

Student: _____

1. The relationship that shows how much buyers of a product want to buy at each possible price, holding fixed all other factors is called
 - A. A demand curve
 - B. Elasticity of demand
 - C. Demand function
 - D. An indifference curve
2. Two products are substitutes if
 - A. An increase in the price of one causes buyers to demand less of the other
 - B. An increase in the price of one causes buyers to demand more of the other
 - C. A decrease in the price of one causes buyers to demand more of the other
 - D. Individuals consume the goods together
3. Two products are complements if
 - A. A decrease in the price of one causes buyers to demand less of the other
 - B. An increase in the price of one causes buyers to demand more of the other
 - C. A decrease in the price of one causes buyers to demand more of the other
 - D. Individuals consume the goods together
4. If an increase in the price of one good causes buyers to demand less of another good, then the two goods are
 - A. Normal goods
 - B. Inferior goods
 - C. Substitutes
 - D. Complements
5. If an increase in the price of one good causes buyers to demand more of another good, then the two goods are
 - A. Normal goods
 - B. Inferior goods
 - C. Substitutes
 - D. Complements

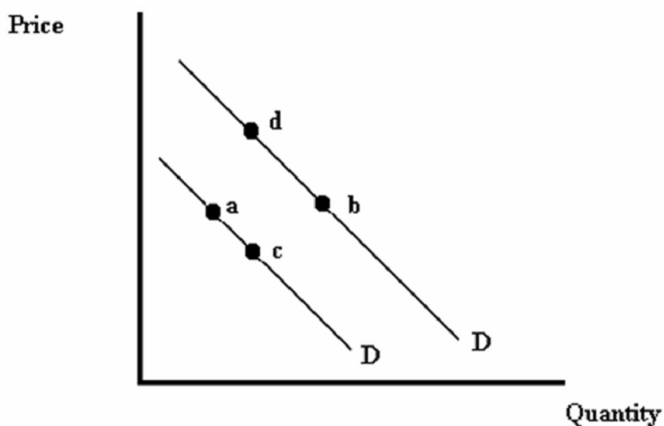


Figure 2.1

6. Refer to Figure 2.1. A movement from point a to point b is most likely caused by
 - A. A decrease in the price of the good
 - B. An increase in consumers' incomes, assuming the good is normal
 - C. An increase in the price of a complementary good
 - D. A decrease in consumers' incomes, assuming the good is normal
7. Refer to Figure 2.1. A movement from point a to point c is most likely caused by
 - A. A decrease in the price of the good
 - B. An increase in consumers' incomes, assuming the good is normal
 - C. A decrease in the price of a complementary good
 - D. An increase in the price of the good
8. An increase in the price of a good is shown by a
 - A. Rightward shift of the demand curve
 - B. Leftward shift of the demand curve
 - C. Movement up and to the left along the demand curve
 - D. Movement down and to the right along the demand curve
9. A change in demand of a good is shown by a
 - A. Movement along a demand curve
 - B. Shift of a demand curve
 - C. Movement along the demand function
 - D. Shift of the demand function
10. A product's _____ describes the amount of the product that is demanded for each possible combination of its price and other factors.
 - A. Demand curve
 - B. Price-consumption curve
 - C. Utility function
 - D. Demand function
11. The effect of an increase in the price of gasoline on the demand for sport utility vehicles would be shown by a
 - A. Rightward shift of the demand curve for sport utility vehicles
 - B. Leftward shift of the demand curve for sport utility vehicles
 - C. Movement up and to the left along the demand curve for sport utility vehicles
 - D. Movement down and to the right along the demand curve for sport utility vehicles
12. Suppose the demand function for cable TV service is given by $Q_{CTV} = 15 - 0.25P_{CTV} + 0.0005xM + 0.3xP_{STV}$, where Q_{CTV} is the quantity of cable TV demanded (thousands of households), P_{CTV} is the price of cable TV, M is income and P_{STV} is the price of satellite TV service. If consumers' income is \$50,000 and the price of satellite TV service is \$90, then the demand curve for cable TV would be given by
 - A. $Q_{CTV} = 17 - 0.25xP_{CTV}$
 - B. $Q_{CTV} = 67 - 0.25xP_{CTV}$
 - C. $Q_{CTV} = 15 - 0.25xP_{CTV} + 0.0005xM + 0.3xP_{STV}$
 - D. $Q_{CTV} = 13 - 0.25xP_{CTV}$
13. Suppose the demand function for cable TV service is given by $Q_{CTV} = 15 - 0.25xP_{CTV} + 0.0005xM + 0.3xP_{STV}$, where Q_{CTV} is the quantity of cable TV demanded (thousands of households), P_{CTV} is the price of cable TV, M is income and P_{STV} is the price of satellite TV service. We can see that
 - A. Cable TV service is an inferior good
 - B. Cable TV service is a normal good
 - C. Cable TV service and satellite TV service are complements
 - D. Cable TV service and satellite TV service are unrelated to one another

14. Suppose the demand function for cable TV service is given by $Q_{CTV} = 15 - 0.25P_{CTV} + 0.0005xM + 0.3xP_{STV}$, Q_{CTV} is the quantity of cable TV demanded (thousands of households), P_{CTV} is the price of cable TV, M is income and P_{STV} is the price of satellite TV service. Suppose consumers' income is \$50,000 and the price of satellite TV service is \$90. At what price would the demand for cable TV services be 55,000 households?
- A. \$67
 - B. \$48
 - C. \$12
 - D. There is not enough information to answer the question
15. A product's _____ shows how much sellers of a product want to sell at each possible price, holding all other factors fixed.
- A. Supply function
 - B. Supply curve
 - C. Production function
 - D. Total product curve
16. An increase in the price of a good is shown by a
- A. Movement up and to the left along the supply curve
 - B. Movement down and to the right along the supply curve
 - C. Movement up and to the right along the supply curve
 - D. Movement down and to the left along the supply curve
17. An increase in the price of milk would be shown by a
- A. Rightward shift of the supply curve for milk
 - B. Movement up and to the right along the supply curve for milk
 - C. Leftward shift of the supply curve for milk
 - D. Movement down and to the left along the supply curve for milk
18. Oil is an input used to produce gasoline. An increase in the price of oil would be represented by
- A. A leftward shift of the supply curve for gasoline
 - B. A rightward shift of the supply curve for gasoline
 - C. A movement up and to the right along the supply curve for gasoline
 - D. A movement down and to the left along the supply curve for gasoline
19. An increase in the technology used to produce cell phones would be shown by a
- A. Rightward shift of the supply curve for cell phones
 - B. Leftward shift of the supply curve for cell phones
 - C. Rightward shift of the demand curve for cell phones
 - D. Leftward shift of the demand curve for cell phones
20. A change in the quantity supplied of a good is represented as a
- A. Movement along a supply curve
 - B. Shift of a supply curve
 - C. Movement along the supply function
 - D. Shift of the supply function
21. Which of the following is a factor that affects both the supply of and demand for a good?
- A. Technology
 - B. Price of Inputs
 - C. Consumers' Income
 - D. Government Regulations
22. A product's _____ describes the amount of the product that is supplied for each possible combination of its price and other factors.
- A. Production function
 - B. Supply curve
 - C. Supply function
 - D. Production possibilities curve

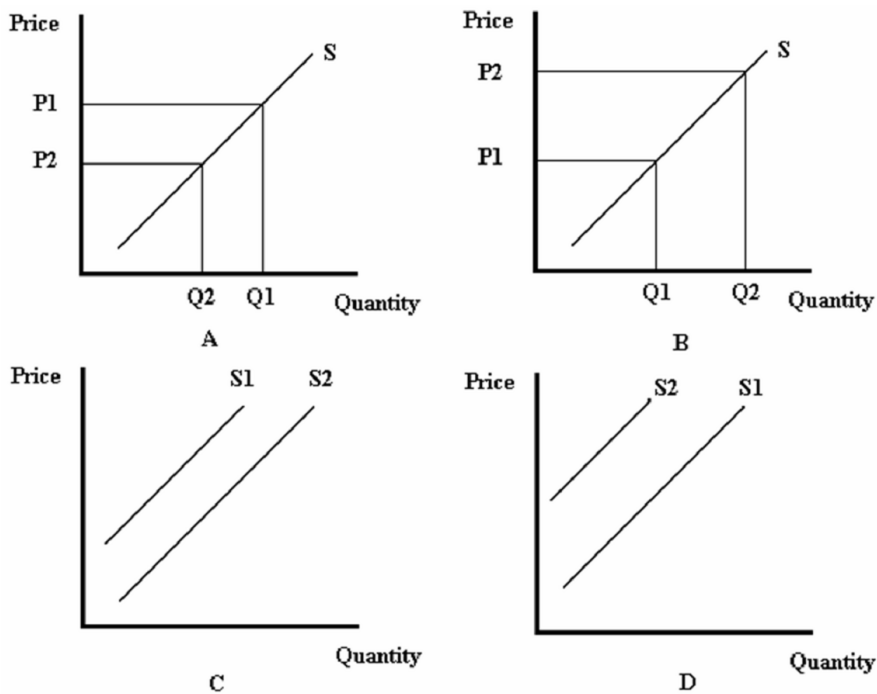


Figure 2.2

23. Refer to Figure 2.2. Which diagram represents the effect of a lower gasoline price on the supply of gasoline?
- A
 - B
 - C
 - D
24. Refer to Figure 2.2. Which diagram best represents the effect of lower fertilizer prices on the market for corn?
- A
 - B
 - C
 - D
25. Consider the relationship given by $Q_{\text{Cars}} = 100 + 4xP_{\text{Cars}} - 2xP_{\text{Steel}} - 2xP_{\text{Workers}}$, where Q_{Cars} is the quantity of cars (in thousands), P_{Cars} is the price of cars and P is the wage earned by autoworkers. If the price of steel is \$10 per unit and the price of workers (the wage) is \$20, what is the supply curve for cars?
- $Q_{\text{Cars}} = 140 + 4xP_{\text{Cars}}$
 - $Q_{\text{Cars}} = 100 + 4xP_{\text{Cars}} - 2xP_{\text{Steel}} - 2xP_{\text{Workers}}$
 - $Q_{\text{Cars}} = 100 + 4xP_{\text{Cars}}$
 - $Q_{\text{Cars}} = 40 + 4xP_{\text{Cars}}$

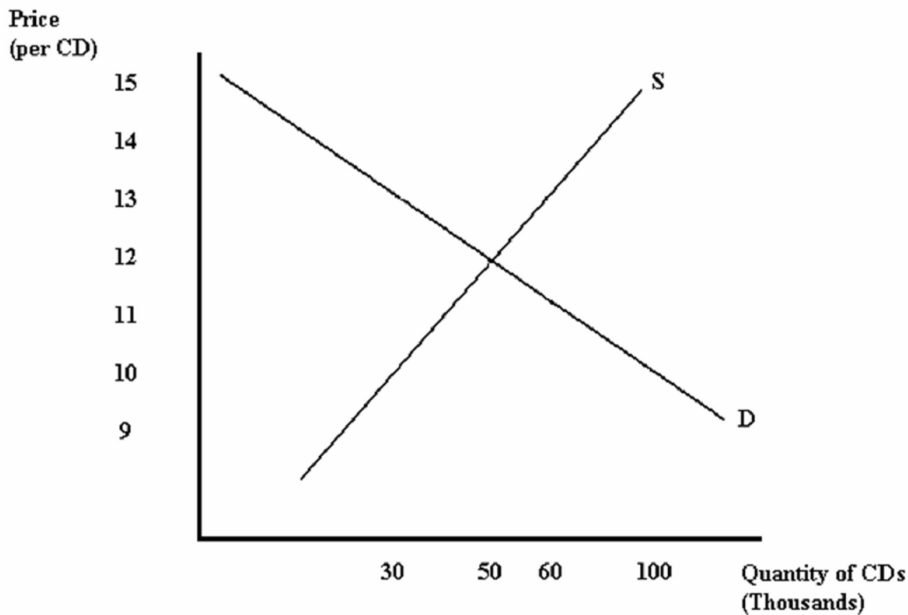


Figure 2.3

26. Refer to Figure 2.3. At a price of \$10 per CD, there would be
- Excess supply of 70 thousand CDs
 - Excess demand of 50 thousand CDs
 - Excess supply of 50 thousand CDs
 - Excess demand of 70 thousand CDs
27. Refer to Figure 2.3. At a price of \$13 per CD, there would be
- Excess supply of 30 thousand CDs
 - Excess demand of 10 thousand CDs
 - Excess supply of 60 thousand CDs
 - Excess demand of 20 thousand CDs
28. Suppose that the demand for movies is given by $Q^d = 30 - 2xP_{\text{Movies}}$ and the supply is given by $Q^s = 2 + 2xP_{\text{Movies}}$. What is the equilibrium price and quantity of movies?
- $P_{\text{Movies}} = \$7, Q = 30$
 - $P_{\text{Movies}} = \$2, Q = 30$
 - $P_{\text{Movies}} = \$4, Q = 28$
 - $P_{\text{Movies}} = \$7, Q = 16$
29. Which of the following best describes the process that occurs when the price of a good is below equilibrium?
- The excess demand for the good provides an incentive for buyers to offer a higher price. These higher prices encourage sellers to supply more of the good
 - The excess supply of the good provides an incentive for buyers to offer a higher price. These higher prices encourage sellers to supply more of the good
 - The excess demand for the good provides an incentive for buyers to offer a lower price. These lower prices encourage sellers to supply less of the good
 - The excess supply for the good provides an incentive for buyers to offer a lower price. These lower prices encourage sellers to supply less of the good

30. Excess supply is
- A. The result of a price that is above equilibrium, causing the quantity demanded to exceed the quantity supplied
 - B. The result of a price that is below equilibrium, causing the quantity demanded to exceed the quantity supplied
 - C. The result of a price that is above equilibrium, causing the quantity supplied to exceed the quantity demanded
 - D. The result of a price that is below equilibrium, causing the quantity supplied to exceed the quantity demanded
31. Which economist is credited with originating the use of supply and demand analysis?
- A. Vernon Smith
 - B. Adam Smith
 - C. Alfred Marshall
 - D. John Maynard Keynes
32. Which economist won the Nobel Prize for using experiments to test the model of supply and demand?
- A. Vernon Smith
 - B. Adam Smith
 - C. Alfred Marshall
 - D. Steven Levitt
33. Which of the following would result from an increase in the demand for a good?
- A. Both equilibrium price and quantity would rise
 - B. Both equilibrium price and quantity would fall
 - C. Equilibrium price would rise and equilibrium quantity would fall
 - D. Equilibrium quantity would rise and equilibrium price would fall
34. Which of the following would result from an increase in the supply of a good?
- A. Both equilibrium price and quantity would rise
 - B. Both equilibrium price and quantity would fall
 - C. Equilibrium price would rise and equilibrium quantity would fall
 - D. Equilibrium quantity would rise and equilibrium price would fall
35. Suppose there is a decrease in both the demand for and supply of a good. What happens to equilibrium price and quantity?
- A. Equilibrium quantity increases, but the effect on equilibrium price is ambiguous
 - B. Equilibrium quantity decreases, but the effect on equilibrium price is ambiguous
 - C. Equilibrium price increases, but the effect on equilibrium quantity is ambiguous
 - D. Equilibrium price decreases, but the effect on equilibrium quantity is ambiguous
36. According to basic supply and demand analysis, when hurricane Katrina caused oil prices to rise, what happened to the equilibrium price and quantity of sport utility vehicles?
- A. Equilibrium price and quantity both increased
 - B. Equilibrium price and quantity both decreased
 - C. Equilibrium price increased and equilibrium quantity decreased
 - D. Equilibrium price decreased and equilibrium quantity increased
37. If the demand for a good increases at the same time the supply of the good decreases, what happens to equilibrium price and quantity?
- A. Equilibrium quantity increases, but the effect on equilibrium price is ambiguous
 - B. Equilibrium quantity decreases, but the effect on equilibrium price is ambiguous
 - C. Equilibrium price increases, but the effect on equilibrium quantity is ambiguous
 - D. Equilibrium price decreases, but the effect on equilibrium quantity is ambiguous
- change "a" to "and at"

38. The _____ the demand curve, the _____ responsive is the amount demanded to price.
- Steeper; less
 - Steeper; more
 - Flatter; less
 - Higher; less
39. Suppose there is an increase in the supply of a good. Which of the following statements is true?
- The closer the demand curve is to being vertical, the larger the decrease in equilibrium price and the smaller the increase in equilibrium quantity
 - The closer the demand curve is to being horizontal, the larger the decrease in equilibrium price and the smaller the increase in equilibrium quantity
 - The closer the demand curve is to being vertical, the smaller the decrease in equilibrium price and the larger the increase in equilibrium quantity
 - The closer the demand curve is to being vertical, the larger the increase in equilibrium price and the smaller the decrease in equilibrium quantity
40. Supply curves tend to be _____ in the _____.
- Flatter; long run
 - Steeper; long run
 - Negatively-sloped in the short run
 - Negatively-sloped in the long run
41. Which of the following is the formula for the elasticity of Y with respect to X?
- $E = (\% \text{ Change in } Y) / (\% \text{ Change in } X)$
 - $E = (\% \text{ Change in } X) / (\% \text{ Change in } Y)$
 - $E = (\text{Change in } Y) / (\text{Change in } X)$
 - $E = (\text{Change in } X) / (\text{Change in } Y)$
42. Which of the following statements about elasticity measures is true?
- Elasticities are always positive values
 - Values that are close to zero indicate greater responsiveness
 - Values that are further from zero indicate greater responsiveness
 - Values that are further from zero indicate less responsiveness

Good	Price Elasticity of Demand
Car Repair	-1.2
Bread	-.2
Electricity	-.1
Lamb	-2.7

Table 2.1

43. According to Table 2.1, which presents hypothetical data on price elasticity of demand, which good's demand is most sensitive to changes in price?
- Car Repair
 - Bread
 - Electricity
 - Lamb
44. According to Table 2.1, which presents hypothetical data on price elasticity of demand, which of the following is true about lamb?
- Each 2.7% change in the price of lamb causes a 1% change in the quantity demanded of lamb
 - The demand for lamb is inelastic
 - Each 1% change in the price of lamb causes a 2.7% change in the quantity demanded of lamb
 - Lamb is a normal good

45. According to Table 2.1, which presents hypothetical data on price elasticity of demand, which good has the steepest demand curve?
- Car Repair
 - Bread
 - Electricity
 - Lamb
46. Suppose a good has a demand curve given by $Q = 20 - 8 \times P$. What is the price elasticity of demand if the price is \$2?
- 4
 - 8
 - $1/2$
 - $-1/2$
47. For a linear demand curve, demand is ____ elastic at ____ prices.
- More; higher
 - Less; higher
 - More; lower
 - Highly; lower
48. Demand is said to be elastic when
- The percentage change in the amount demanded is smaller than the percentage change in price
 - The demand curve is relatively flat
 - The elasticity of demand is less than -1
 - The elasticity of demand is greater than -1
49. Demand is said to be perfectly inelastic when
- The demand curve is horizontal
 - The elasticity of demand is infinite
 - The elasticity of demand is zero
 - Consumers are highly responsive to change in the price of a good

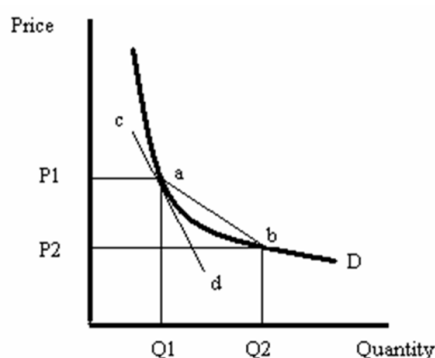


Figure 2.4

50. Refer to Figure 2.4. The elasticity of demand at point a is given by
- The slope of line ab
 - The slope of line cd
 - The slope of line cd times $(P1/Q1)$
 - The slope of line ab times $(Q1/P1)$
51. Isoelastic demand means that
- The elasticity of demand is equal to -1
 - Demand is completely unresponsive to price
 - The elasticity of demand is infinite
 - The demand function has the same elasticity at every price

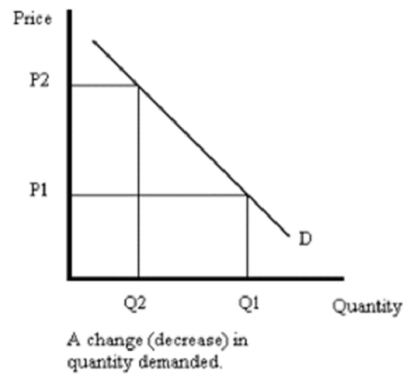
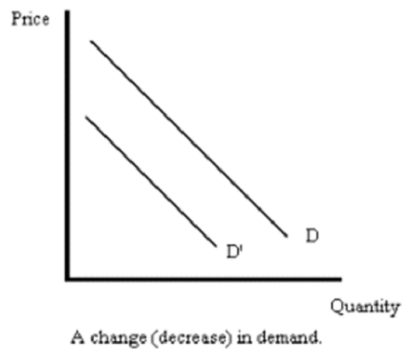
52. If a firm knows that the demand for its product is inelastic, it could generate more revenue by
- Lowering the price, because the resulting change in sales would be relatively large
 - Raising the price, because the resulting change in sales would be relatively large
 - Lowering the price, because the resulting change in sales would be relatively small
 - Raising the price, because the resulting change in sales would be relatively small
53. Total expenditures on a company's product will be largest when the elasticity of demand
- Equals -1
 - Is greater than -1
 - Is less than -1
 - Equals 0
54. In general, supply curves with an elasticity of supply between 0 and 1 are referred to as
- Inelastic
 - Elastic
 - Perfectly elastic
 - Perfectly inelastic
55. When the demand curve shifts, the _____ elastic the supply curve at the initial equilibrium price, the _____ the change in equilibrium price and the _____ the change in equilibrium quantity.
- More; larger; smaller
 - Less; larger; smaller
 - More; larger; larger
 - Less; smaller; larger
56. An inferior good is characterized by
- A positive income elasticity of demand
 - A negative income elasticity of demand
 - A negative price elasticity of demand
 - A price elasticity of demand that is less than zero
57. Complements are characterized by
- Negative cross-price elasticity of demand
 - Positive cross-price elasticity of demand
 - Cross-price elasticity of demand equal to zero
 - Cross price elasticity of demand equal to -1

Demand Change	Price Change	Cross-Price Elasticity
Coke	Pepsi	0.70
Hard Liquor	Beer	-0.11
Beef	Chicken	0.02
Cheese	Butter	-0.61

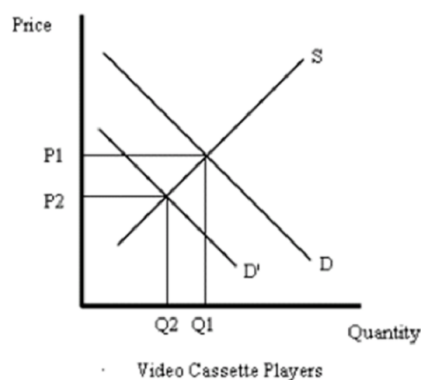
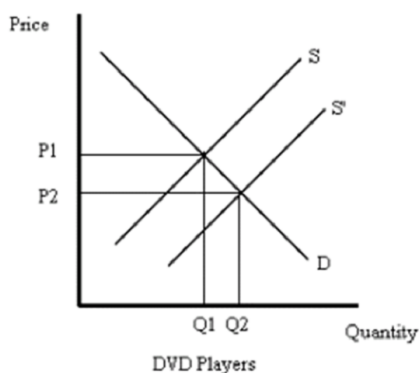
Table 2.2

58. Refer to Table 2.2, which presents hypothetical data on cross-price elasticity of demand estimates. Which goods are the *best* substitutes?
- Coke and Pepsi
 - Hard Liquor and Beer
 - Beef and Chicken
 - Cheese and Butter
59. Suppose that when the price of hot dogs is \$2 per package, there is a demand for 10,000 bags of hot dog buns. When the price of hot dogs is \$3 per package, the demand for hot dog buns falls to 8,000 bags. What is the cross-price elasticity of demand for hot dogs and hot dog buns?
- 0.25
 - 0.25
 - 0.4
 - 2000

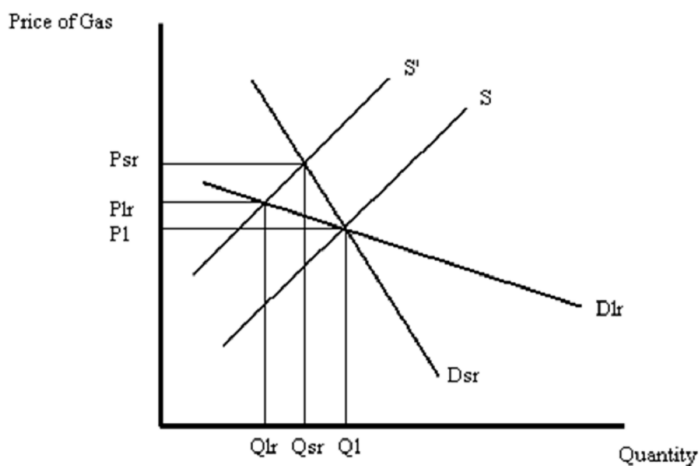
60. According to the text, which of the following statements is true?
- The price elasticity of Honda Accords exceeds the price elasticity of demand for BMWs
 - The price elasticity of BMWs exceeds the price elasticity of demand for Honda Accords
 - The cross-price elasticity of demand for Hondas and BMWs is relatively large
 - The income elasticity of demand for BMWs is negative
61. In econometrics, the variables whose values we are trying to explain are called
- Explanatory variables
 - Dependent variables
 - Independent variables
 - Control variables
62. What is the difference between a change in demand and a change in the quantity demanded of a good? Illustrate your answer using carefully labeled graphs.



63. Using a graph, explain how an increase in technology will affect the equilibrium price and quantity of DVD players. Again using a graph, explain what happens in the market for video cassette recorders.



64. Suppose bad weather destroys a significant portion of the nations' corn crop. Will total expenditures on corn increase or decrease? Illustrate your answer with a graph.
65. Recall that a linear demand curve has the form $Q = A - BP$, where P is price and A and B are positive numbers. Suppose that when price is \$5 the amount demanded is 100 and the elasticity of demand is -2. What are the values of A and B ?
66. Why are total expenditures on a good maximized at the point on the demand curve where the price elasticity of demand equals -1? Explain your answer using the appropriate algebra.
67. Suppose that an increase in oil prices causes the supply curve of gasoline to shift. Using a graph, illustrate the resulting changes in equilibrium price and quantity in both the short run and the long run.



68. Suppose the demand function for the Toyota Camry is given by $Q_d = 500 - 12P_C + 10P_H - 5P_G + 0.0001M$, where P_C is the price of the Toyota Camry (in thousands), P_H is the price of the Honda Accord (in thousands), P_G is the price of gas (per gallon) and M is income. Further, suppose the supply curve for the Toyota Camry is given by $Q_s = 20P_C - 55$.
- What is the demand curve for the Toyota Camry if the price of the Accord is \$25,000, gas is \$2 per gallon and income is \$50,000?
 - What is the equilibrium price and quantity in the market for Toyota Camrys?
 - Is demand elastic or inelastic at the equilibrium price?
 - What is the cross price elasticity of demand at equilibrium?
 - What is the income elasticity of demand for Camrys at equilibrium?

ch02 Key

1. (p. 26) A
2. (p. 27) B
3. (p. 28) C
4. (p. 28) D
5. (p. 27) C
6. (p. 28) B
7. (p. 28) A
8. (p. 28) C
9. (p. 28) B
10. (p. 28) D
11. (p. 28) B
12. (p. 29) B
13. (p. 33) B
14. (p. 29) B
15. (p. 30) B
16. (p. 31) C
17. (p. 31) B
18. (p. 31) A
19. (p. 31) A
20. (p. 31) A
21. (p. 28, 31) D
22. (p. 31) C
23. (p. 31) A
24. (p. 31) C
25. (p. 31, 32) D
26. (p. 32) D
27. (p. 32) A
28. (p. 33) D
29. (p. 32) A
30. (p. 32) C
31. (p. 33) C
32. (p. 33) A
33. (p. 36) A
34. (p. 36) D
35. (p. 40) B
36. (p. 36) B

37. (p. 40) C

38. (p. 43) A

39. (p. 43) A

40. (p. 46) A

41. (p. 47) A

42. (p. 47) C

43. (p. 48) D

44. (p. 48) C

45. (p. 50) C

46. (p. 49) A

47. (p. 49) A

48. (p. 50) C

49. (p. 50) C

50. (p. 49) C

51. (p. 52) D

52. (p. 54) D

53. (p. 54) A

54. (p. 56) A

55. (p. 56) B

56. (p. 57) B

57. (p. 57) A

58. (p. 57) A

59. (p. 57) C

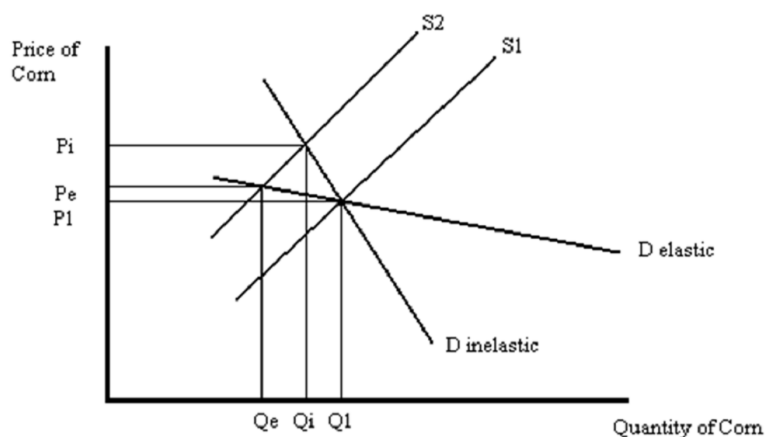
60. (p. 57) A

61. (p. 62) B

62. (p. 27, 28) A change in demand is caused by a change in any factor other than price that affects demand. A change in demand is shown by a shift in a demand curve. A change in quantity demanded results from a change in price and is represented by a movement along the demand curve.

63. (p. 27, 30, 32) The increase in technology causes the supply curve for DVD players to shift to the right. The result is a lower equilibrium price and a higher equilibrium quantity. Because DVD players and Video Cassette players are substitutes, the demand for video cassette players will decrease. As a result, both the equilibrium price and quantity will decrease.

If the demand for corn is elastic, then the resulting change in price (P_1 to P_e) is proportionately smaller than the change in quantity (Q_1 to Q_e). As a result, total expenditures on corn will decrease. If the demand for corn is inelastic, then the resulting change in price (P_1 to P_i) is proportionately greater than the change in quantity (Q_1 to Q_i). As a result, total expenditures on corn will increase.



64. (p. 44) When bad weather destroys a significant amount of the nation's corn crop, the supply curve for corn will shift to the left. The resulting magnitudes of the changes in the equilibrium price and quantity of corn will depend upon whether demand for corn is elastic or inelastic.

65. (p. 51, 52, 53, 54) $E = -Bx(P/Q)$, so $-2 = -Bx(5/100)$ which implies that $B = 40$. Now, using $Q = A - BP$, we have $100 = A - 40(5)$, which implies that $A = 300$.

66. (p. 50, 53, 54) When total expenditures are maximized, neither an increase or decrease in price will increase expenditures. This is only true when $E = -1$. The formula for price elasticity of demand is $E = (\% \Delta Q) / (\% \Delta P)$. If $E > -1$ (that is, if demand is elastic) then $(\% \Delta Q) > (\% \Delta P)$. This implies that a relatively small decrease in price will increase sales by a relatively larger amount, so total expenditures on the good will increase. If $E < -1$ (that is, if demand is inelastic) then $(\% \Delta Q) < (\% \Delta P)$. This implies that a relatively large increase in price will decrease sales by a relatively smaller amount, so total expenditures on the good will increase. Thus, when $E > -1$, total expenditures can be increased by lowering the price of the good.

67. (p. 46) The impact of a decrease in the supply of gasoline on the equilibrium price and quantity of gasoline depends upon the price elasticity of demand for gasoline. The demand for gasoline is much more inelastic in the short run than in the long run. Consumers have time to find substitutes (such as carpooling, more fuel efficient cars) in the long run. The situation is analyzed in the figure below. The market is originally in equilibrium at P_1 and Q_1 . The decrease in the supply of gasoline is shown by the leftward shift of the supply curve from S to S' . In the short run, the relatively inelastic demand for gasoline is shown by the relatively steep slope of demand curve D_{sr} . In the short run then, equilibrium price becomes P_{sr} and equilibrium quantity is Q_{sr} . In the long run, as consumers adjust to the higher price of gasoline, demand becomes more elastic. This is shown by the relatively flat slope of demand curve D_{lr} . In the long run, the equilibrium price is P_{lr} (which is less than P_{sr}) and the equilibrium quantity is Q_{lr} (which is less than Q_{sr}).

68. (p. 28, 33, 50, 57) a) $Q_d = 745 - 12P_C$. b) $P = \$25,000$, $Q = 445$. c) $-12 \times (25/445) = -0.67$, which implies that demand is inelastic. d) $10 \times (25/445) = 0.56$. e) $0.0001 \times (50,000/445) = 0.011$

ch02 Summary

<u>Category</u>	<u># of Questions</u>
Bernhiem - Chapter 02	75
Difficulty: 1	26
Difficulty: 2	30
Difficulty: 3	12
Learning Objective: LO1	13
Learning Objective: LO1; LO3; LO5	1
Learning Objective: LO2	14
Learning Objective: LO3	5
Learning Objective: LO4	11
Learning Objective: LO5	24
Level of Learning: Application	25
Level of Learning: Comprehensive	7
Level of Learning: Knowledge	36