1. Sarah owns a small flower shop and the industry is perfectly competitive. She is considering whether or not to hire an additional worker. The wage rate for the worker is $500 per week; the marginal product of the additional worker would be 100 units per week; and the price of the units produced is $10 per unit. What should Sarah do?
   a) Hire the additional worker.
   b) Not hire the additional worker.
   c) Raise the price of the flower arrangements that she sells.
   d) Not enough information to answer the question.

   Use the following to answer question 2.

   Table: Droids and Moisture Output

<table>
<thead>
<tr>
<th>Number of droids</th>
<th>Output of moisture (barrels per month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>75</td>
</tr>
</tbody>
</table>

2. (Table: Droids and Moisture Output) Luke Skywalker operates a moisture farm on the planet Tatooine. The moisture farm utilizes droids. Luke's production function is given in the accompanying table. A barrel of moisture sells for 50 Republic Credits. A droid costs 675 Republic Credits per month to rent. How many droids should Luke rent?
   a) 1
   b) 2
   c) 3
   d) 4
Use the following to answer questions 3-9.

Figure: Markets and Surplus

3. (Figure: Markets and Surplus) In the accompanying figure, total surplus would _____ if price was _____ $30.
   a) decrease; greater than
   b) decrease; less than
   c) increase; less than
   d) both a and b are correct.

4. (Figure: Markets and Surplus) In the accompanying figure, if price is greater than $30, consumer surplus _____, producer surplus _____, and _____.
   a) increases; decreases; total surplus stays the same
   b) increases; increases; total surplus increases
   c) decreases; increases; a deadweight loss is created
   d) decreases; decreases; total surplus stays the same

5. (Figure: Markets and Surplus) In the accompanying figure, if price is less than $30, consumer surplus _____, producer surplus _____, and _____.
   a) increases; decreases; total surplus stays the same
   b) increases; increases; total surplus increases
   c) decreases; increases; total surplus decreases
   d) increases; decreases; a deadweight loss is created

6. (Figure: Markets and Surplus) In the accompanying figure, a(n) _____ in supply would lead to a(n) _____ in equilibrium price, and a(n)_____ in total surplus.
   a) increase; decrease; increase
   b) increase; increase; increase
   c) decrease; decrease; decrease
   d) decrease; increase; increase

7. (Figure: Markets and Surplus) In the accompanying figure, a(n) _____ in supply would lead to a(n) _____ in equilibrium price, and a(n) _____ in total surplus.
   a) increase; decrease; decrease
   b) increase; increase; increase
   c) decrease; decrease; decrease
   d) decrease; increase; decrease
8. (Figure: Markets and Surplus) In the accompanying figure, a(n) _____ in demand would lead to a(n) _____ in equilibrium price, and a(n) _____ in total surplus.
   a) increase; decrease; increase
   b) increase; increase; increase
   c) decrease; decrease; increase
   d) decrease; increase; increase

9. (Figure: Markets and Surplus) In the accompanying figure, a(n) _____ in demand would lead to a(n) _____ in equilibrium price, and a(n) _____ in total surplus.
   a) increase; decrease; increase
   b) increase; increase; decrease
   c) decrease; decrease; decrease
   d) decrease; increase; increase

Use the following to answer questions 10-13.

Figure: Market for Calculators

10. (Figure: Market for Calculators) The accompanying figure shows the domestic supply and demand curves for calculators. The world price, \( P_W \), equals $100. When the economy moves from autarky to free trade, consumer surplus rises by area ______ and producer surplus falls by ______.
   a) \( B + K + L; B \)
   b) \( B + C + K + L; B + C + K + L \)
   c) \( B + C + H + I + K + L; B + C + H + I \)
   d) \( B + C + G + H + I + J + K + L; B + C \)

11. (Figure: Market for Calculators) The accompanying figure shows the domestic supply and demand curves for calculators. The world price, \( P_W \), equals $100. The government imposes a quota restricting imports to 25 calculators. The domestic price rises to ______ and the quota rent is equal to area ______.
   a) $120; \( K + L \)
   b) $150; \( K + H + I + L \)
   c) $120; \( H + I \)
   d) $150; \( G + H + I + J \)
12. (Figure: Market for Calculators) The accompanying figure shows the domestic supply and demand curves for calculators. The world price, $P_w$, equals $100. The government imposes a quota restricting imports to 25 calculators. If the import licenses are granted to foreigners, the net loss due to the import quota is equal to areas:
   a) $K + L$.
   b) $G + J$.
   c) $G + H + I + J$.
   d) $G + H + I + J + K + L$.

13. (Figure: Market for Calculators) The accompanying figure shows the domestic supply and demand curves for calculators. The world price, $P_w$, equals $100. The government imposes an import tariff of $20 per calculator. Compared with the free trade situation, the tariff leads to a deadweight loss equal to areas:
   a) $K + L$.
   b) $G + J$.
   c) $G + H + I + J$.
   d) There is no deadweight loss, since the tariff revenue the government receives offsets any losses.

Use the following to answer questions 14-17.

Figure: Market for Computers

14. (Figure: Market for Computers) In the accompanying figure, consumer surplus without international trade would be area:
   a) $W + X + Y$.
   b) $W$.
   c) $Y$.
   d) $W + X$.

15. (Figure: Market for Computers) In the accompanying figure, consumer surplus with international trade would be area:
   a) $W + X + Y$.
   b) $W$.
   c) $Y$.
   d) $W + X$.

16. (Figure: Market for Computers) In the accompanying figure, producer surplus without international trade would be area:
   a) $X + Y + Z$.
   b) $W + X + Y$.
   c) $X + Y$.
   d) $Y$. 
17. (Figure: Market for Computers) In the accompanying figure, producer surplus with international trade would be area:
   a) $X + Y + Z$.
   b) $W + X + Y$.
   c) $X + Y$.
   d) $Y$.

Use the following to answer questions 18-20.

<table>
<thead>
<tr>
<th>Student</th>
<th>Willingness to pay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jessica</td>
<td>$150</td>
</tr>
<tr>
<td>Jacquelyn</td>
<td>125</td>
</tr>
<tr>
<td>Brad</td>
<td>105</td>
</tr>
<tr>
<td>Robert</td>
<td>60</td>
</tr>
<tr>
<td>Gwen</td>
<td>25</td>
</tr>
</tbody>
</table>

18. (Table: Consumer Surplus and Phantom Tickets) Using the information in the accompanying table, if the price of a ticket to see Phantom of the Opera is $50, then Robert's consumer surplus is:
   a) $60.
   b) $50.
   c) $10.
   d) $240.

19. (Table: Consumer Surplus and Phantom Tickets) Using the information in the accompanying table, if the box-office price of a ticket to see Phantom of the Opera is $50, and there is no other market for tickets, then total consumer surplus for the five students is:
   a) $100.
   b) $175.
   c) $230.
   d) $240.

20. (Table: Consumer Surplus and Phantom Tickets) Using the information in the accompanying table, if the box-office price of a ticket to see Phantom of the Opera is $130, and there is no other market for tickets, the total consumer surplus for the five students is:
   a) $150.
   b) $125.
   c) $20.
   d) $0.

21. Suppose the United States removes the current sugar quotas and the market price of sugar drops. In the candy bar market, we would expect:
   a) the consumer surplus to increase.
   b) the consumer surplus to decrease.
   c) the consumer surplus to be unchanged.
   d) the deadweight loss to increase.
Use the following to answer questions 22-25.

Table: Producer Surplus and Phantom Tickets

<table>
<thead>
<tr>
<th>Student</th>
<th>Willingness to sell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim</td>
<td>$1</td>
</tr>
<tr>
<td>Laura</td>
<td>30</td>
</tr>
<tr>
<td>Whitney</td>
<td>0</td>
</tr>
<tr>
<td>Ralph</td>
<td>100</td>
</tr>
<tr>
<td>Rick</td>
<td>150</td>
</tr>
</tbody>
</table>

22. (Table: Producer Surplus and Phantom Tickets) Given the information in the accompanying table, if the price for Phantom tickets is $55, which student has the highest individual producer surplus?
   a) Tim
   b) Laura
   c) Rick
   d) Ralph

23. (Table: Producer Surplus and Phantom Tickets) Given the information in the accompanying table, if the box-office price for Phantom tickets is $140, and there is no other market for tickets, total producer surplus for these five students is:
   a) $139.
   b) $110.
   c) $40.
   d) $379.

24. (Table: Producer Surplus and Phantom Tickets) Given the information in the accompanying table, if the price for Phantom tickets is $55, total producer surplus for the five students is:
   a) $54.
   b) $79.
   c) $84.
   d) $64.

25. (Table: Producer Surplus and Phantom Tickets) Given the information in the accompanying table, if these students can sell their Phantom tickets for only $5, then:
   a) Tim will be the only student to sell his ticket.
   b) Laura, Whitney, Ralph, and Rick will not sell their tickets.
   c) the total producer surplus for the five students will be $4.
   d) a, b, and c would be correct.

26. Along the supply curve for brownies, a decrease in the price of brownies will:
   a) increase producer surplus.
   b) decrease producer surplus.
   c) increase consumer surplus.
   d) both b and c
27. (Figure: Producer Surplus) In the accompanying figure, when the price falls from $45 to $35, producer surplus ______ for a total producer surplus of ______.
   a) increases by $10; $140
   b) decreases by $40; $60
   c) increases by $35; $180
   d) decreases by $10; $140

28. (Figure: Producer Surplus) In the accompanying figure, when the price rises from $25 to $35, producer surplus ______ for a total producer surplus of ______.
   a) increases by $10; $30
   b) decreases by $10; $30
   c) increases by $30; $60
   d) decreases by $35; $100

29. (Figure: Producer Surplus) In the accompanying figure, total producer surplus is ______ when the price is $40.
   a) $40
   b) $60
   c) $80
   d) $85
Use the following to answer questions 30-34.

Table: Marginal and Total Benefit

<table>
<thead>
<tr>
<th>Number of games</th>
<th>Total benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>90</td>
</tr>
<tr>
<td>3</td>
<td>120</td>
</tr>
<tr>
<td>4</td>
<td>140</td>
</tr>
<tr>
<td>5</td>
<td>152</td>
</tr>
<tr>
<td>6</td>
<td>160</td>
</tr>
<tr>
<td>7</td>
<td>164</td>
</tr>
<tr>
<td>8</td>
<td>162</td>
</tr>
</tbody>
</table>

30. (Table: Marginal and Total Benefit) Rodger is deciding how many football games he wants to attend this year. The total benefit that Rodger receives from football games is shown in the accompanying table. Rodger's marginal benefit from increasing the number of games that he attends from 2 to 3 is:
   a) 40.
   b) 30.
   c) 10.
   d) 20.

31. (Table: Marginal and Total Benefit) Rodger is deciding how many football games he wants to attend this year. The total benefit that Rodger receives from football games is shown in the accompanying table. If tickets to each football game cost $10, then he should attend ______ game(s).
   a) 0
   b) 1
   c) 2
   d) 5

32. (Table: Marginal and Total Benefit) Rodger is deciding how many football games he wants to attend this year. The total benefit that Rodger receives from football games is shown in the accompanying table. If tickets to each football game cost $75, he should attend ______ game(s).
   a) 0
   b) 1
   c) 2
   d) 5

33. (Table: Marginal and Total Benefit) Rodger is deciding how many football games he wants to attend this year. The total benefit that Rodger receives from football games is shown in the accompanying table. If the games are free, he should attend ____ game(s).
   a) 1
   b) 5
   c) 7
   d) 8
34. (Table: Marginal and Total Benefit) Rodger is deciding how many football games he wants to attend this year. The total benefit that Rodger receives from football games is shown in the accompanying table. Suppose football tickets cost $10, but suppose too that the star player just got injured and will be out for the season. As a result of the injury, Rodger's total benefit of attending any game is now only 10% of the value shown in the table. In this case, Rodger should attend ______ game(s).

   a) 0
   b) 1
   c) 2
   d) 6

35. The optimal quantity of an activity is the quantity at which:
   a) marginal benefit exceeds marginal cost by the greatest amount.
   b) total benefit exceeds total cost by the greatest amount.
   c) marginal benefit equals marginal cost.
   d) both b and c

36. Marginal benefit:
   a) is the subsidiary benefit from an activity; e.g., the main benefit from weight training is an increase in muscle mass and the subsidiary or marginal benefit might be a reduction in cholesterol.
   b) is the addition to total benefit due to undertaking one more unit of an activity.
   c) must be increasing if total benefit is increasing.
   d) normally increases as more of an activity is undertaken.

Use the following to answer questions 37-39.

Figure: Marginal Benefit Curve

37. (Figure: Marginal Benefit Curve) Use the marginal benefit curve in the accompanying figure to determine that the approximate total benefit of mowing 4 lawns is:
   a) $20.
   b) $23.
   c) $80.
   d) $114.

38. (Figure: Marginal Benefit Curve) Use the marginal benefit curve in the accompanying figure to determine that the approximate total benefit of mowing 6 lawns is:
   a) $19.
   b) $35.
   c) $154.
   d) $200.
39. (Figure: Marginal Benefit Curve) Use the marginal benefit curve in the accompanying figure to determine that the approximate total benefit of mowing 7 lawns is:
   a) $172.
   b) $140.
   c) $60.
   d) $18.

Use the following to answer questions 40-42.

Figure: Marginal Cost Curve

40. (Figure: Marginal Cost Curve) Use the marginal cost curve in the accompanying figure to determine that the approximate total cost of mowing 4 lawns is:
   a) $10.
   b) $15.
   c) $50.
   d) $100.

41. (Figure: Marginal Cost Curve) Use the marginal cost curve in the accompanying figure to determine that the approximate total cost of mowing 7 lawns is:
   a) $175.
   b) $113.
   c) $50.
   d) $24.

42. (Figure: Marginal Cost Curve) Use the marginal cost curve in the accompanying figure to determine that the approximate total cost of mowing 5 lawns is:
   a) $68.50.
   b) $100.
   c) $50.
   d) $10.

43. In economics a “marginal” value refers to:
   a) the value associated with an unimportant, or marginal activity.
   b) a value entered as an explanatory item in the margin of a balance sheet or other accounts.
   c) the value associated with one more unit of an activity.
   d) a value that is most appropriately identified in a footnote.

44. The _____ is the increase in output obtained by hiring an additional worker.
   a) average product
   b) total product
   c) marginal product
   d) marginal cost
45. The total product curve:
   a) shows the relation between output and the quantity of a variable input for varying levels of the fixed input.
   b) will become flatter as output increases, if there are diminishing returns to the variable input.
   c) will be downward sloping, if there are diminishing returns to the variable input.
   d) will become horizontal, when the marginal product of the variable input is constant.

Use the following to answer questions 46-47.

Table: Labor and Output

<table>
<thead>
<tr>
<th>Quantity of labor</th>
<th>Total output</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>7</td>
<td>44</td>
</tr>
</tbody>
</table>

46. (Table: Labor and Output) Referring to the accompanying table, the marginal product of the fifth worker is:
   a) 8.
   b) 4.
   c) 3.
   d) 40.

47. (Table: Labor and Output) Referring to the accompanying table, the average product when 4 workers are employed is:
   a) 9.
   b) 36.
   c) 10.
   d) 6.

48. The term “diminishing returns” refers to:
   a) a falling interest rate that can be expected as one's investment in a single asset increases.
   b) a reduction in profits caused by increasing output beyond the optimal point.
   c) a decrease in total output due to overcrowding, when too much labor is used with too little land or capital.
   d) a decrease in the extra output due to the use of an additional unit of a variable input, when more and more of the variable input is used and all other things are held constant.

49. Lauren has 11 people working in her tangerine grove. The marginal product of the 11th worker equals 13 bushels of tangerines. If she hires a 12th worker, the marginal product of that worker will equal:
   a) 14 bushels.
   b) 15 bushels.
   c) 12 bushels.
   d) The answer cannot be determined with the information available.
Answer Key - Review for lecture midterm 2

1. Answer: a  
   Origin: Chapter 12- Factor Markets and the Distribution of Income, Question 7

2. Answer: c  
   Origin: Chapter 12- Factor Markets and the Distribution of Income, Question 20  
   Refer To: Ref 12-1

3. Answer: d  
   Origin: Chapter 13- Efficiency and Equity, Question 69  
   Refer To: Ref 13-4

4. Answer: c  
   Origin: Chapter 13- Efficiency and Equity, Question 70  
   Refer To: Ref 13-4

5. Answer: d  
   Origin: Chapter 13- Efficiency and Equity, Question 71  
   Refer To: Ref 13-4

6. Answer: a  
   Origin: Chapter 13- Efficiency and Equity, Question 72  
   Refer To: Ref 13-4

7. Answer: d  
   Origin: Chapter 13- Efficiency and Equity, Question 73  
   Refer To: Ref 13-4

8. Answer: b  
   Origin: Chapter 13- Efficiency and Equity, Question 74  
   Refer To: Ref 13-4

9. Answer: c  
   Origin: Chapter 13- Efficiency and Equity, Question 75  
   Refer To: Ref 13-4

10. Answer: d  
    Origin: Chapter 17- International Trade, Question 27  
    Refer To: Ref 17-2

11. Answer: c  
   Origin: Chapter 17- International Trade, Question 28  
   Refer To: Ref 17-2

12. Answer: c  
    Origin: Chapter 17- International Trade, Question 29  
    Refer To: Ref 17-2

13. Answer: b  
    Origin: Chapter 17- International Trade, Question 30  
    Refer To: Ref 17-2

14. Answer: d  
    Origin: Chapter 17- International Trade, Question 82  
    Refer To: Ref 17-7

15. Answer: b  
    Origin: Chapter 17- International Trade, Question 83  
    Refer To: Ref 17-7

16. Answer: d  
    Origin: Chapter 17- International Trade, Question 84
17. Answer: a
   Origin: Chapter 17- International Trade, Question 85
   Refer To: Ref 17-7

18. Answer: c
   Origin: Chapter 6- Consumer and Producer Surplus, Question 5
   Refer To: Ref 6-1

19. Answer: d
   Origin: Chapter 6- Consumer and Producer Surplus, Question 6
   Refer To: Ref 6-1

20. Answer: c
   Origin: Chapter 6- Consumer and Producer Surplus, Question 7
   Refer To: Ref 6-1

21. Answer: a
   Origin: Chapter 6- Consumer and Producer Surplus, Question 8

22. Answer: a
   Origin: Chapter 6- Consumer and Producer Surplus, Question 14
   Refer To: Ref 6-3

23. Answer: d
   Origin: Chapter 6- Consumer and Producer Surplus, Question 15
   Refer To: Ref 6-3

24. Answer: c
   Origin: Chapter 6- Consumer and Producer Surplus, Question 16
   Refer To: Ref 6-3

25. Answer: d
   Origin: Chapter 6- Consumer and Producer Surplus, Question 17
   Refer To: Ref 6-3

26. Answer: b
   Origin: Chapter 6- Consumer and Producer Surplus, Question 20

27. Answer: b
   Origin: Chapter 6- Consumer and Producer Surplus, Question 75
   Refer To: Ref 6-6

28. Answer: c
   Origin: Chapter 6- Consumer and Producer Surplus, Question 76
   Refer To: Ref 6-6

29. Answer: c
   Origin: Chapter 6- Consumer and Producer Surplus, Question 77
   Refer To: Ref 6-6

30. Answer: b
   Origin: Chapter 7- Making Decisions, Question 24
   Refer To: Ref 7-1

31. Answer: d
   Origin: Chapter 7- Making Decisions, Question 25
   Refer To: Ref 7-1

32. Answer: a
   Origin: Chapter 7- Making Decisions, Question 26
   Refer To: Ref 7-1

33. Answer: c
34. Answer: a
   Origin: Chapter 7- Making Decisions, Question 27
   Refer To: Ref 7-1
35. Answer: d
   Origin: Chapter 7- Making Decisions, Question 29
36. Answer: b
   Origin: Chapter 7- Making Decisions, Question 18
37. Answer: d
   Origin: Chapter 7- Making Decisions, Question 76
   Refer To: Ref 7-4
38. Answer: c
   Origin: Chapter 7- Making Decisions, Question 77
   Refer To: Ref 7-4
39. Answer: a
   Origin: Chapter 7- Making Decisions, Question 78
   Refer To: Ref 7-4
40. Answer: c
   Origin: Chapter 7- Making Decisions, Question 73
   Refer To: Ref 7-3
41. Answer: b
   Origin: Chapter 7- Making Decisions, Question 74
   Refer To: Ref 7-3
42. Answer: a
   Origin: Chapter 7- Making Decisions, Question 75
   Refer To: Ref 7-3
43. Answer: c
   Origin: Chapter 7- Making Decisions, Question 16
44. Answer: c
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 2
45. Answer: b
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 4
46. Answer: b
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 5
   Refer To: Ref 8-1
47. Answer: a
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 6
   Refer To: Ref 8-1
48. Answer: d
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 7
49. Answer: d
   Origin: Chapter 8- Behind the Supply Curve- Inputs and Costs, Question 3