3

Demand, Supply, and Price Determination

CHAPTER OBJECTIVES

- To explain demand and supply, and show how they work using schedules and graphs.
- To show how demand and supply are affected by changes in price and nonprice factors.
- To demonstrate how demand and supply interact in markets to determine prices, and to show equilibrium price and quantity, shortages, and surpluses in a market.
- To explain how changes in demand and changes in supply affect equilibrium prices and quantities in markets.
- To illustrate how government-imposed price ceilings and price floors influence market conditions.
- To introduce the concept of price elasticity, which measures buyers' and sellers' sensitivities to price changes.

KEY TERMS AND CONCEPTS

| Demand | Change in demand |
| Demand schedule | Nonprice factors influencing demand |
| Law of Demand | Increase in demand |
| Demand curve | Decrease in demand |
| Supply | Change in supply |
| Supply schedule | Nonprice factors influencing supply |
| Supply Curve | Increase in supply |
| Law of Supply | Decrease in supply |
| Market | Price ceiling (upper price limit) |
| Market demand and market supply | Usury laws |
| Shortage | Price floor (lower price limit) |
| Surplus | Price elasticity |
| Equilibrium price and equilibrium quantity | Price elastic |
| Market clearing price | Price inelastic |
| Change in quantity demanded and quantity supplied | Elasticity coefficient |
| Unitary price elastic |  |
**STUDY ORGANIZER**

1. Know the Law of Demand, the Law of Supply, and the reasons for each relationship.
2. Graphically illustrate a demand curve and a supply curve.
3. Define market demand and market supply, and explain how price is determined in a competitive market.
4. Identify equilibrium price and equilibrium quantity on a schedule and a graph.
5. Define surplus and shortage, explain why each occurs, and measure the size of each graphically.
6. Explain how surpluses and shortages move the market price to its equilibrium level.
7. Explain how a change in price causes quantity demanded and quantity supplied to change, and how this is represented graphically.
8. Identify some major nonprice factors that influence demand and influence supply.
9. Explain the relationship between changes in nonprice factors and changes in demand and supply.
10. Graphically illustrate increases and decreases in demand and in supply.
11. Understand the difference between a change in quantity demanded or quantity supplied, and change in demand and in supply.
12. Determine the changes in equilibrium price and equilibrium quantity that result from changes in demand and in supply.
13. Understand when government-imposed price ceilings and price floors take effect, and how they can create shortages and surpluses.
14. Understand the concept of price elasticity.
15. Distinguish among an elastic, an inelastic, and a unitary elastic response to a price change.
16. Calculate an elasticity coefficient and interpret the resulting number.
17. Identify the causes of elastic and inelastic responses to price changes for demand and for supply.

**CHAPTER REVIEW**

| 1. The different amounts of a good or service that a buyer would purchase at different prices in a defined time period with all __________ factors held constant is the buyer’s __________ for that product. | 1. The different amounts of a good or service that a buyer would purchase at different prices in a defined time period with all __________ factors held constant is the buyer’s __________ for that product. |
### Chapter 3: Demand, Supply, and Price Determination

<table>
<thead>
<tr>
<th>Schedule</th>
<th>a. In developing a demand ________ for a product, all nonprice factors that influence buyer demand are held ________ in order to highlight the relationship between the product's ________ and the amount of the product a buyer would purchase in a given time period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>b. The Law of Demand states that, as the price of a product increases, the quantity of that product demanded by a buyer ________, and as the price of a product decreases, the quantity demanded ________. In other words, according to the Law of Demand, there is a(n) ________ relationship between price and quantity demanded.</td>
</tr>
<tr>
<td>Price</td>
<td>c. Buyers' reactions to price changes are based on scarcity and choice: that is, a buyer's ________ is limited, or scarce, and there may be ________ for a good service available to a buyer.</td>
</tr>
<tr>
<td></td>
<td>d. A demand schedule may be illustrated as a demand curve in a graph. Typically, a demand curve is ________ sloping, illustrating the ________ relationship between price and quantity demanded.</td>
</tr>
</tbody>
</table>

2. The different amounts of a good or service that a seller would make available for sale at different prices in a defined time period with all ________ factors held constant is the seller's ________ of that product.

<table>
<thead>
<tr>
<th>Nonprice</th>
<th>a. In developing a supply schedule for a product, all nonprice factors that influence supply are held ________ in order to highlight the relationship between the product's ________ and the quantity of the product supplied in a given time period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>b. The Law of Supply states that there is a ________ relationship between price and quantity supplied: as price increases, quantity supplied ________, and as price decreases, quantity supplied ________.</td>
</tr>
</tbody>
</table>
Chapter 3: Demand, Supply, and Price Determination

C. The basic reason for the Law of Supply is the seller's ability to cover costs and earn a ________.

d. When a supply schedule is illustrated graphically, a typical supply curve is ________ sloping, indicating a ________ relationship between price and quantity supplied.

3. When the demand and supply schedules or curves of all the individual buyers and sellers in a market are added together, ________ demand and ________ supply are determined. The price and quantity at which market demand and market supply curves for a product ________, are called the product's ________ price and ________ quantity.

a. Equilibrium is the point toward which a free market ________ moves, and at which there is no tendency for price and quantity ________.

b. In Figure 3.1, the equilibrium price is ________ cents per unit and the equilibrium quantity is ________ units. The equilibrium price is sometimes called the market ________ price because at that price the amount demanded by buyers ________ the amount supplied by sellers.

45
2,000
clearing
equals
Chapter 3: Demand, Supply, and Price Determination

500
3,500
surplus; 3,000

C. If the price charged in Figure 3.1 were 75 cents per unit, the quantity demanded would be ________ units and the quantity supplied would be ________ units, or there would be a ________ of ________ units.

d. If the price charged in Figure 3.1 were 30 cents per unit, the quantity demanded would be ________ units and the quantity supplied would be ________ units, or there would be a ________ of ________ units.

4. A change in the quantity demanded or a change in the quantity supplied of a product is shown by a movement along ________ the product's demand curve or supply curve from one price-quantity point to another. A change in quantity demanded or quantity supplied results only from a change in the ________ of the product.

5. A change in a nonprice factor influencing the demand or supply of a product causes its demand or supply curve to ________ to the right or left. This is termed a ________ in demand or supply.

a. When a change in a nonprice factor causes buyers to demand more or sellers to supply more of a product at each price, a(n) ________ in the demand or an ________ in the supply of the product occurs, and the demand or supply curve shifts to the ________.

b. When a change in a nonprice factor causes buyers to demand less or sellers to supply less of a product at each price, a(n) ________ in the demand or a ________ in the supply of the product occurs, and the demand or supply curve shifts to the ________.
### Chapter 3: Demand, Supply, and Price Determination

<table>
<thead>
<tr>
<th>buyers’; expectations</th>
<th>3. Some major nonprice factors influencing demand include: incomes; about future incomes, prices, or availabilities; the of related goods and services; the of the good or service; and the number of in the market.</th>
</tr>
</thead>
<tbody>
<tr>
<td>prices; popularity</td>
<td>d. Some major nonprice factors influencing supply include: the of producing the item; of future market conditions; the of other products that the seller could produce; and the number of in the market.</td>
</tr>
<tr>
<td>buyers</td>
<td></td>
</tr>
<tr>
<td>cost; expectations</td>
<td>6. A in the price of a product causes a change in the demanded or the supplied of the product and is illustrated graphically by a the demand or supply curve. A in a nonprice factor influencing demand or supply causes a change in the or in the of the product and is illustrated graphically by a of the demand or supply curve.</td>
</tr>
<tr>
<td>prices</td>
<td></td>
</tr>
<tr>
<td>sellers</td>
<td></td>
</tr>
<tr>
<td>change</td>
<td>7. When there is a change in the demand and/or supply of a product in a market, there is a change in the product's price and quantity.</td>
</tr>
<tr>
<td>quantity; quantity</td>
<td></td>
</tr>
<tr>
<td>movement</td>
<td></td>
</tr>
<tr>
<td>along; change</td>
<td></td>
</tr>
<tr>
<td>demand; supply</td>
<td></td>
</tr>
<tr>
<td>shift</td>
<td></td>
</tr>
<tr>
<td>equilibrium</td>
<td>a. Based on Figure 3.2, an increase in demand with no change in supply would lead to an in the equilibrium price and an in the equilibrium quantity of the product; and an increase in supply with no change in demand would lead to a in the equilibrium price and an in the equilibrium quantity of the product.</td>
</tr>
<tr>
<td>increase</td>
<td></td>
</tr>
<tr>
<td>decrease</td>
<td></td>
</tr>
<tr>
<td>increase</td>
<td></td>
</tr>
</tbody>
</table>

34
b. Based on Figure 3.2, a decrease in demand with no change in supply would lead to a _________ in the equilibrium price and a _________ in the equilibrium quantity of the product; and a decrease in supply with no change in demand would lead to an _________ in the equilibrium price and a _________ in the equilibrium quantity of the product.

8. A price ceiling (upper price limit) keeps prices from _________ above a certain level, and a price floor (lower price limit) keeps prices from _________ below a certain level.

   a. A price ceiling imposed on a market takes effect when the equilibrium price is _________ the ceiling. When a price ceiling takes effect, the quantity demanded of the product is _________ than the quantity supplied, and a _________ develops.

   b. A price floor imposed on a market takes effect when the equilibrium price is _________ the floor. When a price floor takes effect, the quantity demanded of the product is _________ than the quantity supplied, and a _________ develops.
Chapter 3: Demand, Supply, and Price Determination

**Figure 3.3**

<table>
<thead>
<tr>
<th>Price per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$14</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>0, 50, 100, 150, 200, 250, 300, 350, 400, 450</td>
</tr>
</tbody>
</table>

**c.** Based on Figure 3.3, a ceiling price of $4 per unit would cause a ______ of ______ units to occur in this market; and a ceiling price of $10 per unit would keep the market at its ______ price, or the ceiling would _______ take effect.

**d.** Based on Figure 3.3, a price floor of $4 per unit would keep the market at its ______ price; and a price floor of $10 per unit would result in a ______ of ______ units.

**9.** The measure of the strength of a buyer's or seller's response to a price change is referred to as price ________.

**a.** If buyers or sellers react strongly to a price change, the response is said to be price ________. If buyers or sellers react weakly to a price change, the response is categorized as price ________.
Chapter 3: Demand, Supply, and Price Determination

b. The formula for calculating an elasticity coefficient is: the absolute value of the __________ change in __________ divided by the __________ change in __________. The formula for determining the percentage change in quantity is: the change in Q (quantity) divided by the __________ __________. The formula for determining the percentage change in price is: the change in P (price) divided by the __________ __________.

c. A response by either buyers or sellers to a price change is price elastic if a given percentage change in price leads to a __________ percentage change in quantity demanded or quantity supplied, or if the elasticity coefficient is _________ than one. A response to a price change is price inelastic if a given percentage change in price leads to a __________ percentage change in quantity demanded or quantity supplied, or if the elasticity coefficient is _________ than one. A response to a price change is unitary price elastic if a given percentage change in price leads to an __________ percentage change in quantity demanded or quantity supplied, or if the elasticity coefficient is _________.

d. If the price of bicycle helmets increases from $75 to $90 and the quantity of helmets demanded per month falls from 120 to 90 as a result, then the percentage change in quantity demanded equals _________ (change in Q) divided by _________ (base Q), or _________ %, and the percentage change in price equals _________ (change in P) divided by _________ (base P), or _________ %. The elasticity coefficient equals _________ % divided by _________ %, or _________ elastic. The response to the price change in this case is categorized as _________.

e. The main factors determining the price elasticity of demand for a product are: whether the product is a __________ or a __________; the ability of buyers to __________ other goods or services for the product; and the portion of a buyer's __________ that the product's price represents. The main factor determining price elasticity of supply is the amount of __________ a seller has to react to a price change.
EXERCISES

Supply and Demand

1. The following are hypothetical market demand and supply schedules for ice cream sundaes in a resort town on an average summer day.

<table>
<thead>
<tr>
<th>Sundaes per Day</th>
<th>Sundaes Demanded</th>
<th>Sundaes Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1.00</td>
<td>3000</td>
<td>600</td>
</tr>
<tr>
<td>1.20</td>
<td>2800</td>
<td>1000</td>
</tr>
<tr>
<td>1.40</td>
<td>2600</td>
<td>1400</td>
</tr>
<tr>
<td>1.60</td>
<td>2400</td>
<td>1800</td>
</tr>
<tr>
<td>1.80</td>
<td>2200</td>
<td>2200</td>
</tr>
<tr>
<td>2.00</td>
<td>2000</td>
<td>2600</td>
</tr>
<tr>
<td>2.20</td>
<td>2000</td>
<td>2600</td>
</tr>
<tr>
<td>2.40</td>
<td>1600</td>
<td>3400</td>
</tr>
<tr>
<td>2.60</td>
<td>1400</td>
<td>3800</td>
</tr>
<tr>
<td>2.80</td>
<td>1200</td>
<td>4200</td>
</tr>
</tbody>
</table>

a. Plot the above demand and supply schedules on Figure 3.4 and label the curves D and S.

![Figure 3.4](image-url)
b. Both the schedule and the graph illustrate that as price falls, consumers will _________ the quantity demanded and suppliers will _________ the quantity supplied; and as price rises, consumers will ______ the quantity demanded and suppliers will _______ the quantity supplied.

c. In the above example, the equilibrium price is ________, and the quantity of sundaes sold at this price is ________.

d. Assume that the sellers of ice cream sundaes were not yet aware of the equilibrium price and are experimenting with their pricing. Would there be a shortage or a surplus if $1.40 per sundae were charged? ______. How large would this shortage or surplus be? ________

e. Would there be a shortage or a surplus if $2.40 were charged? ________ How large would this shortage or surplus be? ________ In this market, at every price above the equilibrium price a _______ would occur, and at every price below the equilibrium price a ________ would occur.

f. Assume that the local city council creates a Board for the Preservation of the Sweettooth that has as its charge the setting of prices on all ice cream, bakery, and candy items. This board initially sets a maximum price of $1.60 on all sundaes. What will happen as a result of this government-set price?

g. Since there are problems created by setting the maximum price of ice cream sundaes at $1.60, the board decides to raise the price ceiling to $2.60 on all sundaes. What will happen in this case?

h. During the winter months in this town, the equilibrium price of ice cream sundaes falls and fewer sundaes are sold. Identify some reasons for this change in equilibrium price and quantity, and illustrate graphically on Figure 3.4 what happens during the winter months.

2. Given below are the demand and supply schedules--unlabeled--for a hypothetical market.

<table>
<thead>
<tr>
<th>Price</th>
<th>Quantity</th>
<th>Price</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4</td>
<td>100</td>
<td>$4</td>
<td>550</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>8</td>
<td>450</td>
</tr>
<tr>
<td>12</td>
<td>300</td>
<td>12</td>
<td>350</td>
</tr>
<tr>
<td>16</td>
<td>400</td>
<td>16</td>
<td>250</td>
</tr>
<tr>
<td>20</td>
<td>500</td>
<td>20</td>
<td>150</td>
</tr>
<tr>
<td>24</td>
<td>600</td>
<td>24</td>
<td>50</td>
</tr>
</tbody>
</table>

a. Plot these schedules in Figure 3.5 and correctly label each curve. Be sure to also label and number the axes of the graph.

b. The equilibrium price in this market is ________ and the equilibrium quantity is ________.
c. Would there be a shortage or a surplus if the sellers charged $10? ________.
d. How much of a shortage or surplus would occur? ________ Mark this on Figure 3.5.
e. Would there be a shortage or a surplus if the sellers charged $22? ________
f. How much of a shortage or surplus would occur? ________ Mark this on Figure 3.5.

Changes in Demand, Supply, and Equilibrium versus Changes in Quantity Demanded and Quantity Supplied

1. Each of the following gives an example that could change demand or supply, or change just the quantities demanded and supplied. Where applicable, illustrate the change in demand or supply graphically and note the effect on equilibrium price and equilibrium quantity.

<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>GRAPHIC CHANGE</th>
<th>CHANGE IN EQUILIBRIUM PRICE AND EQUILIBRIUM QUANTITY</th>
</tr>
</thead>
</table>

a. What is the effect in the market for aspirin when a major report says it is healthful to take one each day?
b. What happens in the market for compact discs by a recording group when its popularity fades?

\[ \text{Diagram of supply and demand curves for compact discs.} \]

\[ \text{Market equilibrium for compact discs.} \]

c. What happens in the market for quick, convenient oil changes when these businesses raise their prices?

\[ \text{Diagram of supply and demand curves for quick, convenient oil changes.} \]

\[ \text{Market equilibrium for quick, convenient oil changes.} \]

d. What would be the effect of a severe drought on the market for popping corn?

\[ \text{Diagram of supply and demand curves for popping corn.} \]

\[ \text{Market equilibrium for popping corn.} \]

e. What happens in the market for pasta when the cost of flour increases?

\[ \text{Diagram of supply and demand curves for pasta.} \]

\[ \text{Market equilibrium for pasta.} \]

f. What will be the effect on the housing market now if buyers expect that the prices of new homes will increase significantly in the future?

\[ \text{Diagram of supply and demand curves for housing.} \]

\[ \text{Market equilibrium for housing.} \]

g. What will be the effect in the market for home health care workers if the federal government establishes a minimum wage that is below the equilibrium wage rate?

\[ \text{Diagram of supply and demand curves for home health care workers.} \]

\[ \text{Market equilibrium for home health care workers.} \]
h. If movies shown in theaters and movies rented for home viewing are substitutes, what happens in the movie rental market when movie theaters raise their prices?

i. What will happen in the market for copy services in a particular community when many new copy shops are opened?

j. What effect would a decrease in the price of airline tickets have in the market for air travel?

Price Ceilings and Floors

Figure 3.6

1. Assume that the government sets a price ceiling of $1.20 in the market in Figure 3.6. What will result? What would happen if the price ceiling were set at $0.60?
2. Assume that the government sets a price floor of $1.20 in the market in Figure 3.6 What will result?

3. What would happen if the price floor were set at $0.60?

Elasticity

1. A car dealership discovers the following information about the demand for auto accessories. Calculate the price elasticity coefficient for each example and determine whether the change is elastic or inelastic.
   a. When the price of premium tires is lowered by 20 percent, sales increase by 25 percent. The elasticity coefficient is ________ and the response to this price change is ________.
   b. When the price of satellite radio is increased by 30 percent, consumers buy 40 percent fewer car phones. The elasticity coefficient is ________ and the change is ________.
   c. When the price of leather interiors is raised by 30 percent, sales decrease by 20 percent. The elasticity coefficient is ________ and the change is ________.
   d. When the price of sunroofs is lowered by 20 percent, consumers buy 15 percent more sunroofs. The elasticity coefficient is ________ and the change is ________.

2. Calculate the percentage change in quantity, the percentage change in price, and the elasticity coefficient for each of the following examples.
   a. When the price of macadamia nut turtles at Chocolate City is increased from $10 to $11 per pound, Chocolate City increases the quantity offered for sale from 200 to 250 pounds per week.

   \[
   \frac{\text{% change in } Q}{\text{% change in } P} = \frac{250 - 200}{200} = \frac{50}{200} = 0.25
   \]

   elasticity coefficient = ________

   b. When the price of home delivery of a newspaper falls from $24 to $21 a month, subscriptions increase from 16,000 to 18,000 subscriptions.
% change in Q
% change in P = ________

elasticity coefficient = ________

c. When the average price of a condominium in a city drops from $200,000 to $190,000, builders decrease the number of units constructed per month from 100 to 97.

% change in Q
% change in P = ________

elasticity coefficient = ________

d. When a gym increases its quarterly membership fee from $120 to $180, the number of memberships falls from 610 to 305.

% change in Q
% change in P = ________

elasticity coefficient = ________

e. When wages rise from $7 to $8.05 per hour, the number of applicants for a job increases from 140 to 168.

% change in Q
% change in P = ________

elasticity coefficient = ________

SAMPLE EXAMINATION QUESTIONS

Indicate the best answer to each question.

1. The Law of Demand states that:
   a. there is a direct relationship between a product's price and the quantity demanded.
   b. the quantity demanded of a product will decrease when the product's price increases.
   c. the demand curve for a product will shift to the left when the product's price increases.
   d. consumers buy more of a product when its price is low because sellers supply more.
2. When constructing a supply schedule for a product, nonprice factors affecting supply:
   a. and the product's price are held constant.
   b. and the product's price are allowed to change.
   c. are held constant, but the product's price is allowed to change.
   d. are allowed to change, but the product's price is held constant.

3. If the equilibrium price of a product were $6 and the actual price charged in the market
   were $8, you would expect:
   a. shortage of this product at $6.
   b. a surplus of this product at $8.
   c. the equilibrium price to rise to $8.
   d. the amount supplied to be equal to the amount demanded at $8.

4. A surplus of a product in a market indicates that the quantity demanded:
   a. exceeds the quantity supplied and that the equilibrium price is above the price
      charged.
   b. exceeds the quantity supplied and that the equilibrium price is below the price
      charged.
   c. is less than the quantity supplied and that the equilibrium price is above the price
      charged.
   d. is less than the quantity supplied and that the equilibrium price is below the price
      charged.

5. A change in the quantity supplied of a product:
   a. means the entire supply schedule changes.
   b. is caused by a change in the price of the product.
   c. is caused by a change in the number of sellers in the market.
   d. causes the product supply curve to shift to the right or left.

6. The demand curve for a product would shift to the left if:
   a. the price of the product decreased.
   b. the popularity of the product decreased.
   c. the number of sellers in the market decreased.
   d. buyers expected the product's price to be much higher in the future.

7. Which of the following would cause an increase in the supply of a particular product?
   a. The product's price increases.
   b. The cost of producing the product increases.
   c. The profit on another product the seller produces increases.
   d. None of the above.
8. An increase in the number of sellers in the market would cause a movement from:
   a. S1 to S2.
   b. S2 to S1.
   c. D1 to D2.
   d. D2 to D1.

9. The movement from point B to point C represents:
   a. a decrease in demand.
   b. a decrease in quantity demanded.
   c. an increase in supply.
   d. an increase in quantity supplied.

10. The movement from D2 to D1 represents:
    a. a decrease in demand.
    b. an increase in demand.
    c. a decrease in quantity demanded.
    d. an increase in quantity demanded.

11. There would be a surplus in this market if the price were:
    a. $2.00 and demand and supply were shown by D2 and S1.
    b. $2.00 and demand and supply were shown by D2 and S2.
    c. $3.00 and demand and supply were shown by D2 and S1.
    d. $3.00 and demand and supply were shown by D1 and S2.
12. If there were an increase in the demand for a product in a market and no change in supply, you would expect:
   a. an increase in the product's equilibrium price and equilibrium quantity.
   b. an increase in the product's equilibrium price and a decrease in its equilibrium quantity.
   c. a decrease in the product's equilibrium price and an increase in its equilibrium quantity.
   d. a decrease in the product's equilibrium price and equilibrium quantity.

13. A decrease in the equilibrium price and quantity of a good sold in a market would be caused by:
   a. a decrease in the number of buyers in the market.
   b. a decrease in the cost of producing the good sold in the market.
   c. an increase in the number of sellers in the market.
   d. an increase in the price of a good that competes with the good sold in the market.

14. If there were a decrease in the cost of producing a good sold in a market, you would expect the market's equilibrium price:
   a. and equilibrium quantity to decrease.
   b. and equilibrium quantity to increase.
   c. to decrease and equilibrium quantity to increase.
   d. to increase and equilibrium quantity to decrease.

15. If the price of a product is at its legally imposed ceiling rather than at equilibrium, then:
   a. a surplus develops.
   b. a shortage develops.
   c. no surplus or shortage develops.
   d. the ceiling price must be above the equilibrium price.
Chapter 3: Demand, Supply, and Price Determination

Answer questions 16 and 17 on the basis of the following figure.

![Graph showing supply and demand curves](image)

16. If the government imposed a price floor of $5.00 in this market, there would be:
   a. a surplus of 1800 units.
   b. a shortage of 1200 units.
   c. a shortage of 1800 units.
   d. none of the above

17. If the government imposed a price ceiling of $5.00 in this market, there would be:
   a. a surplus of 1200 units.
   b. a surplus of 1800 units.
   c. a shortage of 1800 units.
   d. none of the above

Appendix

18. If the price elasticity of demand for a product were 0.8, buyers’ demand for that product would be:
   a. price elastic.
   b. price inelastic.
   c. unitary price elastic.
   d. directly related to the product's price.
19. Price elasticity of demand is equal to:
   a. original quantity demanded / original price
   b. change in price / change in quantity demanded
   c. percentage change in quantity demanded / percentage change in price
   d. percentage change in price / percentage change in quantity demanded

20. 100 units of a product were supplied by sellers at a price of $20 per unit, but only 70 units are supplied because the price fell to $16. The price elasticity of supply for this product is:
   a. 0.67
   b. 1.0.
   c. 1.5.
   d. 3.0.

NOTE: Correct answers to the Exercises and the Sample Examination Questions can be found at the end of the Study Guide.