1. A government-imposed price ceiling set below the market's equilibrium price for a good will produce an excess supply of the good.
   a. True
   b. False
   
   ANS: B

   **Figure 4-1**

<table>
<thead>
<tr>
<th>Price Per Pair</th>
<th>Quantity Demanded</th>
<th>Quantity Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 2</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>$ 4</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>$ 6</td>
<td>10</td>
<td>5</td>
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<tr>
<td>$ 8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>$10</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

2. Figure 4-1 shows the supply and demand for socks. If a price ceiling of $10 per pair is imposed by the government, the number of pairs actually purchased will be
   a. 2 pairs
   b. 8 pairs
   c. 5 pairs
   d. 1 pair
   e. 6 pairs
   
   ANS: E

5. Price ceilings are primarily targeted to help _______, while price floors generally benefit _________.
   a. producers; no one
   b. increase tax revenue for governments; producers
   c. increase tax revenue for governments; consumers
   d. producers; consumers
   e. consumers; producers
   
   ANS: E

   **Figure 4-3**

<table>
<thead>
<tr>
<th>Price Per Pair</th>
<th>Quantity Demanded</th>
<th>Quantity Supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 2</td>
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<td>$ 4</td>
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<td>$ 8</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>$10</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

4. Figure 4-3 shows the supply and demand for socks. If a price floor of $10 is imposed, the quantity of socks actually purchased will be
   a. 6 pairs
   b. 10 pairs
c. 2 pairs  
d. 8 pairs  
e. 1 pair  
ANS: C

5. Figure 4-4 depicts a market in which the government has imposed a price floor of $5.00 per unit. To maintain the price floor, the government should  
a. buy 200 units of the good  
b. sell 200 units of the good  
c. buy 700 units of the good  
d. sell 700 units of the good  
e. buy 500 units of the good  
ANS: A
6. Another term that could be used for elasticity is  
   a. Sensitivity  
   b. Utility  
   c. Surplus  
   d. Profit  
   e. Slope  
   ANS: A  

7. The price elasticity of demand is important to firms because  
   a. it explains the relationship between income and demand for the goods they sell  
   b. it shows how price changes affect total expenditures on the goods they sell  
   c. the law of demand suggests that elasticity falls as total expenditures rise  
   d. it helps identify the equilibrium price and quantity in the market  
   e. it relates price to supply  
   ANS: B  

8. The price elasticity of demand measures the  
   a. responsiveness of a good's price to a change in quantity demanded  
   b. adaptability of suppliers when a change in demand alters the price of a good  
   c. responsiveness of quantity demanded to a change in a good's price  
   d. adaptability of buyers when there is a change in demand  
   e. responsiveness of quantity supplied to a change in quantity demanded  
   ANS: C  

9. If the price elasticity of demand for Cheer detergent is -3.0, then a  
   a. 12 percent drop in price leads to a 36 percent rise in the quantity demanded  
   b. 12 percent drop in price leads to a 4 percent rise in the quantity demanded  
   c. $1,000 drop in price leads to a 3,000-unit rise in the quantity demanded  
   d. $1,000 drop in price leads to a 333-unit rise in the quantity demanded  
   e. 12 percent rise in price leads to a 36 percent rise in the quantity demanded  
   ANS: A  

10. When calculating the price elasticity of demand, we assume that the price of the good changes while all other variables affecting  
    a. demand except buyers’ incomes remain constant  
    b. demand except the population size remain constant  
    c. demand and supply remain constant  
    d. supply remain constant  
    e. demand remain constant  
    ANS: E  

11. The price elasticity of demand  
   a. is negative for price increases and positive for price decreases  
   b. is positive for price increases and negative for price decreases  
   c. is negative for goods that follow the law of demand  
   d. is positive for goods that follow the law of demand  
   e. could be positive or negative depending on the change in buyers’ incomes that accompanies a price change
ANS: C

12. If a 10 percent rise in the price of bananas leads to a 20 percent reduction in the quantity of bananas demanded, then the price elasticity of demand is -0.50.
   a. True
   b. False

ANS: B

13. If the price of a good increases from $20 to $25 and the quantity demanded declines from 15 to 10 units of the good, the price elasticity of demand is -5.
   a. True
   b. False

ANS: B

14. Suppose that a local supermarket sells apples and oranges for 50 cents apiece, and at these prices is able to sell 100 apples and 200 oranges per week. One week, the supermarket lowered the price per apple to 40 cents and sold 120 apples. The next week, they lowered the price per orange to 40 cents (after raising the price per apple back to 50 cents) and sold 240 oranges. These results imply that the
   a. price elasticity of apples is lower than the price elasticity of oranges
   b. price elasticity of apples is higher than the price elasticity of oranges
   c. demand for apples is more price sensitive than the demand for oranges
   d. demand for oranges is more price sensitive than the demand for apples
   e. price elasticities of demand for apples and oranges are the same over these price ranges

ANS: E

15. A $1.00 increase in the price of a restaurant meal results in a drop in quantity demanded of 5 meals. Which of the following statements is correct?
   a. The slope of the demand curve is -1/5; there is insufficient information to determine the price elasticity of demand.
   b. The price elasticity of demand is -1/5; there is insufficient information to determine the slope of the demand curve.
   c. Both the slope of the demand curve and the price elasticity of demand are equal to -1/5.
   d. There is insufficient information to determine either the slope of the demand curve or the price elasticity of demand.
   e. The slope of the demand curve is -1/5; the price elasticity of demand is 5.

ANS: A

16. If a 20 percent decrease in the price of chicken results in a 10 percent increase in the quantity demanded, the price elasticity of demand has a value of
   a. -0.5
   b. -2
   c. -1
   d. -0.1
   e. none of these

ANS: A
17. Figure 4-6 shows the prices of two services offered by Earl's Barber Shop and the resulting quantities demanded by customers. In this example, the price elasticity of demand for manicures (using the midpoint formula) is
   a. -1
   b. -2
   c. -3
   d. -0.5
   e. -0.4
   ANS: A

18. Figure 4-6 shows the prices of two services offered by Earl's Barber Shop and the resulting quantities demanded by customers. In this example, the price elasticity of demand for haircuts (using the midpoint formula) is
   a. -1
   b. -1.8
   c. -3.5
   d. -2.25
   e. -0.5
   ANS: B

20. Figure 4-9 shows the demand schedule for hockey pucks. What is the price elasticity of demand when the price changes from $4 per puck to $5 per puck?
   a. -0.33
   b. -1.00
   c. -1.15
   d. -3.00
   e. none of these
   ANS: D

21. Figure 4-9 shows the demand schedule for hockey pucks. What is the price elasticity of demand when the price changes from $2 per puck to $1 per puck (using the midpoint formula)?
22. If the demand curve is a straight line with a negative slope, then demand is more elastic at higher prices than lower prices.
   a. True
   b. False
   
   ANS: A

23. Suppose that when the price of aspirin rises from $2 to $3 per bottle, the quantity demanded falls from 800 bottles per day to 700 bottles per day. Over this range, the demand for aspirin is
   a. Elastic
   b. unitary elastic
   c. perfectly elastic
   d. Inelastic
   e. perfectly inelastic
   
   ANS: D

24. Demand is said to be price inelastic when the coefficient of price elasticity of demand is
   a. greater than +1
   b. between 0 and +1
   c. zero
   d. between -1 and 0
   e. less than -1
   
   ANS: D

25. A 10 percent increase in buyers' incomes results in a 5 percent drop in the quantity of hot dogs demanded. In this range, the income elasticity of demand for hot dogs is
   a. 0.5
   b. 2.0
   c. 5.0
   d. -2.0
   e. -0.5
   
   ANS: E

26. The ratio of the prices of two goods multiplied by -1 is equal to the slope of the budget line.
   a. True
   b. False
   
   ANS: A

27. A consumer's budget line shows
   a. the utility that an individual would receive from consuming various combinations of two goods
   b. the combinations of two goods that an individual is able to purchase, given prices and
28. The intercept of a budget line measures the
   a. amount of a good that a consumer will purchase
   b. maximum amount of a good that a consumer could purchase, given his consumption of some other good
   c. maximum amount of a good that could be consumed at given prices and income
   d. minimum amount of a good that could be consumed at given prices and income
   e. minimum consumption of a good consistent with utility maximization

   ANS: C

29. A family on a trip budgets $800 for restaurant meals and fast food. The family can buy 16 restaurant meals if they don't buy any fast food. What is the price of a fast-food meal for the family?
   a. $5
   b. $16
   c. $20
   d. $50
   e. it is impossible to tell from the information given

   ANS: E

30. A family on a trip budgets $800 for restaurant meals and fast food. The price of a fast-food meal is $20 and the family can afford 16 restaurant meals if they don't buy any fast food. How many fast-food meals would the family gain if they gave up one restaurant meal?
   a. 1
   b. 0.4
   c. 2
   d. 2.5
   e. 5

   ANS: D

31. If a consumer's budget line between meat and potatoes has a vertical axis intercept at 100 pounds of meat and a horizontal axis intercept at 100 pounds of potatoes
   a. demand must be inelastic
   b. the consumer's budget must equal $100
   c. both meat and potatoes must be priced at $1 per pound
   d. the price of a pound of meat must equal the price of a pound of potatoes
   e. the opportunity cost of meat in terms of potatoes cannot be determined

   ANS: D

**Figure 5-1**

Income = $100
Price per Ticket = $20
Price per Compact Disk $10
32. Joe spends all of his money on concert tickets and compact disks. Figure 5-1 shows his budget constraint when his income is $100. The price of a ticket is $20, while the price of a compact disk is $10. If Joe currently buys 3 tickets and would like to purchase a fourth, his opportunity cost would be
a. 1 compact disk  
b. $20  
c. $10  
d. 2 compact disks  
e. 4 compact disks  
ANS: D

33. The ratio of the prices of two goods when multiplied by -1
a. is the slope of the demand curve  
b. measures the price elasticity of demand for a particular good  
c. defines real income for the consumer  
d. is the slope of the budget line  
e. is the slope of the indifference curve  
ANS: D

34. Suppose that Trey spends all of his income on vacation trips and textbooks. If the price of a trip is $200 and the price of a textbook is $50, then the slope of his budget line (assuming vacation trips are measured on the vertical axis) would be
a. -4  
b. 4  
c. 0.25  
d. -1.75  
e. -0.25  
ANS: E

35. An increase in the price of the good measured on the vertical axis of a budget line diagram will
a. cause a parallel outward shift of the budget line  
b. leave the budget line unchanged  
c. cause a parallel inward shift of the budget line  
d. make the budget line flatter  
e. make the budget line steeper  
ANS: D
36. If income and the prices of both goods all double, the budget line will
   a. become flatter
   b. become steeper
   c. remain unchanged
   d. experience a parallel outward shift
   e. experience a parallel inward shift

   ANS: C

37. If the price of good X (measured on the horizontal axis of a budget line diagram) increases at the same time that the price of good Y (measured on the vertical axis) decreases, the budget line
   a. will become flatter
   b. will become steeper
   c. could become either steeper or flatter, depending on the sizes of the price changes
   d. will rotate about its original point of intersection with the horizontal axis
   e. will shift outward, but not in a parallel fashion

   ANS: B

38. Which of the following is not consistent with assumptions economists make about consumer preferences?
   a. Pat enjoys his second ice cream cone less than his first.
   b. Chris enjoys her second ice cream cone more than her second candy bar.
   c. Steve enjoys two ice cream cones more than one.
   d. Jane enjoys two ice cream cones more than Tomas enjoys one ice cream cone.
   e. Tim enjoys an ice cream cone more than a candy bar.

   ANS: D

39. The change in total utility arising from a one-unit increase in consumption of a good is referred to as
   a. average utility
   b. the principle of diminishing marginal utility
   c. real income
   d. marginal utility
   e. price

   ANS: D

40. Marginal utility
   a. increases as more of a good is consumed
   b. increases as the total utility of consuming a good increases
   c. is the same as the utility of consuming a good
   d. is the same as the utility of consuming an additional unit of a good
   e. is the same for all units of a good, but varies from one consumer to another

   ANS: D

41. The law of diminishing marginal utility
   a. is valid only after basic necessities (such as food and shelter) have been obtained
   b. says that marginal utility decreases as more of a good is consumed
   c. implies that spending on a good will decrease as more of that good is consumed
   d. says that marginal utility decreases as income increases
e. implies that spending on a good decreases as income increases

ANS: B

42. As Reba consumes four slices of pizza, her total utility rises from 0 to 18, to 24, to 28, and to 30, respectively. What is her marginal utility of the fourth slice of pizza?
   a. 28
   b. 24
   c. 2
   d. 7
   e. 8

ANS: C

**Figure 5-6**

<table>
<thead>
<tr>
<th>Quantity of Apples</th>
<th>Total Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
</tr>
<tr>
<td>3</td>
<td>44</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
</tr>
</tbody>
</table>

43. Figure 5-6 shows the total utility that Jerry receives from consuming different numbers of apples per week. What is his marginal utility from the fourth apple?
   a. 20
   b. 6
   c. 34
   d. 14
   e. 10

ANS: B

44. Figure 5-6 shows the total utility that Jerry would receive from consuming different numbers of apples per week. What is Jerry's marginal utility from consuming the second apple after he already consumed the first one?
   a. 0
   b. 17
   c. 20
   d. 14
   e. 34

ANS: D

45. If \( MU_x/P_x \) is less than \( MU_y/P_y \), then the consumer should consume more of \( X \) and less of \( Y \).
   a. True
   b. False

ANS: B
Chapter 4 – Working with Supply and Demand

46. Beginning at the horizontal axis intercept, as a consumer moves upward along the budget line, he will find that
   a. the marginal utility per dollar spent on the vertical axis good increases
   b. the marginal utility per dollar spent on the horizontal axis good increases
   c. the marginal utility per dollar spent on the horizontal axis good decreases
   d. the marginal utilities per dollar spent on both goods increase
   e. the marginal utilities per dollar spent on both goods remain constant along that particular budget line

   ANS: B

47. The marginal utility per dollar spent on a good represents the
   a. satisfaction received for each dollar spent on the last unit consumed
   b. total satisfaction received from consuming a certain number of units of that good
   c. dollar value of average utility
   d. change in price due to a one-unit increase in total utility
   e. price paid for the last unit of utility

   ANS: A

48. Suzy spends all of her income on potato chips and textbooks. To maximize her total utility, she should
   a. allocate her income so that the marginal utilities of potato chips and textbooks are equal
   b. allocate her income so that the marginal utilities per dollar spent on potato chips and textbooks are equal
   c. change her eating habits
   d. choose a consumption point that is inside her budget constraint
   e. allocate her income so that the total utilities of potato chips and textbooks are equal

   ANS: B

49. If bread costs $1 per pound and meat costs $4 per pound, a consumer whose marginal utility of meat equals 80 utils per pound is maximizing utility only if the marginal utility per pound of bread equals
   a. 4 utils
   b. 5 utils
   c. 10 utils
   d. 20 utils
   e. 80 utils

   ANS: D

50. Ignoring all other goods, if Yong's marginal utility per pound of bread is 10 utils and per pound of cheese is 30 utils, his
   a. total utility would be maximized if the price per pound of cheese is triple the price per pound of bread
   b. total utility could be increased by buying more bread and less cheese
   c. total utility could be increased by buying more cheese and less bread
   d. total utility would be maximized if the price per pound of cheese is one-third the price per pound of bread
   e. marginal utility would be maximized if the price per pound of cheese is one-third the price per pound of bread

   ANS: A
51. Suppose that the price of a pizza is $10 and that the price of a blouse is $30. At her present level of consumption, Magda’s ratio of marginal utility of pizza to marginal utility of blouses is 1/4. To maximize total utility, she should
   a. buy more pizzas and fewer blouses
   b. buy fewer pizzas and more blouses
   c. continue to buy the same quantities of pizza and blouses
   d. spend more time consuming pizza
   e. spend more time buying blouses

   ANS: A

52. Lin is maximizing total utility while consuming food and clothing. Her marginal utilities of food and clothing are 50 utils and 25 utils, respectively. If clothing is priced at $10 per unit, the price of a unit of food
   a. must be rising
   b. must be falling
   c. must equal $10 as well
   d. must equal $20
   e. cannot be determined without additional information.

   ANS: D

53. The income effect measures how
   a. the quantity of a good supplied changes in response to a change in income
   b. the quantity of a good demanded changes in response to a change in the price of a good, with income constant
   c. far the budget line shifts due to a change in income
   d. the quantity of a good demanded changes in response to a change in purchasing power
   e. income changes when prices change, holding quantities demanded constant

   ANS: D

53. The income effect of a lower price for good A
   a. invariably leads a consumer to buy more of good A, because the combination of unchanged money income and lower price raises that consumer’s real income or purchasing power
   b. invariably leads a consumer to buy less of good A because the combination of unchanged money income and lower price encourages that consumer to buy more of other goods
   c. may lead to a larger, smaller, or even an unchanged quantity of good A demanded; it all depends on the nature of the good itself
   d. creates a change in the good’s relative price and, therefore, causes the consumer to substitute good A in place of other goods
   e. causes a parallel outward shift of the budget line, enabling the consumer to buy more of all goods than before

   ANS: C

54. A consumer’s demand curve for apples
   a. is derived by varying the price of apples and determining the quantities of apples at which the marginal utility per dollar spent on apples equals the marginal utility per dollar spent on other goods
   b. is derived by determining how many apples will be purchased at different levels of income
   c. is derived by varying the prices of other goods and determining the quantities of apples at
which the marginal utilities per dollar spent on all goods are equal
d. slopes downward whenever the income and substitution effects cancel out
e. will be vertical if the substitution effect outweighs the income effect

ANS: A

55. Higher education is a normal good. If its price falls,
a. the quantity of higher education demanded will fall
b. the substitution and income effects work in opposite directions
c. the income effect is negative
d. higher education will satisfy to the law of demand
e. real purchasing power will fall

ANS: D

56. The market demand curve for a good is found by
a. adding up the quantities demanded by all consumers at different prices of that good
b. adding up the quantities demanded by all consumers at different incomes
c. adding up the maximum price each consumer is willing to pay for each possible quantity of the good
d. varying consumers' total income and determining what prices they are willing to pay
e. vertically summing the individual consumers' demand curves

ANS: A

57. The substitution effect measures how
a. the quantity demanded of one good is influenced by a change in income, with prices constant
b. the quantity demanded of one good is influenced by a change the price of another good
c. marginal utility per dollar spent is affected by income changes
d. an increase in the price of a good is effectively the same as a reduction in income
e. the quantity demanded of one good is influenced by a change in the price of that good, with income constant

ANS: E

58. For a normal good, such as steak,
a. quantity demanded increases as its price falls.
b. the income and substitution effects work in opposite directions
c. the income effect is negative
d. the income effect reinforces the substitution effect

ANS: D

59. For an inferior good, the income effect
a. is zero
b. at least partially offsets the substitution effect
c. operates to increase the quantity demanded
d. helps explain why the demand curve slopes upward
e. does not exist

ANS: B