1. Which of the following is a key assumption of the supply and demand model?
   A) to focus on how the price and quantity sold are determined in a single market
   B) to focus on how the prices and quantities sold are simultaneously determined in all markets
   C) to focus on how the whole economy achieves equilibrium
   D) to focus on how international markets affect domestic markets, which in turn affect local markets

2. A key assumption of the supply and demand model is that:
   A) each firm's good is unique and cannot be duplicated by other firms in the market.
   B) firms will continue to raise price until profits become positive.
   C) each firm produces an identical good in the market.
   D) each firm produces a level of output at which price exceeds marginal cost.

3. In the supply and demand model, it is assumed that:
   A) several large sellers can raise prices by restricting output.
   B) buyers with bargaining power are able to receive quantity discounts.
   C) all the goods in the market sell for the same price.
   D) larger firms sell their products at lower prices than smaller firms.

4. In the supply and demand model, we assume that there are _____ buyers and _____ sellers in the market.
   A) many; many
   B) several; several
   C) many; several
   D) several; many

5. Which of the following factors influences demand?

   I. consumer income
   II. prices of complement goods
   III. prices of substitute goods
   IV. the number of consumers
   A) I and IV
   B) II and III
   C) I, III, and IV
   D) I, II, III, and IV

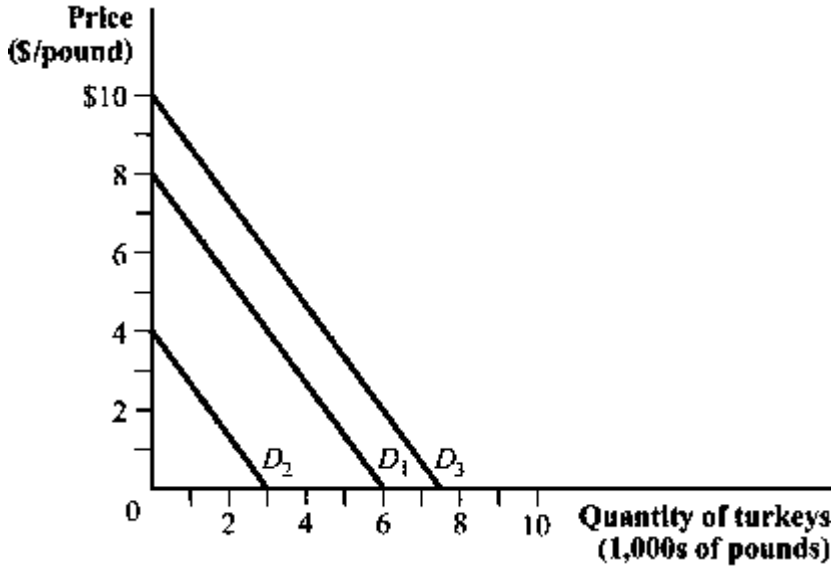
6. Electric guitars and amplifiers are complement goods, and electric guitars and acoustic guitars are substitute goods. An increase in the price of amplifiers _____ the number of electric guitars consumers want to buy, while an increase in the price of acoustic guitars _____ the number of electric guitars consumers want to buy.
   A) increases; decreases
   B) decreases; increases
   C) decreases; decreases
   D) increases; increases

7. Which of the following statements is TRUE?
   A) A demand curve shows the relationship between a product's price and how many units consumers want to buy at each price, assuming there are no changes in other factors affecting demand.
   B) A demand curve shows the relationship between consumer income and the quantity purchased of some product.
   C) A demand curve shows the relationship among consumer income, price of a product, quantity supplied, and how many units consumers want to buy of that product.
   D) A demand curve is drawn with the assumption that demand equals supply.

8. The demand curve for a good is $Q = 80 - 0.20P$, where Q is the quantity demanded and P is the price per unit. This good's inverse demand curve is:
   A) $P = 80 - 0.20Q$.
   B) $P = 40 - Q$.
   C) $P = 5Q + 40$.
   D) $P = 400 - 5Q$.

Use the following to answer questions 9-10:

Figure 2.1



9. (Figure 2.1) Mathematically, the demand curve D_1 is described by the equation:
   A) $Q = 0.75 – P$.
   B) $Q = 6 – 0.75P$.
   C) $Q = 8 – 1.33P$.
   D) $P = 6 – 8P$.

10. (Figure 2.1) A salmonella outbreak would shift the demand curve for turkey from D_1 to _____, and a discovery that eating turkey reduces muscle fatigue in athletes would shift the demand curve for turkey from D_1 to _____.
   A) D_2; D_3
   B) D_3; D_2
   C) D_3; D_3
   D) D_2; D_2

11. Which of the following statements is TRUE?

    I. As more sellers enter a market, the supply of the product will increase.
    II. If input prices increase, the supply of the product will be unaffected because firms pass the higher costs of production on to consumers in the form of higher prices.
    III. Firms respond to high prices for their product by offering a larger quantity for sale.

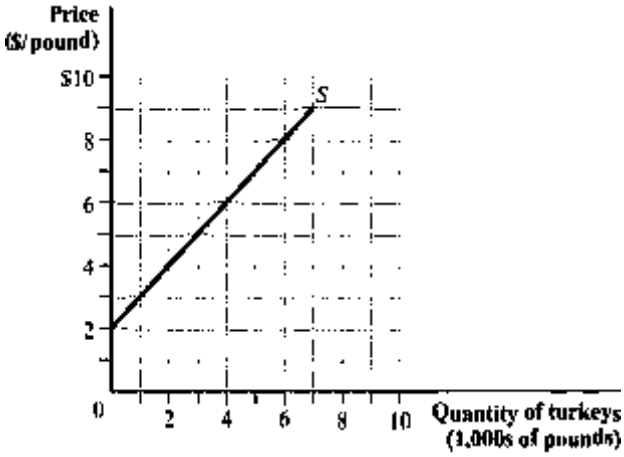
    A) I only
    B) II and III
    C) I, II, and III
    D) I and III

12. Genetically modified soybean seed is an example of a new production technology that has increased soybean productivity. As a result, this new technology _____ production costs and _____ the supply of soybeans.
    A) raised; increased
    B) lowered; decreased
    C) lowered; increased
    D) raised; decreased

13. Suppose that farmers can use their land to grow and sell soybeans and cotton. How would farmers respond to rising cotton prices?
    A) Farmers would respond by producing less cotton and more soybeans.
    B) Farmers would respond by decreasing the supply of soybeans and producing more cotton.
    C) Farmers would respond by increasing the supply of soybeans and cotton.
    D) Farmers would decrease the supply of soybeans and cotton.

Use the following to answer question 14:

Figure 2.2

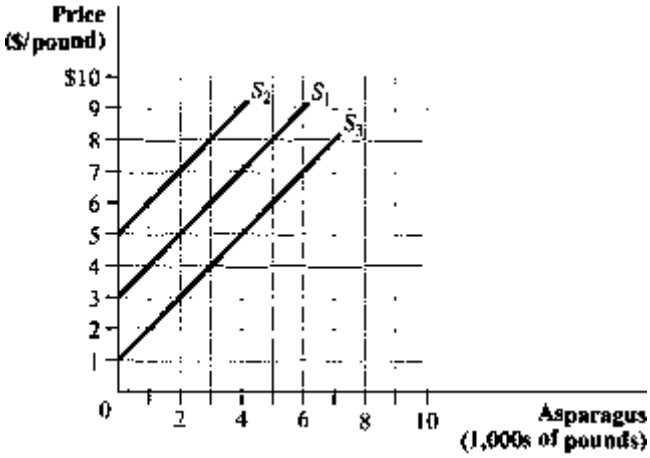


14. (Figure 2.2) If the price of turkey is $4 per pound, _____ pounds of turkey will be offered for sale; if the price of turkey is $7 per pound, _____ pounds of turkey will be offered for sale.
    A) 3,000; 6,000
    B) 0; 6,000
    C) 2,000; 5,000
    D) 1,000; 8,000

15. Suppose that the supply of a good is given by $Q = -50 + 5P$, where Q is the quantity supplied and P is the price measured in dollars per unit. This equation indicates that the quantity supplied increases by:
    A) 5 units for every dollar increase in price.
    B) 45 units for every dollar increase in price.
    C) 50 units for every dollar increase in price.
    D) 55 units for every dollar increase in price.

Use the following to answer questions 16-17:

Figure 2.3



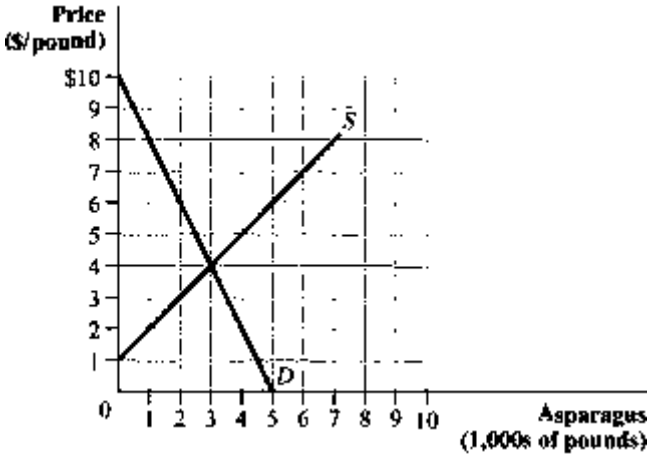
16. (Figure 2.3) An increase in quantity supplied could be indicated by:
    A) the supply curve shifting from S_1 to S_2.
    B) the supply curve shifting from S_1 to S_3.
    C) movement up and along supply curve S_1.
    D) the supply curve shifting from S_3 to S_2.

17. (Figure 2.3) What could cause the supply curve to shift from S_1 to S_2?
    A) an increase in the number of asparagus farmers
    B) poor weather conditions that reduce the asparagus harvest
    C) better fertilizers that lower the costs of production
    D) a decrease in the price of asparagus

18. In the blackberry market, the quantity demanded is given by $Q^D = 2{,}600 - 500P$, and the quantity supplied is given by $Q^S = -400 + 100P$. What is the equilibrium price and equilibrium quantity?
    A) $5 and 100 pounds
    B) $4.25 and 3,000 pounds
    C) $2.50 and 900 pounds
    D) $1.80 and 2,200 pounds

Use the following to answer questions 19-21:

Figure 2.4



19. (Figure 2.4) At what price does the quantity demanded by consumers equal the quantity supplied by producers?
    A) $5
    B) $4
    C) $1
    D) $3

20. (Figure 2.4) At a price of $2, there is an excess:
    A) supply of 4,000 pounds.
    B) supply of 3,000 pounds.
    C) demand of 3,000 pounds.
    D) demand of 1,000 pounds.

21. (Figure 2.4) An excess supply of 3,000 pounds occurs at a price of:
    A) $2.
    B) $5.
    C) $6.
    D) $8.

22. Suppose that the demand and supply curve for green peas are given by $Q^D = 10 - 8P$ and $Q^S = 2P$, where P is price per pound and Q is measured in thousands of pounds. If the current price per pound of peas is $0.50, what do you expect will happen to the price?
    A) At a price of $0.50, there is excess demand in the market of 3,000 pounds, so the price will rise.
    B) At a price of $0.50, there is excess supply in the market of 1,000 pounds, so the price will fall.
    C) At a price of $0.50, the market is in equilibrium, so the price will remain unchanged.
    D) At a price of $0.50, there is excess demand in the market of 5,000 pounds, so the price will rise.

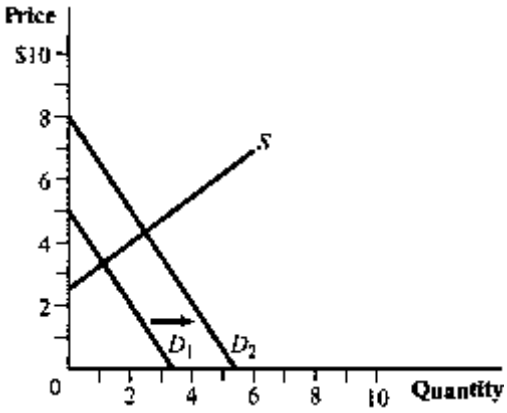
23. Suppose that the equilibrium price of blackberries is $3 per pound, and the price of black raspberries (a substitute good for blackberries) increases. What happens in the market for blackberries?
    A) There will be an excess supply of blackberries at $3 per pound, leading to an increase in quantity demanded and a decrease in quantity supplied.
    B) The demand curve for blackberries shifts to the right, increasing both the equilibrium price and quantity.
    C) There will be an excess demand of blackberries at $3 per pound, resulting in a new equilibrium price that is less than $3 per pound.
    D) The demand curve for blackberries decreases, decreasing the equilibrium price and raising the equilibrium quantity.

24. Suppose that we observe a decrease in the price of sunscreen and fewer people buying sunscreen. What could have caused this change?
    A) a violation of the law of demand
    B) a tax on sunscreen manufacturers
    C) a new study documenting that the ingredients in sunscreen are linked to an increased risk of malignant melanoma, a dangerous form of skin cancer
    D) a new production process that reduces the costs of making sunscreen

25. The Internet has made learning to play a musical instrument easier than ever, with thousands of Web sites offering free music lessons. What happens in the musical instruments market?
    A) The supply curve increases, pushing down the price.
    B) The demand curve shifts out, pushing up the price.
    C) The demand curve shifts out, which in turn causes the supply curve to increase. The overall effect on price is ambiguous.
    D) The price of musical instruments falls, causing an increase in the quantity demanded.

Use the following to answer question 26:

Figure 2.5



26. (Figure 2.5) Which of the following events could have caused the demand curve to shift?

    I. The price of a substitute good decreased.
    II. The price of a complement good increased.
    III. The income of consumers increased.
    IV. The number of buyers in the market increased.
    A) I, II, III, and IV
    B) III and IV
    C) II, III, and IV
    D) I and II

27. The market for Matsutake mushrooms is characterized by the following demand and supply equations: $Q^D = 100 - P$ and $Q^S = -50 + 2P$, where Q is measured in pounds and P is measured in price per pound. If a new fertilizer increases the quantity supplied by 30 pounds at every price, the equilibrium price changes from _____ to _____.
    A) $50; $70
    B) $100; $30
    C) $150; $110
    D) $50; $40

28. An increase in input prices causes:
    A) the market supply to shift inward, driving the equilibrium price downward.
    B) the market supply to shift outward, leading to a higher equilibrium price.
    C) the market supply to shift inward, driving the equilibrium price higher.
    D) the supply curve to decrease and the demand curve to decrease due to the higher price.

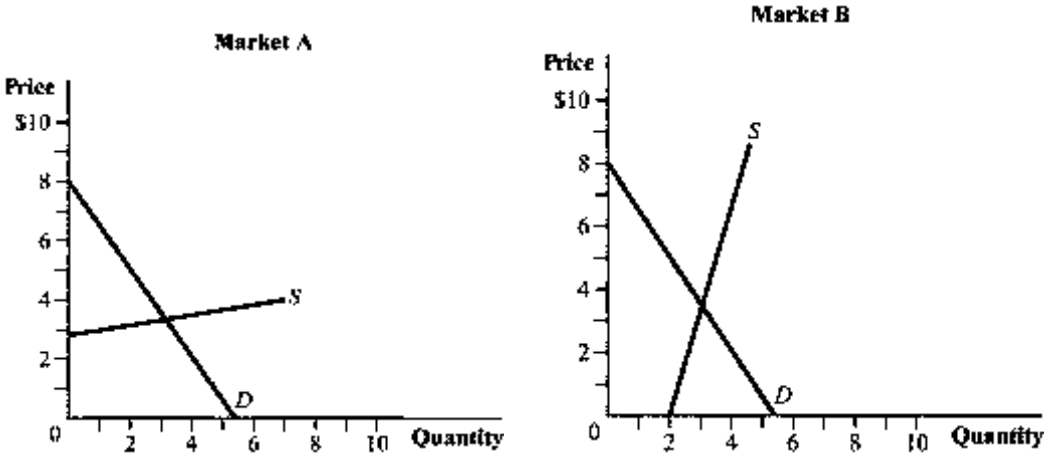
29. In the market for oranges, we observe that the equilibrium price increased and the equilibrium quantity increased. What could have caused this change?
    A) an increase in supply and a decrease in demand
    B) an increase in demand
    C) a decrease in supply
    D) an increase in supply

30. Many video game makers in the early 1980s went out of business because:
    A) a large increase in the supply of games lowered the price of video games so much that it made them unprofitable.
    B) a large decrease in the supply of games raised the price of video games so much that consumers stopped buying them.
    C) a large decrease in consumer demand lowered the price of video games so much that it made them unprofitable.
    D) a large increase in consumer demand raised the price of video games to the point at which they were no longer affordable.

31. What happens in the market for Blu-ray discs if the price of Blu-ray players falls?
    A) The demand for Blu-ray discs increases.
    B) The quantity demanded of Blu-ray discs increases.
    C) The supply of Blu-ray discs increases.
    D) The demand and supply of Blu-ray discs increase.

Use the following to answer question 32:

Figure 2.6



32. (Figure 2.6) Suppose that the demand curve in both markets shifts out by the same distance. The change in price will be relatively larger in _____, and the change in quantity will be relatively larger in _____.
    A) market *A*; market *A*
    B) market *A*; market *B*
    C) market *B*; market *A*
    D) market *B*; market *B*

33. Suppose the demand for lobster decreased from a fall in consumer income, while the supply of lobster increased from a record harvest. What effect would these supply and demand changes have on the equilibrium price and quantity of lobsters?
    A) Both the equilibrium price and quantity would decrease.
    B) The equilibrium price would fall, but the effect on the equilibrium quantity could not be predicted.
    C) The equilibrium price would fall and the equilibrium quantity would increase.
    D) The equilibrium quantity would increase, but the effect on price could not be predicted.

34. A decrease in both demand and supply will cause:
    A) a decrease in the equilibrium quantity and an uncertain effect on the equilibrium price.
    B) an increase in the equilibrium price and a decrease in the equilibrium quantity.
    C) an increase in the equilibrium price and an uncertain effect on the equilibrium quantity.
    D) a decrease in the equilibrium price and an uncertain effect on the equilibrium quantity.

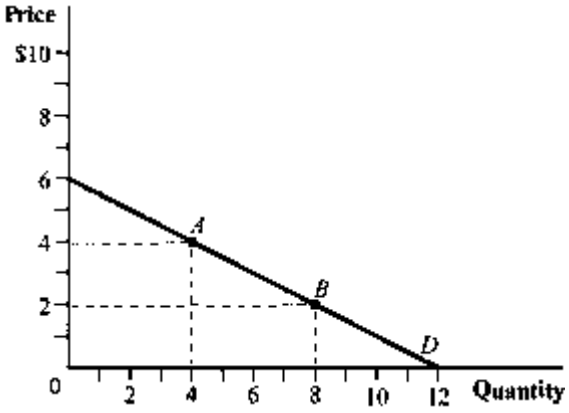
35. If a 10% increase in the price of pork reduces quantity demanded by 7%, the price elasticity of demand is:
    A) –1.43.
    B) –0.14.
    C) –3.0.
    D) –0.70.

36. Consumers are more price-responsive when:
    A) it is difficult to substitute across suppliers and prices are high.
    B) they have little time to change their consumption patterns and prices are low.
    C) there are many substitute goods available for a product, and they have a long time horizon to adjust their consumption.
    D) there are few substitute goods available for a product, and they have a short time horizon to adjust their consumption.

37. In market *A*, a 4% increase in price reduces quantity demanded by 2%. In market *B*, a 3% increase in price reduces quantity demanded by 4%. The price elasticity of demand in market *A* and market *B* are considered_____ and _____, respectively.
    A) elastic; inelastic
    B) inelastic; elastic
    C) perfectly elastic; unit elastic
    D) unit elastic; perfectly inelastic

Use the following to answer question 38:

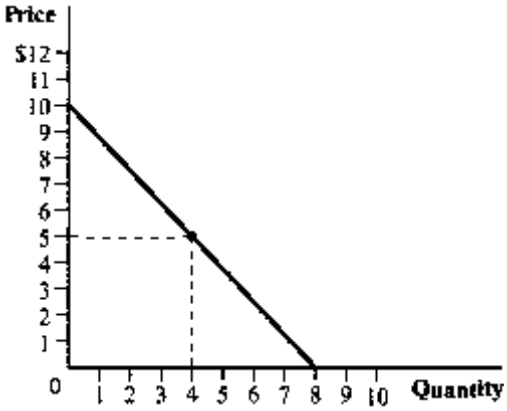
Figure 2.7



38. (Figure 2.7) What is the price elasticity of demand at point *A* and point *B*?
    A) point *A* = –2.0, point *B* = –0.50
    B) point *A* = –0.50, point *B* = –0.50
    C) point *A* = –1.0, point *B* = –2.0
    D) point *A* = –2.5, point *B* = –1.5

Use the following to answer question 39:

Figure 2.8

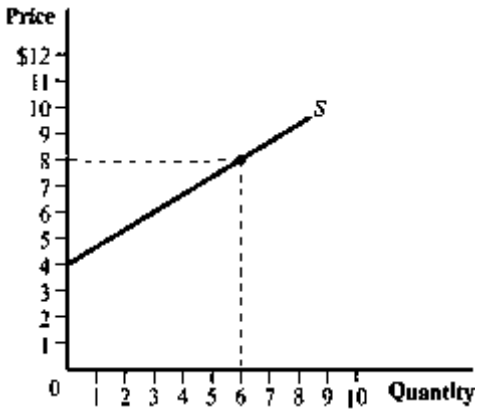


39. (Figure 2.8) Which of the following statements is TRUE?

I. The price elasticity of demand is less than 1 in absolute value at prices less than $5.
II. The price elasticity of demand is elastic at prices above $5.
III. The price elasticity of demand is negative infinity at a price of $0.
IV. At a price of $5, the price elasticity of demand is perfectly inelastic.
A) III only
B) II and IV
C) I, II, III, and IV
D) I and II

Use the following to answer question 40:

Figure 2.9



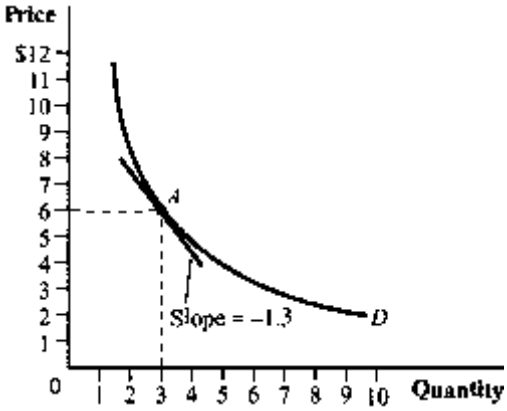
40. (Figure 2.9) The price elasticity of supply at a price of $4 is:
A) 0.
B) 4.
C) $+\infty$.
D) 0.67.

41. The demand curve for a product is $Q = 50 - 0.5P$. What is the price elasticity of demand at a price of $60?
A) –1.50
B) –1.0
C) –0.80
D) –0.25

42. The inverse demand curve for eggs is $P = 20 – 0.25Q$. What is the price elasticity of demand at $P = \$4$?
    A) –0.45
    B) –2.0
    C) –4.0
    D) –0.25.

Use the following to answer question 43:

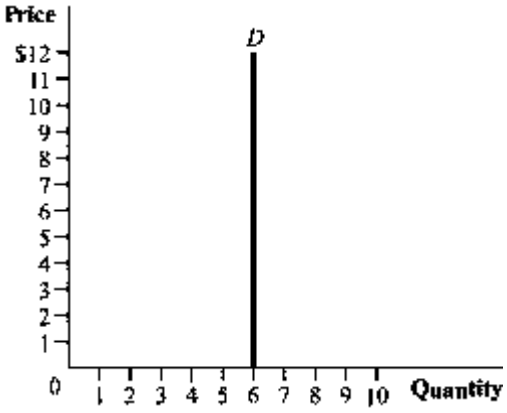
Figure 2.10



43. (Figure 2.10) What is the price elasticity of demand at point *A*?
    A) –2.6
    B) –1.54
    C) –0.7
    D) –3.2

Use the following to answer question 44:

Figure 2.11



44. (Figure 2.11) Which of the following statements is TRUE regarding the figure?

    I. The price elasticity of demand is $-\infty$.
    II. The demand curve is perfectly inelastic.
    III. An increase in price has no effect on quantity demanded.
    A) I and III
    B) I, II, and III
    C) II and III
    D) II only

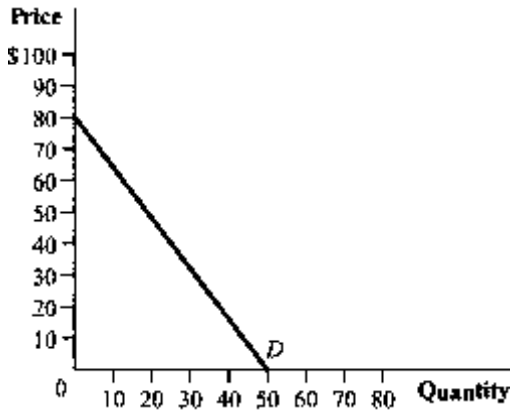
45. Suppose that the supply of oil to Pittsburgh, Pennsylvania, is perfectly elastic. If more people move to Pittsburgh because of its great football and hockey teams, what happens to the equilibrium price and quantity of oil in Pittsburgh?
    A) Both the equilibrium price and the quantity increase.
    B) The equilibrium price increases, but the equilibrium quantity is unchanged.
    C) The equilibrium quantity increases, but the equilibrium price is unchanged.
    D) Both the equilibrium price and the quantity are unchanged.

46. The price of baseball tickets increased by 5%, leading to a 3% decrease in the number of tickets sold. As a result, total expenditures on baseball tickets:
    A) fell.
    B) stayed the same.
    C) increased.
    D) could have increased, decreased, or stayed the same depending on the price elasticity of demand.

47. An increase in the price of computer chips causes a decrease in the total revenue of computer chip manufacturers. The price elasticity of demand for computer chips is:
    A) positive and elastic.
    B) inelastic.
    C) elastic.
    D) positive and inelastic.

Use the following to answer question 48:

Figure 2.12



48. (Figure 2.12) As the price of the product rises from $0 to $40, what happens to total expenditures?
    A) Total expenditures increase, reaching a maximum at a price of $40.
    B) Total expenditures remain unchanged.
    C) Total expenditures decrease, reaching a minimum at a price of $40.
    D) Total expenditures first increase and then decrease, as price approaches the midpoint of the demand curve.

49. If the inverse demand curve for a good is given by $P = 100 – 4Q$, the price elasticity of demand is elastic at a price of _____ and inelastic at a price of _____.
    A) $40; $60
    B) $60; $50
    C) $55; $35
    D) $35; $30

50. The income elasticity of demand for dental services is 2.40, and the income elasticity of demand for nursing homes is 0.90. Based on these estimates, dental services is a(n) _____ and nursing home care is a(n) _____.
    A) luxury good; normal good
    B) normal good; inferior good
    C) inferior good; luxury good
    D) normal good; luxury good

51. If a 5% increase in income increases quantity demanded by 4%, the income elasticity of demand is:
    A) 1.25.
    B) 0.80.
    C) 2.0.
    D) 0.02.

52. Suppose that the cross-price elasticity of demand for movie popcorn with respect to movie tickets is –0.75. If the price of movie tickets rises by 4%, the quantity demanded of movie popcorn will:
    A) fall by 18.75%.
    B) fall by 30%.
    C) rise by 3%.
    D) fall by 3%.

53. On some days Gus makes his own salad for lunch, preferring to use either iceberg or romaine lettuce, topped off with lots of fresh tomatoes. The cross-price elasticity of demand for iceberg lettuce with respect to romaine lettuce is _____, and the cross-price elasticity of demand for iceberg lettuce with respect to tomatoes is _____.
    A) positive; negative
    B) negative; positive
    C) zero; positive
    D) negative; zero

54. List the four basic assumptions of the supply and demand model.

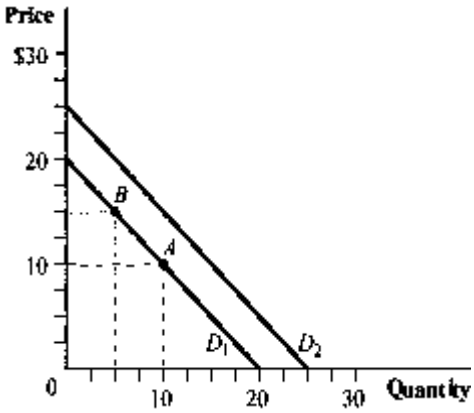
55. There are two firms that produce large commercial airplanes, namely, Boeing and Airbus. Boeing and Airbus have different flight control systems, with many pilots preferring one system over the other. The Airbus A380 has a double-deck design that can hold up to 840 passengers and sells for $375.3 million. By contrast, the Boeing 747 can hold up to 568 passengers and sells for $317.5 million. What key assumptions of the supply and demand model are violated in the large commercial airplane market?

56. Write out your own equation for a downward-sloping linear demand curve. Next, graph this demand curve on a well-labeled diagram, showing the numerical values of the vertical and horizontal intercepts.

57. Suppose that that the demand for a product is given by $Q = 25 – 0.25P$.
    a. Solve for the inverse demand curve.
    b. Graph the inverse demand curve, showing the numerical values for the vertical and the horizontal intercepts.
    c. If the product's price is $105 per unit, how many units will consumers be willing to buy?

Use the following to answer question 58:

Figure 2.13



58. (Figure 2.13) Use the figure to answer the next set of questions.
    a. List the most common factors affecting demand that could cause the movement from point *A* to point *B*.
    b. List the most common factors affecting demand that could cause the demand curve to shift out from D_1 to D_2.

59. The supply curve of rubber balls is given by $Q = 100P – 10$.
    a. What happens to the quantity supplied of rubber balls if the price of rubber balls increases by $1?
    b. What is the equation for the inverse supply curve?
    c. Graph the supply curve of rubber balls, showing the quantity supplied at a price of $0.10 and $0.60.

60. What is the difference between a change in supply and a change in quantity supplied?

61. In the market for cotton, the quantity demanded and quantity supplied are expressed mathematically as $Q^D = 400 - 250P$ and $Q^S = 250P - 100$, where P is the price per pound of cotton.
    a. What is the equilibrium price and equilibrium quantity?
    b. Graph the demand and supply curves and include your answers from part a.

62. Suppose that the demand and supply curve for a good are given by $Q^D = 1{,}000/P$ and $Q^S = 10P$.
    a. What is the equilibrium price and equilibrium quantity?
    b. Explain what is happening in the market at a price of $2.
    c. Explain what is happening in the market at a price of $20.

63. Suppose that the demand and supply curve for a good are given by $Q^D = 90 - P$ and $Q^S = 4P - 10$.
    a. What is the equilibrium price and equilibrium quantity?
    b. At what price is there an excess demand of 50 units?

64. In the maple syrup market, what are the likely effects on the equilibrium price and equilibrium quantity because of the following events?
    a. The price of pancake mix doubles.
    b. Academic scientists claim that consuming maple syrup raises good cholesterol.
    c. Sap streak disease becomes widespread, killing tens of thousands of maple trees.
    d. The price of Aunt Jemima pancake syrup (made with corn syrup, not maple syrup) increases.

65. The market for cod liver oil pills is characterized by the following demand and supply equations: $Q^D = 100 - 4P$ and $Q^S = -20 + 2P$, where P is the price per bottle and Q is the quantity of bottles.
    a. What is the equilibrium price and quantity?
    b. If consumers want to purchase 60 more bottles at any given price, what is the new equilibrium price and quantity?

66. Using well-labeled supply and demand curves, show how the following events will affect the market for the metal lead.
    a. A large deposit of lead is found in Australia.
    b. Millions of Chinese who were recently lifted out of poverty buy new cars that use lead acid batteries.
    c. The EPA bans the use of lead ammunition because of environmental concerns.
    d. A new production technology reduces the cost of removing lead from ore.

67. According to political journalist Michael Kinsley, "The price of oil shoots up; we start using less; reduced demand sends the price down; we start using more; pretty soon it's shooting up again." Explain whether you agree or disagree with Kinsley's assessment of oil markets.

68. In each of the following cases, predict what will happen to the equilibrium price and quantity in the market.
    a. More sellers enter the market and consumer income decreases. The good is a normal good.
    b. The price of a substitute good increases and sellers' options in other markets become less profitable.
    c. A drought reduces the cotton harvest and cotton clothing falls out of favor with consumers.
    d. The price of inputs in production rises and the price of a complement good falls.

69. In the market for good X, demand is $Q^D = 6{,}000 - 0.8P$ and supply is $Q^S = 0.4P - 300$.
    a. What is the equilibrium price and quantity?
    b. Solve for the inverse demand and inverse supply equations.
    c. Suppose that an increase in consumer income makes consumers willing to pay \$500 more per unit of good X. Also, a technological breakthrough in production makes firms willing to sell good X for \$500 less per unit. What is the new equilibrium price and quantity?

70. Suppose the inverse demand for a good is given by $P = 6 - Q$.
    a. What is the price elasticity of demand at P = \$3? Is demand elastic at this price?
    b. If consumers are willing to pay \$2 more per unit, what is the price elasticity of demand at P = \$3? Is demand elastic at this price?

71. Answer the following questions on price elasticity of demand.
    a. The price elasticity of demand for MLB tickets is –0.50. What happens to the quantity of tickets sold if ticket prices rise by 5%?
    b. The price elasticity of demand for fried chicken is –1.12. What happens to expenditures on fried chicken following a price increase?
    c. Suppose the demand for insulin is given by $Q^D = 1{,}000$. What is the price elasticity of demand at $P = \$100$?
    d. What will happen to the price elasticity of demand if there are more substitute goods available?

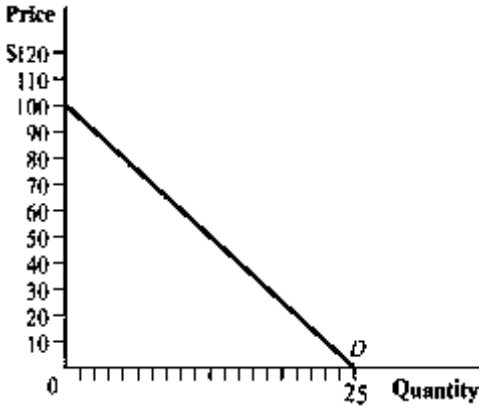
72. The demand and supply curves for a good are given by $Q^D = 50 - 2P$ and $Q^S = P - 1$.
    a. Calculate the price elasticity of demand at the equilibrium price.
    b. Calculate the price elasticity of supply at the equilibrium price.
    c. What would happen to consumer expenditures on the good if firms must pay higher prices for their inputs in production?

73. Consider the following questions on elasticity.
    a. If a 3% increase in income leads to a 1% increase in the quantity purchased, what is the income elasticity of demand? Is the good an inferior good?
    b. The price of good *Y* decreases by 15% and the quantity of good *X* sold increases by 4%. What is the cross-price elasticity of demand for good *X* with respect to good *Y*? How are good *X* and good *Y* related?
    c. The demand equation is $Q^D = 15 - P$. What is the price elasticity of demand at $P = \$6$?

Answer Key

1. A
2. C
3. C
4. A
5. D
6. B
7. A
8. D
9. B
10. A
11. D
12. C
13. B
14. C
15. A
16. C
17. B
18. A
19. B
20. C
21. C
22. D
23. B
24. C
25. B
26. B
27. D
28. C
29. B
30. A
31. A
32. C
33. B
34. A
35. D
36. C
37. B
38. A
39. D
40. C
41. A
42. D
43. B
44. C

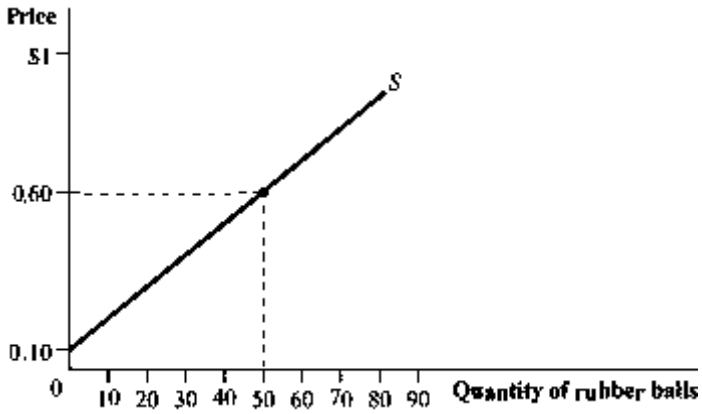
45. C
46. C
47. C
48. A
49. C
50. A
51. B
52. D
53. A
54. *1. We examine how supply and demand interact in a single market.*
    2. All goods bought and sold in the market are homogeneous.
    3. All goods in the market sell for the same price.
    4. There are many producers and consumers in the market.
55. *There are three assumptions violated. First, Boeing and Airbus produce different types of airplanes. Second, Boeing and Airbus planes sell for different prices. Third, there are only two producers of large commercial airplanes, not many.*
56. *Answers will vary, but the general form of a demand curve is given by* Q = a – bP*, where parameter* a *is a positive constant and parameter* b *is a positive constant. The horizontal intercept is* a*, and the vertical intercept is* a/b.
    One example of a demand curve is Q = *100 – 2*P*. The demand curve intersects the quantity axis (horizontal intercept) at 100 and intersects the price axis (vertical intercept) at 50.*
57. *a. Solve the demand equation for:*
    *0.25*P = *25 –* Q
    P = *100 – 4*Q
    b.



    c. Q = *25 – 0.25(105) = –1.25, so consumers are not willing to buy any of the product.*
58. *a. A rise in the good's price is the only factor that could cause movement up and along a given demand curve.*
    b. If there is a change in the number of consumers, consumer income, consumer tastes, or price of other goods, the demand curve shifts out.
59. *a. For every $1 increase in price, the quantity supplied of rubber balls increases by 100.*

b. P = *0.10* + Q/*100*

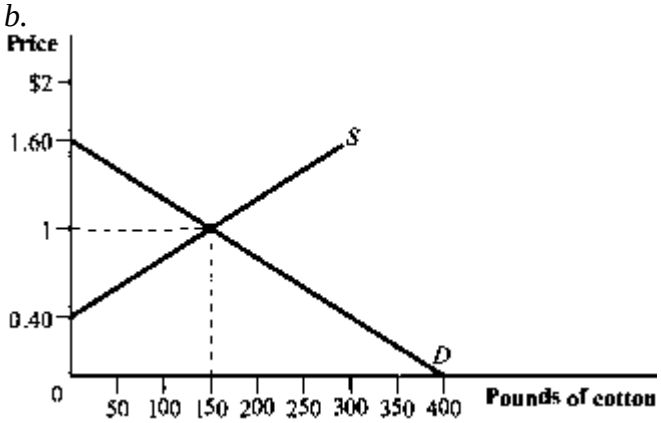
c.



60. *A change in supply refers to the supply curve shifting position, creating an entirely new relationship between price and quantity supplied. A change in quantity supplied is a movement along a supply curve that is caused by a change in the product's price.*

61. *a.* P = *1;* Q =*150*

b.



62. *a.* P =*10;* Q = *150*
    b. *There is an excess demand of 480 units.*
    c. *There is an excess supply of 150 units.*

63. P =*20;* Q = *70*
    At P = *10,* Q^D = *80 and* Q^S = *30, giving an excess demand of 50.*

64. *a.* *A rise in the price of a complement will cause a decrease in demand, leading to a decrease in the equilibrium price and quantity.*
    b. *A positive change in consumer tastes will cause an increase in demand, leading to an increase in the equilibrium price and quantity.*
    c. *The production of maple syrup will be reduced (a decrease in supply), leading to an increase in the equilibrium price and decrease in the equilibrium quantity.*
    d. *A rise in the price of a substitute good will cause an increase in demand, leading to an increase in the equilibrium price and quantity.*

65. *a.* *Set* $Q^D = Q^S$ *and solve for* P.

$100 - 4P = -20 + 2P$

$6P = 120$

$P = 20$

$Q = 100 - 4(20) = 20$

b. *The demand equation is now* $Q^D = 160 - 4P$. *Set* $Q^D = Q^S$ *and solve for* P.

$160 - 4P = -20 + 2P$

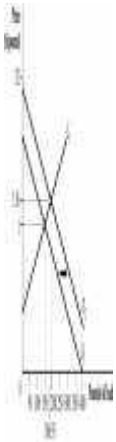
$6P = 180$

$P = 30$

$Q = 160 - 4(30) = 40$

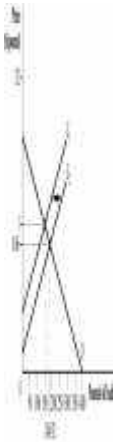
66. *a.*

b.



c.

d.



67. *Disagree. Kinsley is confusing movements along the demand curve with shifts of the demand curve.*
68. *a. An increase in supply and decrease in demand will cause the price to fall, with an indeterminate effect on quantity.*
    b. An increase in demand and supply will cause the quantity to rise, with an indeterminate effect on price.
    c. A decrease in supply and demand will cause the quantity to fall, with an indeterminate effect on price.
    d. A decrease in supply and an increase in demand will cause the price to rise, with an indeterminate effect on quantity.
69. *a.* P = *$5,250*; Q = *1,800*
    b. Inverse demand: $P = 7{,}500 - 1.25Q^D$*; Inverse Supply:* $P = 2.5Q^S + 750$
    c. P = *$5,416.66;* Q = *2,066.67*
70. *a. Price elasticity = –1. Demand is unit elastic.*
    b. Price elasticity of demand = –0.60. Demand is inelastic.
71. *a. The quantity of tickets sold will decrease by 2.5% (5 × –0.50).*
    b. Because demand is elastic, expenditures will decrease from an increase in price.
    c. This demand curve is vertical (perfectly inelastic), so the price elasticity of demand is zero.
    d. The good will become more price elastic.

72. *a.* *The equilibrium price is $17 and equilibrium quantity is 16.*
    The price elasticity of demand = –2 × 17/16 = –2.13.
    b. *The price elasticity of supply is 1 × 17/16 = 1.06.*
    c. *Given that the price elasticity of demand is elastic, a rise in price (owing to higher input prices) would reduce expenditures on the good.*
73. *a.* *Income elasticity of demand = 1/3 = 0.33. The sign is positive, so the good is a normal good.*
    b. *Cross-price elasticity of demand is 4/–15 = –0.27. The sign is negative, so the goods are complements.*
    c. *The price elasticity of demand is –1(6/9) = –0.67.*