Law of Demand
Section:- B

Objectives

1. **Explain** the law of demand.
2. **Describe** how the substitution effect and the income effect influence decisions.
3. **Create** a demand schedule for an individual and a market.
4. **Interpret** a demand graph using demand schedules.

Key Terms

- **demand**: the desire to own something and the ability to pay for it
- **law of demand**: consumers will buy more of a good when its price is lower and less when its price is higher
- **substitution effect**: when consumers react to an increase in a good's price by consuming less of that good and more of a substitute good

Key Terms, cont.

- **income effect**: the change in consumption that results when a price increase causes real income to decline
- **demand schedule**: a table that lists the quantity of a good a person will buy at various prices in a market
- **market demand schedule**: a table that lists the quantity of a good all consumers in a market will buy at various prices
- **demand curve**: a graphic representation of a demand schedule

Introduction

- How does the law of demand affect the quantity demanded?
  - Price changes always affect the quantity demanded because people buy less of a good when the price goes up.
  - By analyzing demand schedules and demand curves, you can see how consumers react to changes in price.

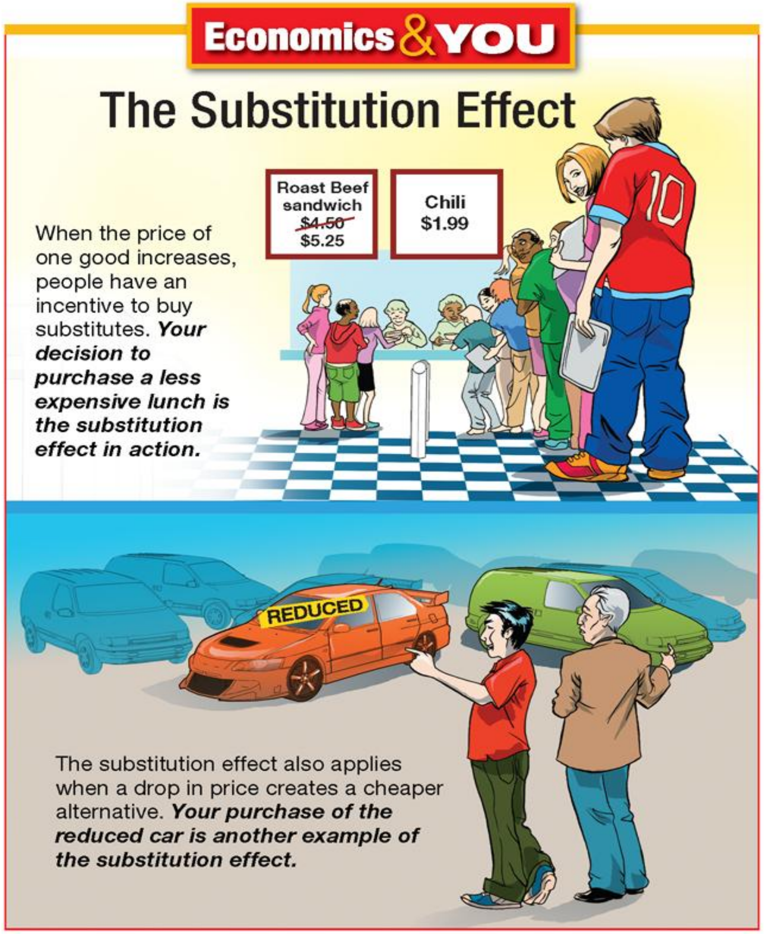
Demand

- Demand is the desire to own something and the ability to pay for it.

  - The law of demand states that when a good's price is lower, consumers will buy more of it. When the price is higher, consumers will buy less of it.
    - The law of demand is the result of the substitution effect and the income effect --two ways that a consumer can change his or her spending patterns. Together, they explain why an increase in price decreases the amount consumers purchase.

The Substitution Effect

- The substitution effect takes place when a consumer reacts to a rise in the price of one good by consuming less of that good and more of a substitute good. The substitution effect can also apply to a drop in prices.



The Income Effect

- The income effect is the change in consumption that results when a price increase causes real income to decline.
  - Economists measure consumption in the amount of a good that is bought, not the amount of money spent on it.
  - The income effect also operates when the price is lowered. If the price of something drops, you feel wealthier. If you buy more of a good as a result of a lower price, that’s the income effect at work.

Demand Schedules

- The law of demand explains how the price of an item affects the quantity demanded of that item.
- To have demand for a good, you must be willing and able to buy it at a specified price.
- A demand schedule is a table that lists the quantity of a good that a person will purchase at various prices in the market.

Market Demand Schedules

- A market demand schedule shows the quantities demanded at various prices by all consumers in the market.
  - Market demand schedules are used to predict the total sales of a commodity at several different prices.
  - Market demand schedules exhibit the law of demand: at higher prices the quantity demanded is lower.

Demand Schedules

- Demand schedules show that demand for a good falls as the price rises.
  - How does market demand change when the price falls from $3 to $2 a slice?

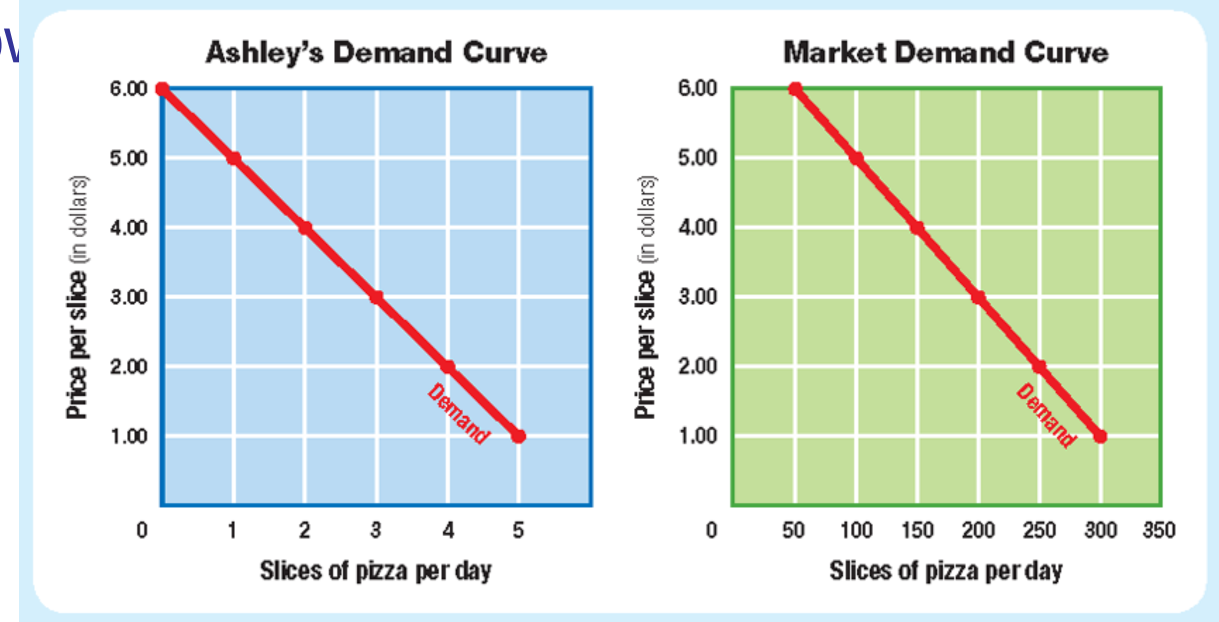
Individual Demand Schedule		**Market Demand Schedule**	
Price of a slice of pizza	Quantity demanded per day	Price of a slice of pizza	Quantity demanded per day
$1.00	5	$1.00	300
$2.00	4	$2.00	250
$3.00	3	$3.00	200
$4.00	2	$4.00	150
$5.00	1	$5.00	100
$6.00	0	$6.00	50

The Demand Graph

- A demand curve is a graphic representation of a demand schedule.
  - The vertical axis is always labeled with the lowers possible prices at the bottom and the highest prices at the top.
  - The horizontal axis should be labeled with the lowest possible quantity demanded at the left and the highest possible quantity demanded on the right.

Demand Curves

- Ashley's demand curve shows the number of slice she is willing and able to buy at each price, while the market demand curve shows demand for pizza in an entire market.
  - How



Action Graph online

Market Demand Curves

- All demand schedules and demand curves reflect the law of demand.
- Market demand curves are only accurate for one very specific set of market conditions. They cannot predict changing market conditions.

Chapter 4: Demand
Section 2

Objectives

1. **Explain** the difference between a change in quantity demanded and a shift in the demand curve.
2. **Identify** the factors that create changes in demand and that can cause a shift in the demand curve.
3. **Give an example** of how a change in demand for one good can affect demand for a related good.

Key Terms

- ***ceteris paribus***: a Latin phrase that means “all things held under constraint”
- **normal good**: a good that consumers demand more of when their income increases
- **inferior good**: a good that consumers demand less of when their income increases

Key Terms, cont.

- **demographics**: the statistical characteristics of populations and population segments, especially when used to identify consumer markets
- **complements**: two goods that are bought and used together
- **substitutes**: goods that are used in place of one another

Introduction

- Why does the demand curve shift?
  - Shifts in the demand curve are caused by more than just price increases and decreases. Other factors include:
    - Income
    - Consumer Expectations
    - Population
    - Demographics
    - Consumer Tastes and Advertising

Changes in Demand

- A demand schedule takes into account only changes in price. It does not consider the effects of news reports of any one of the thousands of other factors that change from day to day that could affect the demand for a particular good.

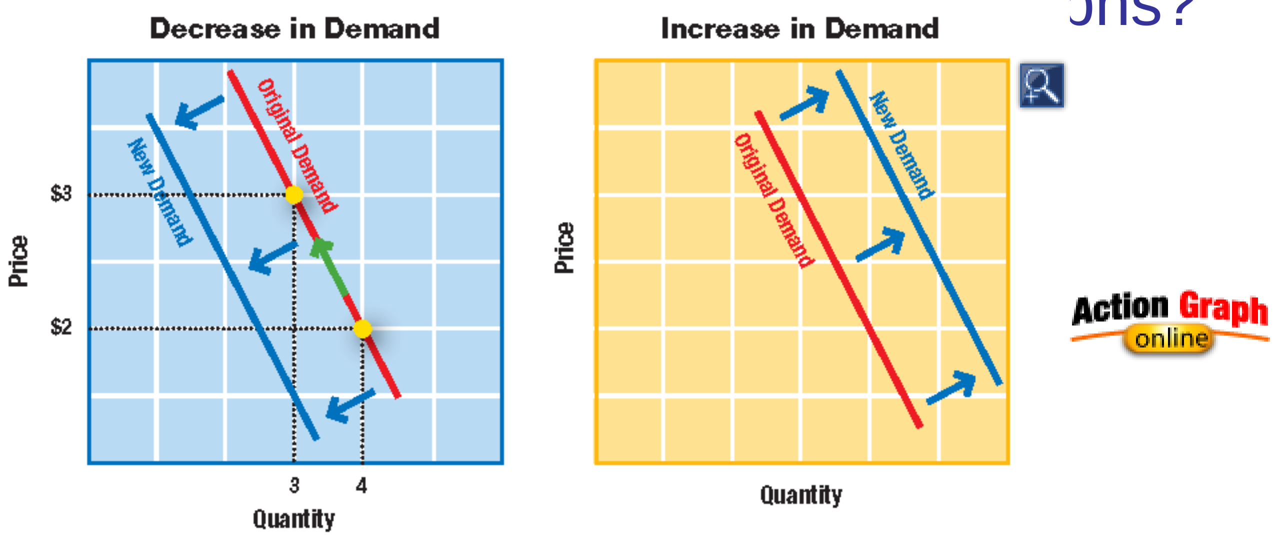
- A demand curve is accurate only as long as there are no changes other than price that could affect the consumer’s decision.

Changes in Demand, cont.

- A demand curve is accurate only as long as the *ceteris paribus* assumption—that all other things are held constant—is true.
- When we drop the *ceteris paribus* rule and allow other factors to change, we no longer move along the demand curve. Instead, the entire demand curve shifts.
  - A shift in the demand curve means that at every price, consumers buy a different quantity than before; this shift of the entire demand curve is what economists refer to as a change in demand.

Graphing Changes in Demand

- When factors other than price cause demand to fall, the demand curve shifts to the left. An increase in demand appears as a shift to the right.
  - If the price of a book rose by one dollar, how would you ... phs?



Chapter 4: Demand
Section 3

Objectives

1. **Explain** how to calculate elasticity of demand.
2. **Identify** factors that effect elasticity.
3. **Explain** how firms use elasticity and revenue to make decisions.

Key Terms

- **elasticity of demand**: a measure of how consumers respond to price changes
- **inelastic**: describes demand that is not very sensitive to price changes
- **elastic**: describes demand that is very sensitive to a change in price
- **unitary elastic**: describes demand whose elasticity is exactly equal to 1
- **total revenue**: the total amount of money a company receives by selling goods or services

Introduction

- What factors affect elasticity of demand?
  - Economists have developed a way to calculate how strongly consumers will react to a change in price.
  - Original price and how much you want a particular good are both factors that will determine your demand for a particular product.

Consumer Response

- Elasticity of demand is the way that consumers respond to price changes; it measures how drastically buyers will cut back or increase their demand for a good when the price rises or falls.

  – Your demand for a good that you will keep buying despite a price change is inelastic.
  – If you buy much less of a good after a small price increase, your demand for that good is elastic.

Elastic Demand

- Elastic Demand comes from one or more of these factors:
  - The availability of substitute goods
  - A limited budget that does not allow for price changes
  - The perception of a good as a luxury item.

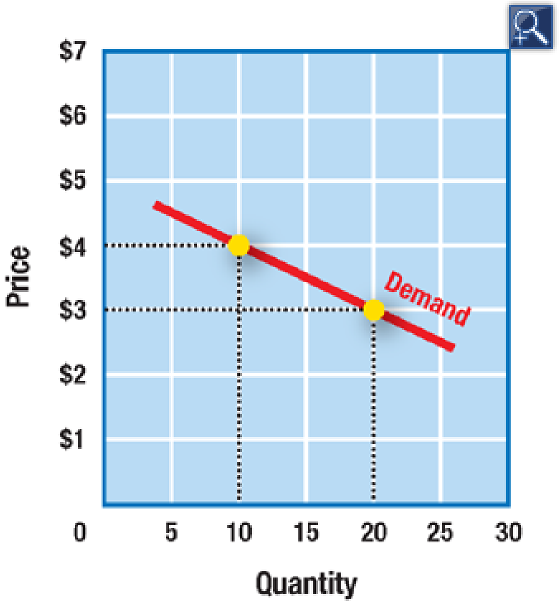
Calculating Elasticity of Demand

- In order to calculate elasticity of demand, take the percentage change in the quantity of the good demanded and divide this number by the percentage change in the price of the good. The result is the elasticity of demand for the good.
  - The law of demand implies that the result will always be negative. This is because increases in the price of a good will always decrease the quantity demanded, and a decrease in the price of a good will always increase the quantity demanded.

To determine elasticity of demand, use the following formulas:

$$\text{Percentage change} = \frac{\text{Original number} - \text{New number}}{\text{Original number}} \times 100$$

$$\text{Elasticity} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$



Example 1: Elastic Demand

The price decreases from $4 to $3, a decrease of 25 percent.

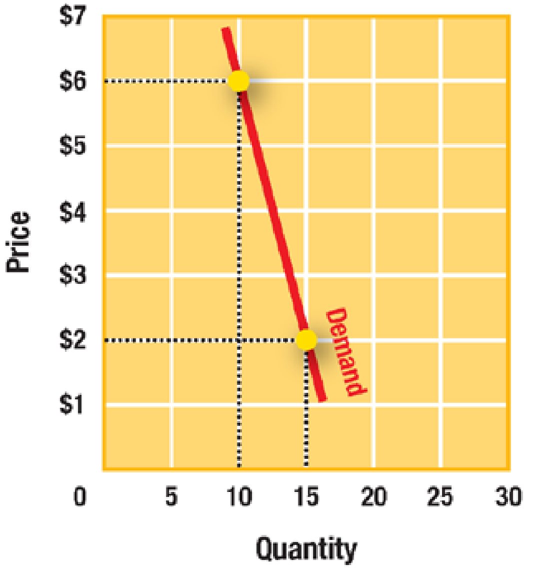
$$\frac{\$4 - \$3}{\$4} \times 100 = 25$$

The quantity demanded increases from 10 to 20. This is an increase of 100 percent.

$$\frac{10 - 20}{10} \times 100 = 100$$

Elasticity of demand is equal to 4.0. Elasticity is greater than 1 so demand is elastic. In this example, a small decrease in price caused a large increase in the quantity demanded.

$$\frac{100\%}{25\%} = 4.0$$



Example 2: Inelastic Demand

The price decreases from $6 to $2, a decrease of about 67 percent.

$$\frac{\$6 - \$2}{\$6} \times 100 = 67$$

The quantity demanded increases from 10 to 15, an increase of 50 percent.

$$\frac{10 - 15}{10} \times 100 = 50$$

Elasticity of demand is about 0.75. The elasticity is less than 1, so demand for this good is inelastic. The increase in quantity demanded is small compared to the decrease in price.

$$\frac{50\%}{67\%} = 0.75$$

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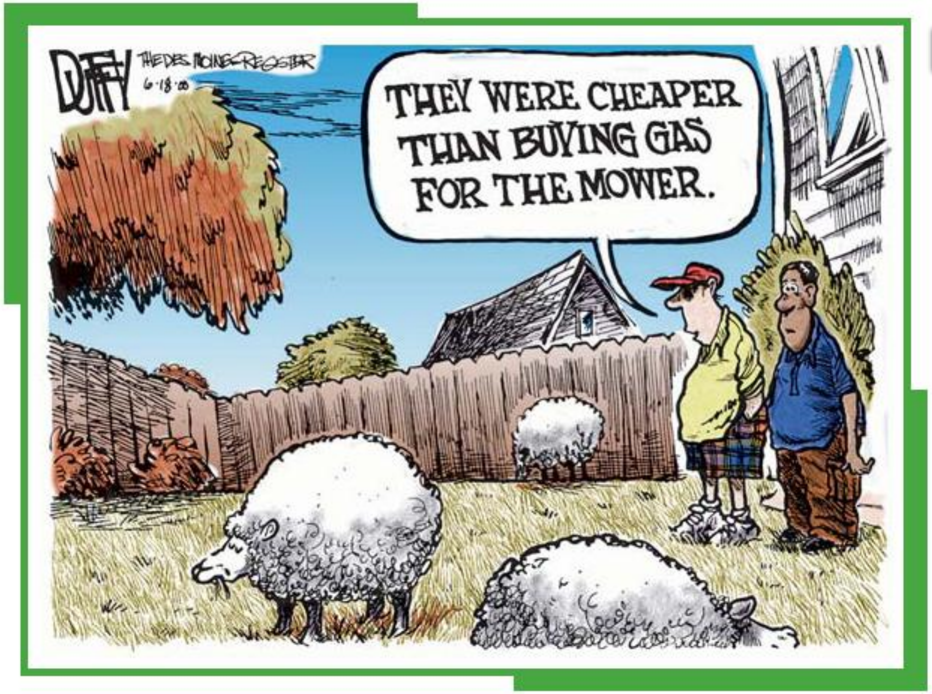
Measuring Elasticity

- If the elasticity of demand for a good at a certain price is less than 1, the demand is inelastic. If the elasticity is greater than 1, demand is elastic. If elasticity is exactly equal to 1, demand is unitary elastic.



According to the cartoon, grazing sheep are this homeowner’s solution to the high price of gasoline.

Factors Affecting Elasticity

- Availability of Substitutes
  - If there are a few substitutes for a good, then even when its price rises greatly, you might still buy it.
  - If the lack of substitutes can make demand inelastic, a wide choice of substitute goods can make demand elastic.

Other Factors

- Relative Importance
  - A second factor in determining a good's elasticity of demand is how much of your budget you spend on a good.

- Necessities v. Luxuries
  - Whether a person considers a good to be a necessity or a luxury has a great impact on a person's elasticity of demand for that good.

Other Factors, cont.

- Change Over Time
  - Consumers do not always react quickly to a price increase, because it takes time to find substitutes. Because they cannot respond quickly to price changes, their demand is inelastic in the short term.
    - Demand sometimes becomes more elastic over time as people eventually find substitutes.