_ Answers to Review Questions

True/False

1. False. The market demand curve shows the amounts of the good demanders are willing to buy at all different, possible prices.
2. True. When demand exceeds supply, the price rises as buyers offer to pay higher prices so they can get more of the good. This moves the price toward its equilibrium level.
3. True. The negative relationship reflects the law of demand.
4. False. Just the opposite is correct. The *smaller* the fraction of income spent on a good, the more inelastic is its demand.
5. True. This is what it means when the price elasticity of supply increases: supply has become more responsive to price.
6. True. If the demand curve has the typical downward slope, both the equilibrium price and quantity change.
7. True. When demand decreases, the demand curve shifts back, to the left.
8. False. The definition of complementary goods is that an increase in the price of one good *lowers* the demand for the other.
9. False. These goods are complements. An increase in the price of hot dogs lowers the demand for hot dog buns.
10. False. The current demand rises as people try to buy more of the good now in order to beat the expected price increase.

11. False. It is very important to realize that most factors shift *either* the supply or demand curve but do not shift both.
12. True. Whenever the price elasticity of demand exceeds one, demand is price elastic.
13. True. This means the supply curve shifts back, to the left.

Multiple Choice Questions

1. (e) This is the definition of *demand*. Notice how it is different from the meaning of *wants*.
2. (d) These changes result because the increase in price of imported cars increases the demand for domestic cars. This is illustrated above, where the equilibrium price rises from *P* to *P'* and the quantity from *Q* to *Q'*.
3. (b) The substitution effect is closely related to the principle of substitution.
4. (c) Answer (a) is incorrect because it causes an upward *movement along* the demand curve. Answers (b) and (d) cause the demand curve to shift to the left.
5. (c) The distinction between an increase (or decrease) in demand and an increase (or decrease) in quantity demanded is vital. Changes in the price of the good cause changes in its quantity demanded but not changes in demand.
6. (d) An improvement in technology causes the supply curve for a commodity to shift out, that is, causes an increase in supply.
7. (c) Factors that cause shifts in the demand curve have no direct effect on supply, so the supply curve does not shift.
8. (d) The baby boom shifts the demand curve for diapers to the right, resulting in an increase in both the equilibrium price and quantity.
9. (c) Changes in the price of the good cause changes in the quantity supplied of the good; that is, movements along the supply curve.
10. (c) This action decreases the supply of lamb, thereby shifting the supply curve to the left. The demand curve for lamb does not shift. This is illustrated above, where the price rises from *P* to *P*' and the quantity falls from *Q* to *Q'*.
11. (b) The supply curve for televisions increases; that is, shifts to the right.
12. (e) This occurs because people want more of the second good to take the place of the product that has risen in price.

13. (e) The reverse of all the statements in parts (a) to (c) is correct.
14. (d) With inelastic demand, consumers will not cut back on purchases.

Chapter 3 Market Demand, Supply, and Elasticity

Essay Questions

1. (a) The demand for corn (like the demand for all goods) slopes down, indicating that a higher price reduces the quantity of corn demanded.
(b) The demand for a normal good increases when income increases. Hence, as illustrated, the demand for corn shifts to the right, indicating that at every possible price more corn is demanded when income is higher.
(c) The drought has *no* effect on the demand curve. As we will see in problem 2, the drought shifts only the supply curve. It is crucial to understand that most factors influencing the supply and demand in a market shift *either* the supply curve or the demand curve but not both.

2. (a) The supply curve for corn (like virtually all supply curves) slopes up, indicating that more corn will be supplied the higher is the (relative) price of corn.
(b) The increase in income does *not* shift the supply curve; as we saw above in question 1, it shifts the demand curve but there is no direct effect on the supply curve.

(c) The drought shifts the supply curve to the left, indicating that the drought reduces the quantity of corn that will be supplied at every possible price. Comparing this answer with that for question 1, we again see that the factors that shift one curve do not shift the other.
3. Q is the equilibrium quantity; P is the equilibrium price. When demand falls or shifts to the left both the price and quantity fall to P and Q .
4. When the price of a commodity falls, the demand for its substitutes also falls. Thus, a reduction in the price of fuel oil causes a decrease in the demand for solar water heaters. This is reflected in the figure from #3 by the shift to the left in the demand curve for solar water heaters, indicating that at every possible price people now demand fewer solar water heaters. Then, the price of solar water heaters falls, from P to P , and the quantity produced also falls, from Q to Q'.

5.
As teenagers switch their preferences, the demand for skateboards falls and the demand for video games rises. Thus, the relative price and quantity of skateboards falls while the relative price and quantity of video games rises. This is a good illustration of Adam Smith's invisible hand in operation. The lower price for skateboard manufacturers causes them to reduce the quantity supplied of skateboards. The higher relative price for video games encourages video game manufacturers to increase the quantity of games they supply. As a result, consumers get what they desire: fewer skateboards and more video games.
6. (a) Inferior good; as people's incomes rise, they tend to buy new cars rather than used.
(b) Normal good; as a poor person's income rises he or she usually buys more meat and fewer meat substitutes, such as beans.
(c) Inferior good; this class of people tends to buy more steaks and less hamburger as their income rises. Items b and c point out the interesting fact that a product may be both a normal good and inferior good over different ranges of income.
(d) Normal good
(e) Normal good
7. A change in demand refers to the *shifting* of the *entire* demand curve. This can be distinguished from a change in the quantity demanded, which refers to a *movement along* a demand curve. A change in any factor that affects the demand for a good, other than its price, causes a change in demand. These include factors such as income, prices of related goods, preferences, the number of demanders, and the price expected to prevail in the future. Changes in the quantity demanded are caused by changes

in the good’s price.
8. Since the elasticity of supply equals the percentage change in the quantity supplied divided by the percentage change in price, the elasticity of supply equals 2.0. In a similar fashion, the elasticity of demand equals the absolute value of the percentage change in the quantity demanded divided by the percentage change in price. So, the elasticity of demand equals 10 percent divided by 5 percent, or 2.0.

9. Don’t be mislead by this statement; it misses an important point about the prices used in the supply and demand model. The supply and demand model refers to *relative* prices; that is, the money price of one good relative to the money prices of other goods. Thus, the supply and demand model predicts that the relative price of a good falls if the demand for that product is reduced. It is very common to see decreases in the *relative* price of a good. After all, if the money price of a particular good rises by 5 percent while the money prices of all other products increase by 10 percent, the price of the good relative to other products has fallen.
10. The public-health effects depend on elasticity of demand. If there is a high elasticity of demand for cigarettes, smokes will cut back on smoking and public health will improve. The revenue effects will be the opposite. If there is a low elasticity of demand, smokers will continue to buy about the same number of packs as before, and government tax revenues will be large.

_ Additional Questions.

1. Consider the market for pizza. The table below shows how many pizzas consumers demand and how many pizzas firms supply at different prices.

Price	Quantity Demanded	Quantity Supplied
$25	10	50
$20	20	40
$15	30	30
$10	40	20
$5	50	10

(a) Suppose the prevailing price is $20. Is there a surplus or shortage? By how much?
(b) Suppose the prevailing price is $5. Is there a surplus or shortage? By how much?
(c) What is the equilibrium price? How many pizzas are bought and sold at this price?
2. Consider the market for Toyotas and Fords sold in the United States. Using demand and supply analysis explain what will happen to the equilibrium price and quantity of both cars if the United States government imposes a tariff (tax) on Toyotas sold in the United States.
3. Suppose the price of gasoline increases by 10%. As a result the quantity of gasoline increases by 12%. What is the price elasticity of supply? Is the supply of gasoline elastic or inelastic?
4. Suppose the price of a Big Mac increases from $2.00 to $2.50. As a result the quantity of Big Macs demanded falls from 2 million to 1.8 million. Calculate the elasticity of demand for Big Macs.
5. On a demand and supply diagram, depict a situation in which the burden of a tax falls completely on consumers.

Answers

1. (a) There is a surplus of 20 units.
(b) There is a shortage of 40 units.
(c) The equilibrium price is $15. At that price 30 pizzas are bought and sold.
2. The effect of the tariff is to reduce the supply of Toyotas in the United States. Therefore, the equilibrium price of a Toyota will rise and the equilibrium quantity of Toyotas will fall. Since the price of a Toyota has risen, the demand for Fords will increase since the two cars are substitutes. If the demand for Fords rises, the equilibrium price and quantity of Fords will increase.
3. The price elasticity of supply is 1.20 (12%/10%). Since it is greater than 1, supply is elastic.
4. The percent change in the quantity demanded is –10%. The percent change in the price of Big Mac’s is 25%. Therefore, the elasticity of demand is 0.40 (note that the answer is in absolute value).

5. In this case demand would be vertical—a perfectly inelastic demand. The tax will cause the supply curve to shift up by the amount of the tax. Since demand is vertical the price will increase by the full amount of the tax from P_0 to P_1.

MARKET STRUCTURES - Activity 7

	Perfect/Pure Competition	**Monopolistic Competition**	**Oligopoly**	**Monopoly**
How many suppliers are there?	Large number of buyers and sellers	Large number of buyers and sellers	Only a few, large sellers	Opposite of perfect competition: only one seller
What influence do the firms have over price?	Each individual firm is too small to affect price	If sellers can convince consumers that their product is better, they may be able to raise price above competitors'	Each firm has considerable power and influence over price yet knows other sellers will follow with similar pricing	Opposite of perfect competition; controls price
How much completion exists between firms?	Sellers compete against one another for consumers'	Sellers compete against one another and buyers compete against one another and against sellers for best price	Firms tend to act together, sometimes eve colluding; generally like to compete on nonprice basis	Little or no competition
Are all firms selling identical or similar products?	Buyers and sellers deal in identical products; buyers do not prefer one seller's product over another's	Firms sell similar but not identical products: differences may be real or perceived	Product may be different or standardized	A particular economic product with no close substitutes
Is it easy or difficult to enter the market?	Buyers and sellers are free to enter, conduct, or get out of business	Same ease of entry as perfect competition	More difficult than perfect competition and monopolistic competition	Difficult

CARTOON 8

1. What does the cartoon imply about the outcome of the Justice Department's lawsuits against Microsoft?

   C. That it will be difficult for them to win

2. A reasonable interpretation of the cartoon would be that the government

   B. has difficulty controlling such a powerful company

GUIDED READING - Activity 7-1

1. What is the role of government under Adam Smith's laissez-faire philosophy? The role of government is confined to protecting private property, enforcing contracts, settling disputes, and protecting businesses against foreign goods.
2. Define market structure. The nature and degree of competition among firms operating in the same industry.
3. What are the four different types of market structure?
   a. _Perfect/pure competition
   b. _monopolistic competition
   c. _ oligopoly
   d. _ monopoly
4. What are the five major conditions that characterize perfectly competitive markets? Explain each condition briefly.
   a. – There are a large number of buyers and sellers, so that no single group is powerful enough to affect the product's price.

b. – Buyers and sellers deal in identical products, so there is no need to advertise
c. – Buyers and sellers act independently, with sellers competing against each other for the consumer's dollar and buyers competing for the best price.
d. –Buyers and sellers are well-informed about the product and price, so that the sellers can match the price of a competitor and buyers know the best price to pay.
e. – Buyers and sellers are free to enter into business, so that no single producer in any industry can keep the market to themselves.

5. Name and describe the four different types of monopolies
    a. – natural: a market situation, such as a public utility, in which costs are minimized by having a single firm produce the product;
    b. – geographic: based on the absence of other sellers in a geographic area;
    c. – technological: based on ownership or control of a manufacturing method, process, or other scientific advance
    d. – government: involving products that private industry cannot adequately provide

Economic Vocabulary Activity – Chapter 6: Prices and Decision Making

1. Shortage
2. Rationing
3. Minimum wage
4. Economic model
5. Ration coupon
6. Equilibrium price
7. Surplus
8. Nonrecourse loan
9. Price floor
10. Rebate

11.Market equilibrium
12.Deficiency payment
13.Price ceiling
14.Target price