How the Furby Flies



Primary and Secondary Source Readings,
p. 7

Objective: Understand some reasons why demand can increase dramatically.
Focus/Teach: Ask students to brainstorm a list of products in high demand. Then have students complete the activity.
Assess:

Close:

92

Have students exchange papers to grade each other's answers.
Have students identify other products that have been scarce in stores due to popularity.

## Differentiated Instruction Strategies

BL Ask students to draw a graphic organizer to show the sequence of events in the article.
AL Direct students to write a description of the causes and effects of the Furby craze.
ELL Show students pictures of the products mentioned in the article.


As you can see, Mike would not buy any CDs at a price of $\$ 25$ or $\$ 30$, but he would buy one if the price fell to $\$ 20$, and he would buy three if the price was $\$ 15$, and so on. Just like the rest of us, he is generally willing to buy more units of a product as the price gets lower.

## The Individual Demand Curve

The demand schedule in Panel A of Figure 4.1 can also be shown graphically as the downward-sloping line in Panel B. All we have to do to is to transfer each of the price-quantity observations in the demand schedule to the graph, and then connect the points to form the curve. Economists call this the demand curve, a graph showing the quantity demanded at each and every price that might prevail in the market.

For example, point a in Panel B shows that Mike purchased three CDs at a price of $\$ 15$ each, while point $\mathbf{b}$ shows that he will buy five at a price of $\$ 10$. The demand schedule and the demand curve are similar in that they both show the same information-one in the form of a table and the other in the form of a graph.

[^3]
## The Law of Demand

MAIN Idea There is an inverse relationship between the price of an item and the quantity demanded.

Economics \& You When you go shopping, do you try to catch sale days? Read on to find out how an economic "law" describes your behavior.

The prices and quantities in Figure 4.1 point out a feature of demand: for practically every good or service that we might buy, higher prices are associated with smaller amounts demanded. Conversely, lower prices are associated with larger amounts demanded. This is known as the Law of Demand, which states that the - quantity demanded varies inversely with its price. When the price of something goes up, the quantity demanded goes down. Likewise, when the price goes down, quantity demanded goes up.

## Why We Call It a "Law"

Expressing something as a "law" may seem like a strong statement for a social science like economics to make, but there are two reasons why economists prefer to do so. First, the inverse relationship between price and quantity demanded is something

Demand and Prices If the prices of CDs drop, consumers will be better able and more willing to buy them. How does this situation reflect the Law of Demand?
demand curve a curve that shows the quantities demanded at all possible prices

Law of Demand rule stating that consumers will buy more of a product at lower prices and less at higher prices

## (i.) Personal Finance Handbook <br> See pages R4-R5 for more information on budgeting.

## Critical Thinking

## Determining Cause and

 Effect Ask: What causes a change in demand? (a change in price) BL
## Differentiated Instruction

## Logical/Mathematical

 Have students construct three imaginary demand schedules for three products of their choice. Then have them graph each of the schedules. Students should pair with another student to check each other's schedules and graphs. OLCaption Answer: The situation shows consumers buying more at lower prices, which reflects the inverse relationship specified by the Law of Demand.

## $\sqrt{ }$ Reading Check Answer:

Answers will vary, but most students will agree that they will buy more at lower prices, which illustrates the Law of Demand.

## Leveled Activities

## Reteaching Activities, p. 4



Graphic Organizer Transparencies, p. 29


AL Primary and Secondary Source Readings, p. 5


# Figure 4.2 - Individual and Market Demand Curves 

## Skill Practice

Using Line Graphs Ask: How many CDs would Mike buy at a price of $\$ 20$ ? (1) How many would Julia buy at the same price? (2) How can you determine the number of CDs that would be bought in the market at a price of \$20? (Possible answer: Add together Mike's and Julia's quantities.) OL

## W Writing Support

Expository Writing Have students write about a time when they observed the Law of Demand working. Students can write about purchases they have made or purchases they have observed others making. OL

Economic Analysis
Answer: The first two curves each show what one person would buy at various prices. The third curve shows the quantities demanded by the entire market.

## Reading Check Answer: It

slopes downward to the right, reflecting the inverse relationship between price and quantity stated in the Law of Demand.

## Hands-On <br> Chapter Project

## Step 1

## Making Decisions About Demand and Elasticity

In this project, students will create a presentation to stockholders outlining the progress of a business over the course of a year.

## Step 1: Identifying Demand for a

 Product. Students will choose a product and survey classmates to determine demand schedules.Directions: In a general class discussion, brainstorm a list of products that class members buy. Organize the class into small groups, and tell each group to imagine that they are forming a business. Students should then choose from the list a product that they would like to sell and set a range of three to five possible prices that they might charge for it. Group members should then survey ten classmates to see what quantities they would buy at each of the prices. Have each group compile the data into a demand schedule.
that we find in study after study, with people almost always stating that they would buy more of an item if its price goes down, and less if the price goes up.
Second, common sense and simple observation are consistent with the Law of Demand. This is how people behave in everyday life-they normally buy more of a product at lower prices than they do at higher ones. All we have to do is to note the increased purchases at the mall whenever there is a sale. This is why economics is a social science: because it is the study of the way we behave when things around us _change.

## The Market Demand Curve

So far we have discussed a particular individual's demand for a product. Sometimes, however, we are more concerned with the market demand curve, the demand curve that shows the quantities demanded by everyone who is interested in purchasing the product. Figure 4.2 shows the market demand curve $\mathbf{D}$ for Mike and

Market Demand Curve


HISKills Handbook
See page R49 to learn about Using Line Graphs.
market demand curve a curve that shows how much of a product all consumers will buy at all possible prices

The market demand curve shows the quantities demanded by everyone in the market who is interested in purchasing a product. Point a on the market demand curve represents the three CDs Mike and Julia each would purchase at a price of $\$ 15$ for a total of six CDs.

See StudentWorks ${ }^{T M}$ Plus or glencoe.com.

Economic Analysis How do the three demand curves differ?

## Mike's Individual Demand Curve



his friend Julia, the only two people whom (for simplicity) we assume to be willing and able to purchase CDs.

To get the market demand curve, all we do is add together the number of CDs that Mike and Julia would purchase at every possible price. Then, we simply plot the prices and quantities on a separate graph. To illustrate, point a in Figure 4.2 represents the three CDs that Mike would purchase at $\$ 15$, plus the three that Julia would buy at the same price. Likewise, point $\mathbf{b}$ represents the quantity of CDs that both would purchase at $\$ 10$.

The market demand curve in Figure 4.2 is very similar to the individual demand curve in Figure 4.1. Both show a range of possible prices that might prevail in the market at a given time, and both curves are downward sloping. The main difference between the two is that the market demand curve shows the demand for everyone in the market.
$\sqrt{ }$ Reading Check Explaining How does the market demand curve reflect the Law of Demand?

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Summarizing Direct each group to use their demand schedules to graph a demand curve for their product. OL
(Chapter Project continued in Section 2.)

## Demand and Marginal Utility

MAIN Idea As we buy more of an item, we get less satisfaction from each additional purchase.
Economics \& You When you buy clothes, why do you prefer a variety of colors and styles to identical items? Read to see how this relates to marginal utility.

As you may recall from Chapter 1, economists use the term utility to describe the amount of usefulness or satisfaction that someone gets from the use of a product. Marginal utility-the extra usefulness or additional satisfaction a person gets from acquiring or using one more unit of a product-is an important extension of this concept because it explains so much about demand.

The reason we buy something in the first place is because we feel that the product is useful and will give satisfaction. However, as we use more and more of a product, we
encounter diminishing marginal utility, the principle which states that the extra satisfaction we get from using additional quantities of the product begins to decline.

Because of our diminishing satisfaction, we usually are not willing to pay as much for the second, third, fourth, and so on, as we did the first unit. This is why our demand curve is downward-sloping, and this is why Mike and Julia won't pay as much for the second CD as they did for the first.

Diminishing satisfaction happens to all of us at some time. For example, when you buy a drink because you are thirsty, you get the most satisfaction from the first purchase. Since you are now less thirsty, you get less satisfaction from the second purchase, and even less from the next, so you are not willing to pay as much for the second and third purchases.

## $\sqrt{ }$ Reading Check Describing How does the

principle of diminishing marginal utility explain the price we pay for another unit of a good or service?
marginal utility additional satisfaction or usefulness a consumer gets from having one more unit of a product
diminishing marginal utility decrease in satisfaction or usefulness from having one more unit of the same product

## 

## Vocabulary

1. Explain the significance of demand, microeconomics, market economy, demand schedule, demand curve, Law of Demand, market demand curve, marginal utility, and diminishing marginal utility.

## Main Ideas

2. Describing What is the relationship between the demand schedule and the demand curve?
3. Determining Cause and Effect Using a graphic organizer like the one below, explain how a change in price changes the quantity demanded of an item.


## Critical Thinking

4. The BIG Idea How does the principle of diminishing marginal utility explain the slope of the demand curve?
5. Inferring Although people buy more of a product when the seller lowers the price, some items such as luxury goods are not offered at a lower price. Why?
6. Analyzing Visuals Look at the demand schedules on page 94. Assume that Julia is willing to purchase different quantities at the same prices, and write down the new demand. Then plot a new market demand curve that incorporates the changed demand.
7. Using Graphs Create your own demand schedule for an item you currently purchase. Next, plot your demand schedule on a demand curve. Be sure to include labels.

## Applying Economics

8. Diminishing Marginal Utility Using what you have learned about diminishing marginal utility, find examples from your own experience and explain how they support this concept.

CHAPTER 4, SECTION 1

## G Critical Thinking

Theorizing Ask: What problems might economists have in trying to measure marginal utility? Explain. (Possible answer: Marginal utility is difficult to measure because it is subjective. If 20 people were asked how much satisfaction they received from a second soft drink, each one might give a different answer.) AL

Reading Check Answer: If we get less satisfaction from more of a product, we won't be willing to pay as much for another unit of the product.

## Assess

Use the Interactive Tutor Self-Assessment CD-ROM to review Section 1, and then assign the Section 1 Review as homework or as an in-class activity.

## Close

## Making Connections Have

 students give an example of how price or diminishing marginal utility changed their decision to buy a good or service. OL
## Answers

1. All definitions can be found in the section and the Glossary.
2. The demand curve is a graphical representation of the information given in a demand schedule.
3. As price increases, quantity demanded decreases. As price decreases, quantity demanded increases.
4. The principle of diminishing marginal utility tells us that the more of a product we consume, the less satisfaction we will get from additional units. If we are getting less
satisfaction, we will be willing to pay less money for those additional units, which would produce an inverse relationship between price and quantity.
5. Possible answer: Sellers offer products at the price at which they can make the most profit. Luxury goods can command high prices.
6. Answers will vary, but the new demand schedule should follow the Law of Demand and the resulting curve should slope downward to the right.
7. Answers will vary, but demand schedules should reflect an inverse relationship between price and quantity demanded.
8. Answers will vary but should include personal experiences that reflect the principle of diminishing marginal utility.

## BusinessWeek

## Teach

## W Writing Support

Persuasive Writing Have students write a letter to a state or federal legislator taking a position on federal regulation of foods to make them healthier. Students might address issues such as personal freedom, increasing childhood obesity, and health care costs. AL

## BusinessWeek 0/W/L/I/N/E

To find up-to-date news and analysis on the economy, business, technology, markets, entrepreneurs, investments, and finance, have students search feature articles and special reports on the BusinessWeek Web site, www.businessweek.com.

## Examining the Newsclip

## Answers:

1. Kraft was running the risk of being regulated or sued for making unhealthy foods.
2. Demand might drop.

## Additional Support

# BusinessWeek NEwsCLIP 

Oscar Mayer, one of the brands of Kraft Foods Inc., first launched its Lunchables product line in 1988. The prepackaged lunches quickly became popular, and today these snacks are available in many different flavor combinations. They also have come under attack by critics. Kraft is finding ways to satisfy these critics and keep consumer demand high.

## Slimmer Kids, Fatter Profits?

Charles Davis, a Kraft food maven, is on a health kick. But then, he has no choice. Making cheese healthier is complicated. Add too much calcium, and it starts to taste chalky. Take out too much fat, and the cheese emerges from mechanical graters like Play-Doh. "It becomes a big glob instead of having good shredding integrity," says Charles W. Davis, vice-president of global technology and quality for convenient meals at Kraft Foods Inc.


Davis can tell you all about finding that delicate balance between what tastes good and what's good for you. Since 2004, the 48 -year-old chemist has been leading a team of scientists, technicians, and engineers working to improve the nutritional content of Kraft's popular Lunchables Lunch Combinations line, a process known industrywide as reformulation.

That means he has spent an inordinate amount of time experimenting not only with cheese but also with the juice drinks, crackers, deli meats, and fruit snacks that make up these all-in-one meals. If you count all 41 varieties of Lunchables, Davis has cut calories by an average of $10 \%$, fat by $24 \%$, and sodium by $20 \%$.

Why do Davis and hundreds of other people throughout the company do nothing else but experiment in their kitchen labs all day? Because their employer has no choice. Kraft, the nation's largest food manufacturer, and its competitors risk becoming this decade's cigarette companies: vilified for pushing junk to children, restricted by oftenconflicted regulators, challenged in court.
-Reprinted from BusinessWeek

## Examining the Newsclip

1. Understanding Cause and Effect Why did Kraft decide to reformulate a product that was already popular?
2. Making Inferences What might happen to demand for the Lunchables products if Kraft did not respond to consumer demands?

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## Activity: Interdisciplinary Connection

Health Tell students that competition forces businesses to follow consumer desires. Direct students to find two TV or print advertisements for products that have been reformulated to be "healthier." Have students research the products to find out how much they have changed (for example, students might compare and contrast each product's past and present nutrition information). Have students write several paragraphs analyzing the product changes
and determining whether the reformulated products should truly be labeled "healthier." Call on volunteers to share their findings with the class. OL

## Focus

## Bellringer

Daily Focus Transparency 9


## COMPANIES IN THE NEWS

-TIME

## McMakeover Deluxe

McDonald's is getting a makeover. The fast-food force has launched its first restaurant redesign in 30 years. More than 6,000 locations will feature the new look by year's end.

Customers will have three zones to choose from, based on their dining needs. Counter seating will serve eat-and-run customers. Those looking to linger will find soft lighting and plush chairs. Mingling teens can cram tables together in a flexible seating area.
"It's something McDonald's should have done years ago," says restaurant analyst Howard Penney. The design suggests a certain coffee chain, but Penney says it could give McDonald's an edge over fast-food rivals.

Reading Strategy
Listing As you read about the determinants of demand, list each on a table similar to the one below and provide an example of each.

| Determinants of Demand |  |  |
| :--- | :--- | :--- |
| Determinant | Example | Effect on demand |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

## GUIDE TO READING

Possible Answers to Graphic:
Determinant: consumer income. Example: getting a raise. Effect on demand: income rising increases demand.

Determinant: consumer tastes. Example: fashion. Effect on demand: can increase demand for fashionable clothing and decrease demand for unfashionable clothing.
$W_{\text {hy would McDonald's go to the trou- }}$ ble and expense of redesigning its restaurants? The company realizes that consumer demand is changing. This means the company has to change too, or it risks losing business to competitors that better meet customer demand. Such changes in demand have an effect on both the demand schedule and the demand curve.

When it comes to demand, there are two types of changes. When the price of a product changes while all other factors remain the same, we have a change in the quantity demanded. Sometimes other factors change while the price remains the same-similar to the change in consumer taste in our news story. When this happens, we see a change in demand.

Resource
Manager

| R |
| :--- |
| Reading |
| Teacher Edition |
| - Making Connections, |
| pp. 98, 100 |
| - Analyzing Text |
| Structure, p. 99 |
| Additional Resources |
| - Guid. Read. Act., p. 11 |
| - Read. Ess. \& Note- |
| Taking Guide, p. 28 |

 Critical
Thinking
Teacher Edition

- Making Inferences, p. 98
- Dist. Fact/Opinion, p. 102


## Additional Resources

- Crit. Think. Act., p. 4
- Daily Focus Trans. 3, 9


## D Differentiated Instruction

Teacher Edition

- Interpersonal, p. 99
- ELL, p. 100

Additional Resources

- Econ. Cartoons, p. 8
- Pri./Sec. Source Read., p. 7
- Enrichment Act., p. 4
 Writing
Support
Teacher Edition
- Narrative Writing, p. 100
- Expository Writing, p. 102


## Additional Resources

- High School Writing Process Trans.


## Skill Practice

Teacher Edition

- Making Inferences, p. 101


## Additional Resources

- Reading and Study

Skills Fold., p. 51

- Math Prac. for Econ., p. 6


## Teach

## Critical Thinking

Making Inferences Tell students that inflation is a rise in the general level of prices. Ask: What kind of income effect do you think inflation would produce? (It would make consumers feel poorer.) How might it affect quantity demanded? (Consumers will likely buy smaller quantities.) AL

## R Reading Strategy

## Making Connections Ask

 students to list five goods that they use. Then have them list other goods they would buy more of if the prices of the original goods rose and the substitution effect took hold. OL
## Economic Analysis

Answer: because people are willing to buy more items when prices are low and less items when prices are high
$\sqrt{ }$ Reading Check Answer: by a movement from one point to another on the same curve
change in quantity demanded movement along the demand curve showing that the amount someone is willing to purchase changes when the price changes
income effect that part of a change in quantity demanded due to a change in the buyer's real income when a price changes

## substitution

 effect that part of a change in quantity demanded due to a price change that makes other products more or less costly
## Change in the Quantity Demanded

MAIN Idea Only a change in price can cause a change in quantity demanded.
Economics \& You When you shop for an item, do you also consider prices of related items? Read on to learn how demand accounts for this behavior.

Look at Figure 4.3 to see what happens when only the price changes and everything else remains constant. Point a on the demand curve shows that six CDs are demanded at a price of $\$ 15$. When the price falls to $\$ 10,10 \mathrm{CDs}$ are demanded. This movement from point $\mathbf{a}$ to point $\mathbf{b}$ is $\mathbf{a}$ change in quantity demanded-a change that is graphically represented as a movement along the demand curve. When the price goes up, fewer CDs are demanded. When the price goes down, more are

## Figure 4.3 - Change in the Quantity Demanded



Only a change in price can cause a change in quantity demanded. When the price goes down, the quantity demanded increases. When the price goes up, the quantity demanded decreases. Both changes appear as a movement along the demand curve.
Economic Analysis Why do price and quantity demanded move in opposite directions?
demanded. As we will see, the income and substitution effects also help us understand this principle.

## The Income Effect

When the price of a product drops, consumers pay less and, as a result, have some extra income to spend. For example, we can see from Figure 4.3 that consumers spent $\$ 90$ to buy six CDs when the price was $\$ 15$ per CD. If the price drops to $\$ 10$, they would spend only $\$ 60$ on the same quantity, leaving them \$30 "richer" because of the drop in price. They may even spend some of this extra income on more CDs. As a result, part of the increase from 6 to 10 units purchased, shown as the movement from point $\mathbf{a}$ to point $\mathbf{b}$ on the demand curve, is due to consumers feeling richer.

If the price had gone up, consumers would have felt a bit poorer and would have bought fewer CDs. This illustrates the income effect, the change in quantity demanded because of a change in price that alters consumers' real income.

## The Substitution Effect

A lower price also means that CDs will be relatively less expensive than other goods and services such as concerts and movies. As a result, consumers will have a tendency to replace a more costly itemsay, going to a concert-with a less costly one-more CDs. The substitution effect is the change in quantity demanded because of the change in the relative price of the product. Together, the income and substitution effects explain why consumers increase their consumption of CDs from 6 to 10 when the price drops from $\$ 15$ to $\$ 10$.

Whenever a price change causes a change in quantity demanded, the change appears graphically as a movementalong the demand curve. The change in quantity demanded, as illustrated in Figure 4.3, can be either an increase or a decrease, but in either case the demand curve itself does not shift.
$\sqrt{ }$ Reading Check Describing How is a change in the quantity demanded illustrated on the demand curve?


Authentic Assessment Strategies and
Activities, p. 4

## Graphing the Law of Demand

A change in demand occurs when people decide to purchase different amounts of a product at the same price. When we plot the numbers from the demand schedule, we get two separate demand curves. An increase in demand appears as a shift of the demand curve to the right. A decrease in demand appears as a shift to the left.

## Economic Analysis What might cause a change in demand for CDs?



## Change in Demand

MAIN Idea Several factors can cause the demand curve to shift.

Economics \& You Can you remember something fashionable that quickly went out of style? Read on to learn how changing consumer tastes affect demand.

Sometimes other factors change while the price remains the same. When this happens, people may decide to buy different amounts of the product at the same prices. This is known as a change in demand. As a result, the entire demand curve shifts-to the right to show an increase in demand, or to the left to show a decrease in demand. Therefore, a change in demand results in an entirely new demand curve, while a change in quantity demanded is a movement along the original demand curve.

A change in demand is illustrated in the schedule and graph in Figure 4.4. Note that

Panel A has a third column showing that people are willing to buy different amounts at each and every price. At a price of $\$ 15$, for example, consumers are now willing to buy 10 CDs instead of 6 , moving from point a to point $\mathbf{a}^{\prime}$. When this information is transferred to the graph, the demand curve appears to have shifted to the right.

When demand changes, a new schedule or curve must be constructed to reflect the new quantities demanded at all possible prices. Demand can change because of changes in the determinants of demand: consumer income, consumer tastes, the price of related goods, expectations, and the number of consumers.

## Consumer Income

Changes in consumer income can cause a change in demand. An increase in income means people can afford to buy more at all possible prices. Suppose, for example, that
change in demand shift of the demand curve when people buy different amounts at every price

## Reading Strategy

## Analyzing Text Structure

Ask: What word signifies a comparison in the text? (while) What two things are being compared? (A change in demand is being compared with a change in quantity demanded.) BL

## D Differentiated Instruction

Interpersonal Have students work together in pairs. Ask students in each pair to choose a good that they would buy more of if they had more income. For each good, have students question each other to construct two demand schedules-one for their current income and one for after their income doubled. Have them use the same three prices for both schedules. Ask: How would you expect consumer income to affect demand? (For most goods, more income will increase demand.) OL

## Economic Analysis

Answer: Students might say that demand for CDs would change if a new product, such as satellite radio, became popular.

## Leveled Activities

BL Economic Content Vocabulary Activities, p. 4


OL Economic Cartoons, p. 8


## Critical Thinking Activities, p. 4



## Differentiated Instruction

## English Language Learners

Tell students that an item's popularity grows when more and more people like it. Ask: What foods are popular in your school's cafeteria? What makes them popular? (Answers will vary, but students will likely recognize that the foods are popular because the majority of students enjoy eating them.) ELL

## W Writing Support

Narrative Writing Have students write a short story about how a rumor or an unfavorable report affects the demand of a product or service. For example, students might imagine how a negative report on death rates might affect a hospital. AL

## R Reading Strategy

Making Connections Have students suggest more examples of substitute goods. Write the list on the board. (Possible answers: Coke and Pepsi; beef and chicken; minivans and SUVS.) Remind students to consider their own behavior when thinking about how a change in the price of a related product will affect demand. OL

## Hands-On <br> Chapter Project

Step 2

## Digital Demand in South Korea

When a financial crisis hit Asia over a decade ago, South Koreans decided to invest in technology to spur economic development. Today over 70 percent of the country has high-speed Internet access, and South Korea boasts the world's largest Wi-Fi network.

South Koreans eagerly embrace the new technology, using it in ways unknown in the United States. For example, they pay for the subway fare by swiping their cell phones through readers. Students access Webcast tutorials as they study for their version of the SAT.

The increasing demand for new technology is most evident in cell phones. South Koreans replace their cell phones as often as every six months. That puts pressure on companies to constantly develop upgraded models with new and exciting features.

It also has turned South Korea into a nation-wide focus group on cell phones. The phone you purchase today may well have features that your South Korean peers tested for you 6 to 12 months earlier.
substitutes competing products that can be used in place of one another

Mike and Julia get a raise, which allows them to buy more CDs. Instead of Mike and Julia each buying 3 for a total of 6 when the price is $\$ 15$, they can now each buy 5 for a total of 10 . If we plot how many CDs would be purchased at every possible price in the market as demand curve $\mathbf{D}^{1}$ in Figure 4.4, then it appears as if the curve has shifted to the right.

Exactly the opposite could happen if there was a decrease in income and Mike and Julia bought less. The demand curve would then shift to the left, showing a decrease in demand.

## Consumer Tastes

Consumers sometimes change their minds about the products they buy. Advertising, fashion trends, and even changes in the season can affect consumer tastes. For example, when a product is successfully advertised, its popularity increases and people tend to buy more of it. As a result, the demand curve shifts to the right.

On the other hand, people will buy less [of a product if they get tired of it. This is exactly what happens when a rumor or unfavorable report about a product appears. When fewer people want the product at all possible prices, the demand curve shifts to the left, showing a decrease in demand.

In addition, the development of new products can have a dramatic and relatively sudden impact on consumer preferences. For example, when music CDs were first introduced on the market, they reduced the demand for cassette players and tapes, shifting the demand curves for both to the left. When the iPod and similar devices arrived, the demand for CDs and CD players decreased.

Sometimes the change in consumer tastes and preferences is relatively rapid, and sometimes the change occurs more slowly. In recent years, for example, consumer concerns about health have slowly increased the demand for healthful foods.

## Substitutes

A change in the price of related products can cause a change in demand. Some products are known as substitutes because they can be used in place of other products. For example, if people treat butter and margarine as substitutes, a rise in the price of butter will cause an increase in the demand for margarine. Likewise, a rise in the price of margarine would cause the demand for butter to increase. In general, the demand for a product tends to increase if the price of its substitute goes up. The demand for a product tends to decrease if the price of its substitute goes down.

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## Making Decisions About Demand and Elasticity

Step 2: Identifying Relevant Demand Determinants. Students will determine which demand determinants they might manipulate to increase demand.
Directions: Have students return to their previous groups, review the information in the section, and discuss how each determinant might apply to their product. For example, they should identify what products might be substitutes or complements and whether
fashion or health information might apply. Have groups plan an advertising campaign aimed at manipulating one of the determinants in the hopes of increasing demand for their product.
Designing Have groups write ad copy, draw pictures, or choose a photo to represent their ad campaign. OL
(Chapter Project continued in Section 3.)

## Complements

Other related goods are known as complements, because the use of one increases the use of the other. Personal computers and software are two complementary goods. When the price of computers decreases, consumers buy more computers and more software. If the price of computers spirals upward, consumers would buy fewer computers and less software. Thus, an increase in the price of one good usually leads to a decrease in the demand for its complement.

## Expectations

The way people think about the future can affect demand. For example, suppose that a company announces a technological breakthrough in television picture quality. Even if the new product might not be available for a year, some consumers might hold off buying a TV today due to their expectations. Purchasing less at every price would cause demand to decline, illustrated by a shift of the demand curve to the left.

Of course, expectations can also have the opposite effect on market demand. For
example, if the weather service forecasts a bad year for crops, people might stock up on some foods before these items actually become scarce. The willingness to buy more because of expected future shortages would cause demand to increase, shown by a shift of the demand curve to the right.

## Number of Consumers

A change in income, tastes, and prices of related products affects individual demand schedules and curves-and hence the market demand curve. The market demand curve can also change if there is a change in the number of consumers.

Suppose that Devan, one of Mike's and Julia's friends, decides to purchase CDs. We would add the number of CDs that Devan would buy at all possible prices to those for Mike and Julia. The market demand curve would shift to the right to reflect an increase in demand. If Mike or Devan should leave the market, the total number of CDs purchased would decrease, shifting the market demand curve to the left.

Reading Check Explaining How do changes in consumer income and tastes affect the demand curve? Student Web Activity Visit the Economics: Principles and Practices Web site at glencoe.com and click on Chapter 4-Student Web Activities for an activity on change in demand.
complements products that increase the use of other products

CHAPTER 4, SECTION 2

## Skill Practice

Making Inferences List the following products on the board: peanut butter, hamburger, CD player, car, TV. Have students suggest complements for the products. (Possible answers: peanut butter: bread, jelly; hamburger: bun, ketchup, cheese; CD player: CDs, headphones; car: gasoline; TV: cable service) OL

## $\sqrt{ }$ Reading Check Answer:

If people make more money or come to like a product, demand goes up; if consumers make less money or no longer like a product, demand goes down.

## Assess

## Use the Interactive Tutor

 Self-Assessment CD-ROM to review Section 2, and then assign the Section 2 Review as homework or as an in-class activity.
## Close

Summarizing Have students list and briefly explain the factors that cause a change in demand. 0

## Answers

1. All definitions can be found in the section and the Glossary.
2. A change in quantity demanded is a change in a single quantity that occurs as a result of a change in price; a change in demand is a
change in all the quantities demanded at all a change in price; a change in demand is a
change in all the quantities demanded at all possible prices.
3. consumer income (increase or decrease in how much people make); consumer tastes (change in what people like and dislike); substitutes (products that can be used in place of other products); complements

## Critical Thinking

4. The BIG Idea How and why does a change in price affect the demand for substitutes? Provide an example.
5. Analyzing Visuals Look at Figure 4.4 on page 99 . Assume that a new CD format will come out soon. What do you think will happen to the market demand curve D? Explain.
6. Interpreting Locate an article in your newspaper illustrating at least one determinant of demand. Write a brief explanation of the effect of the determinant(s).

## Applying Economics

7. Change in Demand Name a product that you recently purchased because it was on sale. Identify one substitute and one complement for the product and describe how your demand for the substitute and complement changed because of the sale.
(products whose use increases the use of other products); expectations (the way people think about the future); number of consumers (increase or decrease in number of people interested in purchasing a product)
8. When the price of a good rises, it becomes less attractive to consumers, as per the Law of Demand. This encourages consumers to buy substitutes for the good, which constitutes a change in demand for the substitute. Students' examples will vary.
9. It will likely shift to the left, indicating a decrease in demand as the result of consumers buying the new CD format instead.
10. Possible answer: Doctors discover that a food is very beneficial to health. Consumer preferences for that food increase, as does demand.
11. Answers will vary but should illustrate substitutes and complements and how they are affected by a sale price.

## Teach

## Critical Thinking

## Distinguishing Fact from

 Opinion Ask: What is one fact and one opinion given in the feature? (Answers will vary but may include as a fact that Winfrey moved to Chicago in 1984. An opinion might be the description of Oprah as "likable" in the caption.)
## OL

## W Writing Support

Expository Writing Have students make an annotated time line of Winfrey's career, highlighting the achievements discussed in the feature. BL

## Examining the Profile

## Answers:

1. Winfrey is the first woman to produce and own her own talk show and the first African American woman to own a major television and film studio.
2. Answers will vary but may include ambition, determination, and confidence.

## Additional Support

Most people know Oprah Winfrey as a talk show host. Over the years, though, the likable Winfrey has developed many other talents to become one of the wealthiest, most successful, and most influential women in America.

## Profles in tenomices

## Oprah Winfrey (1954-)

- first woman in history to produce and own her own talk show
- first African American woman-and third woman in history-to own a major television and film studio


## The Gift of Gab

Oprah Winfrey grew up in deep poverty. As a troubled teenager, she went to live with her father, who encouraged her education. Four years later Winfrey received a scholarship to attend Tennessee State University. At the same time, she got her first media job as a radio news announcer. Two years later Winfrey became cohost of a talk show-and found her calling. Winfrey felt comfortable talking in front of cameras, and viewers responded to her easygoing attitude by making her program the number-one talk show in the Baltimore market.

In 1984 Winfrey relocated to Chicago to take over the failing talk show A.M. Chicago. Just as in Baltimore, the audience responded to her relaxed manner by watching in increasing numbers. Within two years, the show, renamed The Oprah Winfrey Show, became nationally syndicated, and today viewers watch her in more than 100 countries. The syndication deal made Winfrey the highestpaid entertainer at the time, with estimated earnings of over \$37 million in 1987.

## Building a Media Empire

Winfrey used this money and her personal ambition to build a wide-ranging business empire. In 1986 she established her own company, Harpo Inc. (Harpo is Oprah spelled backward.) A production company and movie studio grew from that venture. Since then, Winfrey has become cofounder of the Oxygen television network and branched out into print media through the publications 0 , The Oprah Magazine, and 0 at Home.
Success has allowed Winfrey to spend a portion of her income on charities that support education and help families. That portion is rising. Forbes magazine listed Winfrey as the first African American woman to become a billionaire. Her annual income, estimated at over $\$ 225$ million by 2006, has increased ever since.

## Examining the Profile

1. Drawing Conclusions Why is Oprah Winfrey considered to be one of the most powerful women in America?
2. Analyzing What characteristics helped Winfrey become a successful talk show host and entrepreneur?

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## Teacher Tip

## Arranging Student Groups

 When dividing students into groups, be sure to mix students of differing abilities and backgrounds. In particular, be sure to include a student with strong math skills in each group.
## Activity: Collaborative Learning

Demographics Have students work together in small groups to calculate Oprah's influence in quantitative terms. Share this information with them: Oprah's show has reached as many as ten million people daily in more than 190 cities in 112 countries. On average, when the Oprah Winfrey Show airs, about 7 percent of households with televisions are tuned into it. Have students research the populations
of five countries as well as the number of households with televisions. They should then calculate how many people in those countries are reached on an average day by Oprah's show. OL

## Focus

## Bellringer

Daily Focus Transparency 12


Reading Strategy
Describing As you read about price elasticity, complete a web diagram like the one below to describe what effect a change in price has on quantity demanded if the demand curve is elastic, inelastic, or unit elastic.


GUIDE TO READING

## COMPANIES in the NEWS

## Netflix, Blockbuster Battle It Out

Netflix and Blockbuster continue to battle head to head in the online movie rental arena. The monthly rental prices have dropped for DVD entertainment delivered to your door, ordered online. . . . Entertainment culture at its best, it seems-lots of competition and that is normally a better price point for the consumer.
[Reed Hastings, the CEO of Netflix, says,] "One of the reasons our last year has been so successful is the market's elasticity in response to our price cuts one year ago. . . . Obviously, if there's enough elasticity to make additional price cuts work, this would increase the economic pressure on video stores, and the additional store closures would further increase Netflix growth for many years ahead."

In 2006, Netflix expects to grow to 5.65 million subscribers with pretax net income between $\$ 50$ million and $\$ 60$ million.

Academic Vocabulary

- technical (p. 106)
- adequate (p. 108)

Section Preview
In this section you will learn about the factors that influence the size of a change in quantity demanded.

Content Vocabulary

- elasticity (p. 103)
- inelastic (p. 104)
- demand elasticity (p. 104)
- elastic (p. 104) preax ne income between 550 milion and $\$ 60$ millon.


You can find cause-and-effect relationships everywhere, and they are especially important to businesses. For example, Netflix had hoped that lower prices would entice customers to rent more movies and thus increase its overall revenues. The gamble paid off. Company CEO Reed Hastings credited the market's demand elasticity for the company's success

Elasticity is a general measure of respon-siveness-an important cause-and-effect relationship in economics. It tells us how a dependent variable, such as quantity demanded, responds to a change in an independent variable, such as price. Elasticity is a general concept that can also be applied to other measures such as income or supply.
elasticity a measure of responsiveness that shows how one variable responds to a change in another variable

## GUIDE TO READING

## Answers to Graphic:

elastic: change in price has a relatively large effect on quantity demanded
inelastic: change in price has a relatively small effect on quantity demanded
unit elastic: for a given percentage change in price, quantity demanded will change by the same percentage

Resource
Manager

| iR Reading | Critical Thinking |
| :---: | :---: |
| Teacher Edition <br> - Det. Importance, p. 106 <br> - Monitoring, p. 107 <br> Additional Resources <br> - Guid. Read. Act., p. 12 <br> - Read. Ess. \& NoteTaking Guide, p. 28 <br> - Pri./Sec. Source Read., p. 9 | Teacher Edition <br> - Predicting, p. 104 <br> - Making Inferences, p. 105 <br> - Drawing Con., p. 110 <br> - Problem-Solving, p. 115 <br> Additional Resources <br> - Math Prac. for Econ., p. 4 |

## D Differentiated Instruction

Teacher Edition

- ELL, p. 104
- Special Ed., p. 108
- Adv. Learners., p. 109
- Auditory/Musical, p. 110


## Additional Resources

- Econ. Cont. Vocab. Act., p. 4
- Reading and Study Skills Fold., p. 51


## W Writing Support

Teacher Edition

- Expository Writing, p. 106
- Narrative Writing, p. 108


## Additional Resources

- High School Reading in the Content Area Strat. and Act.

Teacher Edition

- Comparing Data, p. 104
- Using Tables and Charts, p. 105
- Interpreting Political Cartoons, p. 107
- Visual Literacy, p. 114

Additional Resources

- Reteaching, p. 4


## Teach

## D Differentiated Instruction

## English Language Learners

 Guide students in pronouncing the term elastic. Help them understand the meaning by showing them a piece of elastic and how it stretches. Extend their understanding by pointing out that the prefix in- means "without." Ask: Which stretches, or changes, more-something that is elastic or inelastic? (something that is elastic) ELL
## G Critical Thinking

Predicting Ask students to suggest other products where demand may be inelastic. Make a list on the board. As you continue the section, have students discuss the validity of their suggestions.

## S Skill Practice

Comparing Data Have students compare the data shown in the two graphs. Ask: Which graph shows the greatest change in expenditure? (the elastic demand graph) OL

## demand

elasticity a measure that shows how a change in quantity demanded responds to a change in price
elastic type of elasticity where a change in price causes a relatively larger change in quantity demanded
inelastic type of elasticity where a change in price causes a relatively smaller change in quantity demanded

Demand Elasticity
MAIN Idea When the price of an item changes, the change in quantity demanded can vary a little or a lot.

Economics \& You If there was a huge sale on table salt, would you stock up? Read on to learn how elasticity describes your response to the price change.

Consumers react to a change in price by changing the quantity demanded, although the size of their reaction can vary. This response is known as demand elasticitythe extent to which a change in price causes a change in the quantity demanded.

## Elastic Demand

Economists say that demand is elastic when a given change in price causes a relatively larger change in quantity demanded. To illustrate, look at how price and quantity demanded change between points $\mathbf{a}$ and $\mathbf{b}$ on the demand curve in Panel A of Figure 4.5.
As we move from point $\mathbf{a}$ to point $\mathbf{b}$, we see that price declines by one-third, or from $\$ 3$ to $\$ 2$. At the same time, the quantity demanded doubles from two to four units. Because the percentage change in quantity
demanded is relatively larger than the percentage change in price, demand between those two points is elastic.

This type of elasticity is typical of the demand for products like green beans, corn, or other fresh garden vegetables. Because prices of these products are lower in the summer, consumers increase the amount they purchase during that time. When prices are considerably higher in the winter, consumers tend to buy canned or frozen products instead.

## Inelastic Demand

For other products, demand may be inelastic, which means that a given change in price causes a relatively smaller change in the quantity demanded. We can see the case of inelastic demand in Panel B of Figure 4.5. In this case, the one-third drop in price from point $\mathbf{a}^{\prime}$ to $\mathbf{b}^{\prime}$ causes quantity demanded to increase by only 25 percent, or from two to two and one-half units.
This is typical of the demand elasticity for a product like table salt. A change in the price for salt does not bring about much _change in the quantity purchased. Even if the price was cut in half, the quantity

## Figure 4.5 Demand Elasticity and the Total Expenditures Test

## Additional Support



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## Extending the Content

Analyzing Policy Since raising the price of a product reduces quantity demanded, it is often suggested that harmful goods such as cigarettes should be heavily taxed. Taxing would raise the price that consumers would have to pay, therefore reducing the number of cigarettes bought. But how successful this policy would
actually be is determined by the price elasticity of demand for cigarettes. If demand is inelastic, the tax will not cause cigarette buying to decrease significantly. However, if it is elastic, the tax will have a real impact on smoking. One study shows that the elasticity of demand for cigarettes is .35 , or inelastic. However, this study dealt
with people of all ages who smoke. Another study looked only at teenage smoking and found that demand for cigarettes by this age group is elastic. Therefore, raising taxes on cigarettes could significantly decrease teenage smoking.
demanded would not increase by much because people can consume only so much salt. Similarly, if the price doubled, we would still expect consumers to demand about the same amount, because people spend such a small portion of their budget on salt.

## Unit Elastic Demand

Sometimes demand is unit elastic, so that a given change in price causes a proportional change in quantity demanded. When demand is unit elastic, the percentage change in quantity equals the percentage change in price. For example, a five percent drop in price would cause a five percent increase in quantity demanded. Unit elastic demand is shown in Panel C of Figure 4.5.

Examples of unit elasticity are difficult to find because the demand for most products is either elastic or inelastic. Unit elasticity is more like a middle ground that separates the other two categories of elasticity: elastic and inelastic.
$\sqrt{ }$ Reading Check Comparing What is the difference between elastic and inelastic demand?

## The Total Expenditures Test

MAIN Idea The total expenditures test is used to estimate the demand elasticity of a product.

Economics and You You just learned about demand elasticity. Read on to find out how businesses apply elasticity when setting prices.

To estimate elasticity, it is useful to look at the impact of a price change on total expenditures, or the amount that consumers spend on a product at a particular price. This is sometimes called the total expenditures test.

## Determining Total Expenditures

We find total expenditures by multiplying the price of a product by the quantity demanded for any point along the demand curve. To illustrate, the total expenditure under point a in Panel A of Figure 4.5 is $\$ 6$, which is determined by multiplying two units times the price of $\$ 3$. Likewise, the total expenditure under point $\mathbf{b}$ in Panel A is $\$ 8$, or $\$ 2$ times four units. By observing the change in total expenditures when the price changes, we can test for elasticity.

## Critical Thinking

Making Inferences Explain to students that an actual number value for elasticity is found by dividing the percent change in quantity demanded by the percent change in price. Ask: Why might the term unit be used to label a quantity change that, percentage-wise, is equal to a price change? If you divide a number by an equal number, the answer is one.) AL

## S Skill Practice

## Using Tables and Charts

Ask: How will a decrease in price affect expenditures on an elastic good? (Expenditures will rise.) On an inelastic good? (Expenditures will fall.) BL

## Reading Check Answer:

Elastic: a price change causes a larger change in quantity demanded. Inelastic: a price change causes a smaller change in quantity demanded.

## Economic Analysis

Answer: so it will know how one variable will respond to a change in another variable

0


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## Activity: Hands-On Economics

Restaurant Revenues Present students with the following scenario: You own a restaurant that is fully booked during the weekends. In mid-week, however, you rarely have enough bookings to stay open. To make more money during this slow period, you decide to cut dinner prices by one-third-from $\$ 15$ to $\$ 10$ —on Wednesdays and Thursdays.

Ask: Do you think this action will increase your revenues? Suggest that students draw graphs similar to those in Figure 4.5 to illustrate their answers. Call on volunteers to present and discuss their graphs. OL


- Panels $\mathrm{A}, \mathrm{B}$, and C show how quantity demanded responds to a price change for products with elastic, inelastic, and unit elastic demand. Panel D summarizes these changes in a chart. Economic Analysis Why is an understanding of elasticity important for a business?


## R Reading Strategy

## Determining Importance

Ask: Which qualification do you think is the most important for this job? (Possible answer: the ability to identify products that will sell) OL

## W Writing Support

Expository Writing Have students write two paragraphs explaining what steps they could take to raise revenues in a business of their choice. Tell students to give extensive consideration to the issue of elasticity. OL

## Three Results

The relationship between changing prices and total expenditures is summarized in the four panels of Figure 4.5 on the previous page. The figure shows how a decrease in price from $\$ 3$ to $\$ 2$ impacts total expenditures for each of the demand curves. In each case, the change in expenditures depends on the elasticity of the demand curve.

## CAREERS

## Buyer

## The Work

* Purchase merchandise for resale to the public
* Study sales records, inventory levels of current stock, determine foreign and domestic suppliers, and determine supply and demand for products and materials

* Choose suppliers, negotiate the lowest price, and award contracts
* Stay informed about new products and trends, attend trade shows, assist in sales promotions and advertising campaigns, check on displays


## Qualifications

* Ability to plan, analyze data provided by suppliers, make decisions quickly, work under pressure, and identify products that will sell
* Good communication, negotiation, and mathematical skills
* Knowledge of supply-chain management
* Bachelor's degree with a business emphasis


## Earnings

* Median annual earnings: \$42,230


## Job Growth Outlook

* Slower than average

Source: Occupational Outlook Handbook, 2006-2007 Edition

The demand curve in Panel A is elastic. When the price drops by $\$ 1$ per unit, the increase in the quantity demanded is large enough to raise total expenditures from $\$ 6$ to $\$ 8$. The relationship between the change in price and total expenditures for the elastic demand curve is described as "inverse." In other words, when the price goes down, total expenditures go up.

The demand curve in Panel B is inelastic. In this case, when the price drops by $\$ 1$, the increase in the quantity demanded is so small that total expenditures fall below $\$ 6$. For inelastic demand, total expenditures decline when the price declines. Finally, the demand curve in Panel $C$ is unit elastic. This time, total expenditures remain unchanged when the price decreases from $\$ 3$ to $\$ 2$.

## Determining Elasticity

The relationship between the change in price and the change in total expenditures is shown in Panel D of Figure 4.5. If the changes in price and expenditures move in opposite directions, demand is elastic. If they move in the same direction, demand is inelastic. If there is no change in expenditure, demand is unit elastic.
Even though all the price changes we just discussed were decreases, the results would be the same if prices had gone up instead of down. If the price rises from $\$ 2$ to $\$ 3$ in Panel A, spending falls from $\$ 8$ to $\$ 6$. Prices and expenditures still move in opposite directions, as shown in the table.

## Elasticity and Revenues

While this discussion about elasticity may seem technical and somewhat unnecessary to you, knowledge of demand elasticity is extremely important to most businesses. Suppose, for example, that you run your own business and want to do something that will raise your revenues. You could try to stay open longer, or you could try to advertise in order to increase sales. You might, however, also be tempted to raise the price of your product in order to increase total revenue from sales.

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## Recognizing Demand and Elastic Demand



Math Practice for
Economics, p. 4

Objective:
Understand how elasticity affects total expenditure.
Focus/Teach: Ask students to name a good that they have bought at different prices. Have them speculate on how their purchases affected total revenues.
Assess: Close:

106 Have students check each other's answers. Ask students why it is important to know your product or service's elasticity of demand before changing its price.

Differentiated Instruction Strategies
BL. Have pairs explain how price changes affect expenditures for goods with different elasticities.
AL Ask students how a business owner might use the concept of elasticity.
ELL Have students make flash cards to coach themselves on the effects of elasticity on expenditures.


Total Expenditures and Demand Elasticity Some consumers, such as the painter in this cartoon, buy more than they need when items go on sale. What kind of demand elasticity is depicted in this cartoon, and what happened to total expenditures for green paint?

THEY HAD A SALE ON ELECTRIC GREEN

This might actually work in the case of table salt or medical services, because the demand for both products is generally inelastic. However, what would happen if you sold a product with elastic demand? If you raise the price, your total revenuewhich is the same as consumer expendi-tures-will go down instead of up. This outcome is exactly the opposite of what you intended!

This is exactly why some businesses experiment with different prices when they introduce a new product to the market. They may adjust prices repeatedly to see how customers respond to new prices. If a business can determine a new product's demand elasticity, it can find the price that will maximize total revenues. This is why demand elasticity is more important than most people realize.
$\sqrt{ }$ Reading Check Explaining What happens to the total expenditures for a product with elastic demand when its price goes up?

## Determinants of Demand Elasticity

MAIN Idea The answers to three questions help determine a product's demand elasticity.

Economics and You Can you think of an item you delayed buying because it was too expensive? Read on to learn how your decision to wait is a way to determine the elasticity of a product.

What makes the demand for a specific good elastic or inelastic? To find out, we can ask three questions about the product. The answers will give us a reasonably good idea about the product's demand elasticity.

## Can the Purchase Be Delayed?

Sometimes consumers cannot postpone the purchase of a product. This tends to make demand inelastic, meaning that the quantity of the product demanded is not especially sensitive to changes in price.

Skills Handbook
See page R36 to learn about Determining Cause and Effect.

## Skill Practice

Interpreting Political Cartoons Ask: What economic concept does this cartoon illustrate? Explain. (elastic demand; the man bought several cans of electric green paint because it was on sale) OL

## R Reading Strategy

Monitoring Tell students that asking themsel ves questions as they read can help them check their understanding of a text. Have students check their comprehension by asking the following question as they read the bracketed paragraph: Why do some businesses experiment with different prices when they introduce a new product? (Businesses sometimes experiment because they don't know the product's elasticity. Changing price is one way to find out.) OL

Caption Answer: elastic; they went up

$\sqrt{ }$ Reading Check Answer: They go down.

## Leveled Activities

Reading Essentials and Note-Taking Guide, p. 34


OL Reading and Study Skills Foldables, p. 51


AL Primary and Secondary Source Readings, p. 9


## © <br> Differentiated Instruction

Special Education Ask: Can purchasing table salt be delayed? (no) Are there adequate substitutes for butter? (yes) To help students answer these questions, suggest that they use a blank sheet of paper to cover the areas of the chart that they aren't using. BL

## W Writing Support

## Narrative Writing Have

 students write a short story about someone who has inelastic demand for a product but is faced with a significant price change. Students can use medicine or drugs but could also invent examples of their own, such as the gas needed to get to a job interview or a special gift for an important person. OL
## Economic Analysis

Answer: The purchase can be delayed, there are adequate substitutes, and the purchase is likely to take up a large portion of the budget. For all these reasons, demand for a luxury good would tend to be elastic.

## Hands-On <br> Chapter Project

Step 3

The elasticity of demand can usually be estimated by examining the answers to three key questions. All three answers do not have to be the same in order to determine elasticity, and in some cases the answer to a single question is so important that it alone might override the answers to the other two.
Economic Analysis If you applied the three questions to a luxury product, what would be the elasticity of demand for that product?

| PRODUCTS |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Determinants of elasticity <br> If yes: elastic <br> If no: inelastic | Fresh tomatoes, <br> corn, or <br> green beans | Table salt | Gasoline from <br> a particular <br> station | Gasoline in <br> general | Services <br> of medical <br> doctors | Insulin | Butter |
| Can purchase be delayed? | Yes | No | Yes | No | No | No | Yes |
| Are adequate substitutes <br> available? | Yes | No | Yes | No | No | No | Yes |
| Does purchase use a large <br> portion of income? | No | No | Yes | Yes | Yes | No | No |
| Type of elasticity | Elastic | Inelastic | Elastic | Inelastic | Inelastic | Inelastic | Elastic |

[
For example, persons with diabetes need insulin to control the disorder. An increase in its price is not likely to make diabetes sufferers delay buying and using the product. The demand for tobacco also tends to be inelastic because the product is addictive. As a result, a sharp increase in price will lower the quantity purchased by consumers, but not by very much. The change in quantity demanded is also likely to be relatively small for these products when their prices go down instead of up.
If the products were corn, tomatoes, or gasoline from a particular station, however people might react differently to a price change. If the prices of these products were to increase, consumers could delay buying any of these items without suffering any great inconvenience.
Figure 4.6 summarizes some of these observations. If the answer to the question "Can the purchase be delayed?" is yes, then the demand for the product is likely to be elastic. If the answer to the question is no, then demand is likely to be inelastic.

## Are Adequate Substitutes <br> Available?

If adequate substitutes are available, consumers can switch back and forth between the product and its substitute to take advantage of the best price. If the price of beef goes up, buyers can switch to chicken. With enough substitutes, even small changes in the price of a product will cause people to switch, making the demand for the product elastic. The fewer substitutes available for a product, the more inelastic the demand.
Sometimes only a single adequate substitute is needed to make demand elastic. For example, in the past there were few substitutes for sending a letter through the post office. Then fax machines allowed messages to be transmitted over phone lines. Today many people use e-mail on the Internet or send instant messages on their cell phones. Because of all these alternatives, it is more difficult for the U.S. Postal Service to increase its total revenues by raising the price of a first-class stamp.

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## Making Decisions About Demand and Elasticity

## Step 3: Comparing Demand Schedules With the Determinants of Elasticity.

Students will use their demand schedules to calculate elasticity and then analyze their product with the determinants of elasticity.
Directions: Have students calculate elasticity of demand for their product using the total expenditure test and the demand schedules they made when surveying classmates. Then
have students evaluate their product according to the determinants of elasticity listed in the text. Students should summarize their comparison in a paragraph. If the two elasticities are different, students should write another paragraph in which they choose and defend which elasticity they will use when writing their price and sales histories. OL
(Chapter Project continued in Visual Summary.)

Note that the size of the market is important. For example, the demand for gasoline from a particular station tends to be elastic because consumers can buy gas at another station. If we ask about the demand for gasoline in general, however, demand is much more inelastic because there are few adequate substitutes for gasoline.

## Does the Purchase Use a Large Portion of Income?

The third determinant is the amount of income required to make the purchase. If the amount is large, then demand tends to be elastic. If the amount of income is small, demand tends to be inelastic.

Finally, you may have noticed that the answers to our three questions is not always "yes" or "no" for each of the products shown in Figure 4.6. For example, some products such as salt may be easy to classify, since each of the answers is "no." However, we have to use our judgment on others. For
$\rightarrow$ Inelastic Taxes? When you buy a product in a store, most states charge a sales tax when you get to the cash register. Many states also charge an excise tax, or a general revenue tax on the manufacture or sale of selected items, which is already included in the price of the item. The excise tax usually raises the price of the item. If demand for the product is inelastic, then so much the better for the tax collector, because the quantity demanded does not drop very much. That's why so many excise taxes are on items like gasoline and concert admissions-items that have an inelastic demand.
example, the demand for the services of medical doctors tends to be inelastic even though they require a large portion of income. This is because most people prefer to receive medical care right away rather than taking the time to look for adequate substitutes.
$\sqrt{\text { Reading Check }}$ Identifying Can you think of
other goods with inelastic demand? Why is the demand for those goods inelastic?

## Differentiated Instruction

## Advanced Learners Point

 out to students that, while the demand for some products may seem inelastic, over time demand may grow somewhat more elastic. Have students find examples of such products. (Possible answer: rise in gas prices in the 1970s eventually made demand more elastic) AL
## $\sqrt{ }$ Reading Check Possible

Answer: food in general-no adequate substitutes; pencilssmall portion of budget

## Assess

Use the Interactive Tutor Self-Assessment CD-ROM to review Section 3, and then assign the Section 3 Review as homework or as an in-class activity.

## Close

Making Connections Have students list the five most elastic products they buy and the five most inelastic products they buy. 01

## Answers

1. All definitions can be found in the section and the Glossary.
2. When a price changes on an elastic good, consumers make proportionally greater changes in quantity demanded. For an inelastic good, the change in quantity is proportionally smaller than the change in price. The changes are proportionally the same for a good with unit elasticity.
3. For a given price change, total expenditures will rise or fall depending on the elasticity of demand for a product.
4. Understanding Cause and Effect A hamburger stand raised the price of its hamburgers from $\$ 2.00$ to $\$ 2.50$. As a result, its sales of hamburgers fell from 200 per day to 180 per day. Was the demand for its hamburgers elastic or inelastic? Why?
5. Analyzing Visuals Based on Figure 4.6 on page 108, create your own chart for the following products: an MP3 player, electricity, a gallon of milk, an ink pen, and a pound of onions. Explain.
6. Drawing Conclusions Airlines in the United States generally do not offer reduced round-trip airfares during holidays such as Easter, Thanksgiving, and Christmas. What can you conclude about the elasticity of demand for airplane travel at these times?

## Applying Economics

9. Elasticity of Demand Interview an owner or manager of a local business about the effects of recent price increases for a product. Is the demand for these goods or services elastic or inelastic? Why?
10. The BIG Ideal Why is the demand for airplane tickets inelastic for last-minute ticket purchases?

## Focus

## D <br> Differentiated Instruction

Auditory/Musical Have students write a journal entry detailing their experiences with the iTunes Store or handheld music devices. OL

## Teach

## C Critical Thinking

## Drawing Conclusions

Ask: How does Apple's digital rights management technology affect the elasticity of demand for iPods? (It makes the demand less elastic.) OL

## Analyzing the Impact

## Answers:

1. The iPod was smaller and could hold more songs. Also, it gave users access to the iTunes Store. Subsequent innovations kept the iPod in the dominant position.
2. Apple continues to innovate, making the iPod ever smaller and more adaptable.

## Additional Support

## The iPod

## The Idea

Handheld music devices date back to the 1970s, when Sony introduced the Walkman. So why has the iPod dominated the MP3 market in the early 2000s?

When the iPod hit store shelves in November 2001, other MP3 players were already on the market. Yet they were larger than the 6.5 -ounce iPod, and they could not hold nearly as many songs. The iPod was an instant hit.

## Innovation

Technology set off the iPod in other ways. The mechanical scroll wheel allowed easy scrolling and © navigation. FireWire allowed much faster transfer of music from the computer to the iPod.

In 2003 Apple CEO Steve Jobs announced that the iTunes software, formerly used to store and play digital music on a Mac, would become a gateway to the online iTunes Store. The owners of iPods now were able to download songs for just $99 \nless$ each. While Apple makes only about $.10 \not \subset$ per
U.S. Market for MP3s


Source: BusinessWeek

ApPLE'S Revenue 2000-2006*


Source: www.apple.com
*2006 earnings projected
sale, it generates many more iPod sales. On top of that, music from the iTunes Music Store can be played only on Apple devices because of Apple's digital rights management technology. This tempts more people to purchase iPods.

## Staying Ahead of the Pack

Apple continues to innovate. In January 2004, Apple introduced the iPod mini. Its "click wheel" removed the need for buttons. Newer models can hold ever larger volumes of data, while tiny flashmemory chips keep the player size small. Today's iPods can store up to 10,000 songs, hold hundreds of photos, and play entire movies. Adapters connect iPods with car or home stereo systems. By constantly updating, Apple has been able to keep its huge market share ever since the iPod was introduced.

## Analyzing the Impact

1. Summarizing What features allowed Apple's iPod to dominate the market?
2. Drawing Conclusions How does Apple continue to stay ahead of the competition?

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## Extending the Content

iPod Innovations Apple has now partnered with Nike in such a way as to decrease elasticity for both the iPod Nano and Nike running shoes. The companies have developed a Sport Kit that enables athletic shoes to communicate with the iPod, so that athletes can get real-time feedback and commentary on their
workouts. The kit includes a sensor that goes in the running shoe and a receiver that goes in the iPod, enabling the iPod to provide audible updates on the runner's speed, distance, and calories burned. Workouts can be customized according to goals, and the athlete's weight can be entered to more accurately measure
burned calories. The kit can also be calibrated according to gait, running surface, incline, or temperature. Although it is a luxury, there are as yet no substitutes for this device. Hence, one can expect demand for the good to be inelastic.

## Visual Summary

Law of Demand The Law of Demand states that when the price goes up, quantity demanded goes down. When the price goes down, quantity demanded goes up.

Change in Demand When a change in demand occurs, people want to buy different amounts of a product at the same price. A change in demand can happen for several reasons.


Demand and Elasticity Changes in price and total expenditures help determine the demand elasticity of a product.

| Type of Demand | Change in Price | Change in <br> Expenditure | Movement of Price <br> and Expenditure |
| :---: | :---: | :---: | :---: |
| Elastic | $\downarrow$ | $\boldsymbol{\imath}$ | Opposite |
| Inelastic | $\downarrow$ | $\boldsymbol{\downarrow}$ | Same |
| Unit elastic | $\downarrow$ | No change |  |

Assessing Ask students to think about the goods that they purchase. Using information from the text, have them make a judgment as to which good has the most elastic demand and the most inelastic demand. Have students write a paragraph about each good, explaining why the good has certain demand characteristics. OL

Personal Writing Tell students to write an essay in which they choose three products that they currently purchase and describe how a change in each determinant of demand would affect the amount of the good that they purchase. OL

## Making Decisions About Demand and Elasticity

## Step 4: Bringing It All Together.

Students will synthesize what they learned in Steps 1-3.
Directions: Instruct each group to outline the progress of business practices and sales for their product over the course of a year, as if they were reporting to imaginary stockholders. Groups should choose an
initial price, with the resulting quantity sold given by the market demand schedule. Students should then predict what would happen to demand following their ad campaign, and choose a new price that might result. Students should use their decisions regarding elasticity when determining the new quantity and total expenditure (sales figures) that would result. Presentations should include copy, graphs, visuals, and any events that might
have happened, such as the product being put on sale, seasonal variations, and so on. Groups should use their reports to make oral presentations to the class, as if the class constituted a stockholder's meeting. OL

## Assessment and Activities

## ExamViéw <br> Assessment Suite

This easy-to-use software includes extensive question banks and allows you to create fully customized tests that can be administered in print or online.

## Review Content Vocabulary

| 1. $e$ | 2. $d$ |
| :--- | ---: |
| 3. $b$ | 4. $g$ |
| 5. $h$ | 6. c |
| 7. i | 8. $a$ |
| 9. j | 10. f |

## Review Academic Vocabulary

11.-16. Students' sentences will vary but should demonstrate understanding of each term's meaning in an economic context.

## Review the Main Ideas

17. A demand schedule shows the quantities demanded of a good at all prices. A demand curve is a graph showing the same information.
18. The law expresses the inverse relationship that exists between price and quantity demanded.
19. The principle says that the more of a product we consume, the less satisfaction we will receive from consuming additional units. The demand curve indicates that we will purchase additional units of a good only if the price drops.
20. Income effect: When the price of a good drops, consumers have extra income and might buy more of the good, increasing demand. Substitution effect: If the price of a good rises, consumers will buy cheaper substitutes, decreasing demand.

Review Content Vocabulary<br>On a separate sheet of paper, match the letter of the term best described by each statement below.<br>a. demand<br>f. complement<br>b. demand elasticity<br>g. elastic demand<br>c. change in demand<br>h. substitutes<br>d. demand curve<br>i. marginal utility<br>e. Law of Demand<br>j. unit elastic demand

1. statement that more will be demanded at lower prices and less at higher prices
2. graph that shows the quantity demanded at all possible prices in the market at a given time
3. measure of responsiveness relating change in quantity demanded to a change in price
4. a given change in price causes a relatively larger change in quantity demanded
5. products that can be used in place of one another
6. a principle illustrating that consumers demand different amounts at every price, causing the demand curve to shift to the left or the right
7. additional satisfaction or usefulness as more units of a product are acquired
8. the desire, ability, and willingness to buy a product
9. a given change in price causes a proportional change in quantity demanded
10. product that increases the use of another product

## Review Academic Vocabulary

On a separate sheet of paper, use each of these terms in a sentence that reflects the term's meaning in the chapter.
11. prevail
14. illustrate
12. inversely
15. technical
13. principle
16. adequate

## Review the Main Ideas

Section 1 (pages 91-95)
17. Describe a demand schedule and a demand curve. How are they alike? How do they differ?
18. Discuss what is meant by the Law of Demand.
19. Explain how the principle of diminishing marginal utility is related to the downward-sloping demand curve.

Section 2 (pages 97-101)
20. Explain the difference between the income effect and the substitution effect.
21. Identify and describe the five factors that can cause a change in individual demand, using a graphic organizer similar to the one below.


Section 3 (pages 103-109)
22. Describe the difference between elastic demand and inelastic demand.
23. Explain how the total expenditures test can be used to determine demand elasticity.
24. Identify and then describe the determinants of demand elasticity.

## Critical Thinking

25. The BC Ideas Assume that demand for pizza has been steady for some time. How do you think the market demand curve for pizza would be affected by (1) an increase in everyone's pay, (2) a successful pizza advertising campaign, (3) a decrease in the price of hamburgers, and (4) new people moving into the community? Explain your answers.

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21. consumer income (how much people make); consumer tastes (what people like and dislike); substitutes (products that can be used in place of other products); complements (products whose use increases the use of other products); expectations (how people view the future); number of consumers (people interested in purchasing a product)
22. Elastic demand: quantity demanded responsive to price changes. Inelastic demand: quantity demanded not responsive to price changes.
23. Total expenditure will change in the opposite direction of price with elastic demand. Expenditure will change in the direction of price with inelastic demand.
24. If a purchase can be delayed, adequate substitutes are available, and the purchase uses a large portion of income, demand will be elastic.

## Critical Thinking

25. Answers will vary but should recognize that 1,2 and 4 would shift the curve right and 2 would shift the curve left.
26. Determining Cause and Effect Razor blades are complementary goods for razor handles, while electric razors are substitutes. Copy the demand curves below on a sheet of paper. Then show how the rise in the cost of razor handles, if they were sold separately, would affect the demand curves for its complementary and its substitute products.

27. Making Generalizations Do you think the Law of Demand accurately reflects most people's behavior regarding certain purchases? Explain.
28. Synthesizing Assume that you are a business owner. How would you use your knowledge of demand elasticity to determine the price of your product?

## Analyzing Visuals

30. Look at Figure 4.2 on page 94. Suppose that Avi, a friend of Mike's and Julia's, is also willing to buy CDs. Create a new market demand schedule by adding the numbers that you think Avi is willing to purchase at different prices. Then draw a market demand curve reflecting the new numbers.

## Thinking Like an Economist

31. Write a paragraph describing a business you might like to own. Describe the product your business makes. Then use the three determinants of demand elasticity to predict the elasticity of demand for that product. Explain the pricing policy you would use to get consumers to maximize their expenditures on that product.

## Interpreting Cartoons

32. Critical Thinking Look at the cartoon below. What do you think Snoopy's doghouse represents? What message is the cartoonist trying to convey? Explain whether or not he found a good way to discuss the topic.


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26. A rise in the cost of razor handles would decrease the demand for razor blades, as they are complementary goods. The demand curve for razor blades would shift to the left. A rise in the cost of razor handles would make electric razors more attractive, as they are substitutes. The demand curve for electric razors would shift to the right.
27. Answers will vary, but students should mention diminishing marginal utility, the substitution effect, and the income effect.
28. Knowing demand elasticity of a product enables a business owner to price her product so as to maximize total revenue from it. If the good is inelastic, the owner could raise prices. If the good is elastic, lowering prices would increase revenue.

Have students visit the Web site at glencoe.com to review Chapter 4 and take the SelfCheck Quiz.

## Math Practice

29. a. The demand schedule should show a quantity of 10 partnered with a price of $\$ 10,6$ with $\$ 20$, and 18 at $\$ 5$.
b. Total expenditures would be greatest at a price of $\$ 20$ and smallest at a price of $\$ 5$.

## Analyzing Visuals

30. Answers will vary, but Avi's demand schedule should follow the Law of Demand and use the same prices as those used for Mike and Julia. The market demand curve should also use the same prices, with Avi's quantities added to the sum of Mike's and Julia's quantities.

## Thinking Like an Economist

31. Answers will vary, but students should demonstrate understanding of elasticity, its determinants, and how to use elasticity to predict the effects of price changes on total expenditures on a product.

## Interpreting Cartoons

32. Answers will vary but should convey that the price given has no realistic relationship with the actual value of the doghouse.

## The Global Economy <br> YOU

## China's Thirst for Gas

Hurricanes in the Gulf of Mexico, deteriorating pipelines in Alaska, and conflict in Iraq can cause gasoline prices to rise by restricting supply. Often the events we see in the headlines affect the supply of oil available to consumers, but changes in the level of world demand for petroleum products also affects the price of oil.

## China's Growing Demand

U.S. demand for petroleum products has been high for decades. The United States is the largest consumer of oil, using about a quarter of the world's petroleum. This is quickly changing. Emerging nations are becoming thirsty for oil, and China is at the top of that list.

How did such a rapid change happen? In the past, China has not needed much petroleum. As the country is industrializing, however, it needs more and more fuel to satisfy its growing energy needs. In fact, as the graph of oil consumption between 1995 and 2025 shows, China's consumption is increasing much more rapidly than U.S. consumption.


While China still consumes considerably less

petroleum than the United States, it has been responsible for over 25 percent of the growth in world petroleum consumption since 1994 and 30 percent of growth since 2000. This increase was enough to make China the second biggest consumer in the world market in 2003, and its demand is not expected to slow down soon.

## Worldwide Impact

China's growing energy needs have worldwide repercussions. The nation's increasing demand has helped to push up prices for crude oil. In 2005 the International Monetary Fund (IMF), which promotes economic growth and cooperation, expressed concern that high oil prices could bring about a worldwide slowdown in economic growth because of these increased energy needs.

[^4]
## Extending the Content

Carbon Emissions According to recent scientific reports, China is on course to soon overtake the United States as the world's leading emitter of carbon dioxide. The projections are based on China's rapid increases in oil, gas, and coal consumption. The burning of those three fuels for heat, power, and transportation produces carbon dioxide. Since most scientists view carbon dioxide as a major contributor
to global warming, the recent trends in China have caused concern around the world. Thirty-five developed nations have agreed to a United Nations plan to cut their emissions. These countries have called on the world's two leading carbon emitters, the United States and China, to make similar cuts.


## What Does It Mean for You?

Why should you care whether China is increasing its demand for petroleum? Simply put, any increase in demand for oil on the world market can lead to rising prices for a variety of goods and services in the United States because so many other products are linked to energy costs.

The results of all these increased costs are manifold. You may see a cut in school programs to pay for higher transportation costs. The products you buy in stores may become more expensive. And of course the price of gas you put into your car may increase. If you are on a limited or fixed budget, like most students, such increases will leave you with less money to spend on other things. As you see, China's higher demand for petroleum _has a direct impact on you and your wallet.

## Analyzing the Issue

1. Identifying Why has China's demand for petroleum increased in recent years?
2. Describing What is the effect of increased oil prices on your or your family's budget?
3. Applying Check your local newspaper, news magazines, or Internet news sources for recent reports about global issues affecting oil prices. On a separate piece of paper, summarize the issues discussed in these articles and describe how they affect you.

## Assess/ Close

## G Critical Thinking

Problem-Solving Have students brainstorm possible solutions to the problem of increased global demand for petroleum. (Possible answer: development of alternative energy sources such as wind or solar power) Ask students to write and deliver a speech proposing a future course of action based on the solution they think will be most effective. OL

## Analyzing the Issue

## Answers:

1. As China industrializes, it consumes more petroleum to satisfy its growing energy needs.
2. Students should note that they impact the cost of goods and services.
3. Students should describe the personal effects of global oil prices.

## Activity: Collaborative Learning

Analyzing Organize the class into small groups. Instruct each group to select an industrializing nation not already mentioned in this feature. You may wish to assign nations to avoid overlap. Have groups use reliable print or online resources to research the past and projected oil consumption of their assigned nation. Ask groups to prepare a visual presentation (possible formats
include charts, posters, video, and PowerPoint) that explains oil production and consumption trends of their country. Visuals should also analyze how these trends will impact the global oil market in the future. After each group has presented, lead the class in a discussion about the likely effects of the world's changing energy needs. OL

## Teacher Tip

Comparing and Contrasting
After the presentations, create a bar graph on the board showing the oil consumption of the nations that students studied. Refer to the graph during the class discussion about the world's energy needs.


[^0]:    *Also available in Spanish

[^1]:    *Also available in Spanish

[^2]:    Glencoe Media Center
    》 glencoe.com
    Study-To-Go

    - Vocabulary eFlashcards
    - Self-Check Quizzes
    > Audio/Video
    - Student Edition Audio
    - Spanish Summaries
    - Economics \& You Videos

[^3]:    $\sqrt{ }$ Reading Check Interpreting How do you react to a change in the price of an item? How does this illustrate the concept of demand?

[^4]:    114 UNIT 2 Microeconomics: Prices and Markets

