

THE UNIVERSITY OF WESTERN ONTARIO
LONDON CANADA

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ECONOMICS 020-003

October 13, 2001

MIDTERM 1

MICROECONOMICS

INSTRUCTIONS:

1. The examination begins at **12:00 p.m.** and ends at **2:00 p.m.**
2. Check that your examination paper contains 17 pages.
3. Use a **BLACK PENCIL** to complete your Scantron Form.
Print your **NAME** and complete your **SIGNATURE**.
Enter your **STUDENT NUMBER**.
Enter your **SECTION NUMBER**, which is 003.
4. **Please hand in Scantron form ONLY.**

QUESTIONS ARE PRINTED AT THE BACK OF EACH PAGE



1. You plan a three month adventure trip for the summer. You won't be able to take your usual summer job that pays \$9,000. The cost of your travel on the trip will be \$2,000, film and video tape will cost you \$250, and your food will cost \$1,400. You can't find anyone to sublet your apartment to, so you will have to pay the rent, which is \$600 a month. Your normal expenditure on food for 3 months is \$600. The opportunity cost of taking your trip (expressed in dollars) is:
 - A) \$10,350
 - B) \$12,150
 - C) \$12,050
 - D) \$11,750
 - E) \$12,650.

2. Western has built a new parking garage. There is always a free parking spot but it costs \$1 a day to park. Before the new garage was built, there was no parking charge but it took 15 minutes of cruising to find a parking space. If you can earn \$10 an hour as an economics tutor, your opportunity cost of parking has _____ from _____ a day to _____.
 - A) increased, 0, \$1.00
 - B) decreased, \$10.00, \$2.50
 - C) increased, 0, \$10.00
 - D) decreased, \$2.50, \$1.00
 - E) decreased, \$10.00, \$1.00.

3. During the next hour John can choose one of the following three activities: playing basketball, watching television, or reading a book. The opportunity cost of reading a book
 - A) depends on how much the book cost when it was purchased.
 - B) is the value of playing basketball if John prefers that to watching television.
 - C) is the value of playing basketball *and* the value of watching television.
 - D) depends on how much John enjoys the book.
 - E) a) and b).

4. If output in a country has increased by 10 percent and population has increased by 7 percent, we conclude that within that nation
 - A) productivity has increased.
 - B) living standards have increased.
 - C) output per person has declined.
 - D) both a) and b).
 - E) there has been a 3 percent increase in per capita income.

5. Which one of the following is *not* an example of a capital resource?
 - A) Money.
 - B) A carpenter's hammer.
 - C) A shoe factory.
 - D) A bread-slicing machine.
 - E) The SkyDome.

6. Which one of the following concepts is *not* illustrated by a production possibility frontier?
 - A) Scarcity.
 - B) Monetary exchange.
 - C) Opportunity cost.
 - D) Attainable and unattainable points.
 - E) The tradeoff between producing one good versus another.

7. If Harold must decrease the production of some other good to increase production of good *X*, then Harold
 - A) is producing on his production possibility frontier.
 - B) is producing outside his production possibility frontier.
 - C) is producing inside his production possibility frontier.
 - D) must prefer good *X* to any other good.
 - E) has too few capital goods.

8. The scarcity of resources implies that the production possibility frontier is
 - A) bowed inward (convex).
 - B) bowed outward (concave).
 - C) positively sloped.
 - D) negatively sloped.
 - E) linear.

Use the following to answer question 9:

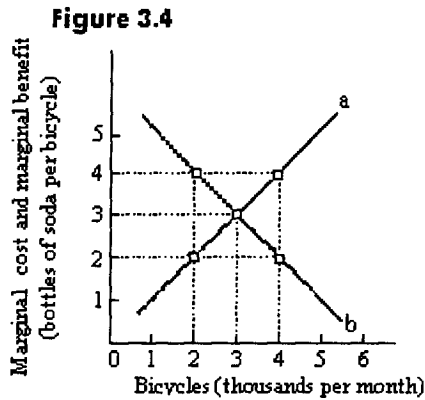
Table 1 Production Possibilities

Possibility	Units of Butter	Units of Guns
<i>a</i>	8	0
<i>b</i>	6	1
<i>c</i>	0	3

9. Consider Table 1. In moving from combination *b* to combination *c*, the opportunity cost of producing *one* additional unit of guns is
 - A) 2 units of butter.
 - B) 1/2 unit of butter.
 - C) 6 units of butter.
 - D) 1/6 unit of butter.
 - E) 3 units of butter.

10. As you consume more and more of a good,
 - A) the marginal benefit increases.
 - B) the marginal benefit decreases.
 - C) the marginal benefit always equals the marginal cost.
 - D) the marginal benefit increases or decreases depending where you are on the *PPF*.
 - E) the price of the good falls.

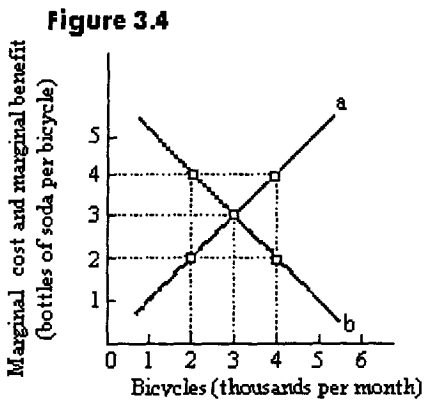
Use the following to answer question 11:



11. In Figure 3.4, the curve labeled *b* shows

- A) the bottles of soda that people are *willing* to forgo to get another bicycle.
- B) the bicycles that people are *willing* to forgo to get another bottle of soda.
- C) the bottles of soda that people *must* forgo to get another bicycle.
- D) that the benefits of producing more bicycles is greater than the benefits of producing more soda.
- E) that the benefits of producing more soda is greater than the benefits of producing more bicycles.

Use the following to answer question 12:



12. In Figure 3.4, when 4,000 bicycles are made each month, we can see that

- A) the marginal benefit from another bicycle is greater than the marginal cost of another bicycle.
- B) more bicycles should be produced to reach the efficient level of output.
- C) fewer bicycles should be produced to reach the efficient level of output.
- D) the economy is very efficient at this level of production of bicycles.
- E) both a) and c).

13. Which one of the following would cause a production possibility frontier to shift *outward*?
- A) An increase in the stock of capital.
 - B) An increase in the production of consumption goods.
 - C) Bad weather.
 - D) A decision to fully utilize unemployed resources.
 - E) A decrease in the population.
14. In general, the higher the proportion of resources devoted to technological research in an economy, the
- A) greater will be current consumption.
 - B) faster the production possibility frontier will shift outward.
 - C) faster the production possibility frontier will shift inward.
 - D) closer it will come to having a comparative advantage in the production of all goods.
 - E) more bowed out will be the shape of the production possibility frontier.
15. A person who has an absolute advantage in the production of all goods will
- A) also have a comparative advantage in the production of all goods.
 - B) not be able to gain from specialization and exchange.
 - C) produce all goods at the lowest opportunity cost.
 - D) not have a comparative advantage in the production of any goods.
 - E) generally have a comparative advantage in the production of only some goods and not others.

Use the following to answer questions 16-17:

Fact 1

In an eight-hour day, Andy can produce either 24 loaves of bread or 8 kilograms of butter. In an eight-hour day, Rolfe can produce either 8 loaves of bread or 8 kilograms of butter.

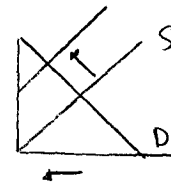
16. From Fact 1, we know that
- A) Andy has the lower opportunity cost of producing bread, while Andy and Rolfe have equal opportunity costs of producing butter.
 - B) Andy has the lower opportunity cost of producing both bread and butter.
 - C) Andy has the lower opportunity cost of producing bread, while Rolfe has the lower opportunity cost of producing butter.
 - D) Andy has the lower opportunity cost of producing butter, while Rolfe has the lower opportunity cost of producing bread.
 - E) Andy has the higher opportunity cost of producing both bread and butter.
17. Refer to Fact 1. The opportunity cost of producing 1 kilogram of butter is
- A) 20 minutes (1/3 hour) for Andy and 1 hour for Rolfe.
 - B) 1 hour for Andy and 1 hour for Rolfe.
 - C) 3 loaves of bread for Andy and 1/3 loaf of bread for Rolfe.
 - D) 3 loaves of bread for Andy and 1 loaf of bread for Rolfe.
 - E) 8 loaves of bread for Rolfe and 24 loaves of bread for Andy.

18. Which of the following quotations illustrates dynamic comparative advantage?
- A) "If the firm reorganized its production process, it could produce more widgets *and* more gadgets."
 - B) "The firm should sell more gadgets, even if it means less widget sales."
 - C) "The more and more gadgets the firm produces, the bigger the fall in widget production."
 - D) "If the firm invested more in capital equipment, it can expand sales next year."
 - E) "The firm has been able to lower costs due to its extensive experience in building widgets."
19. Scarcity can be eliminated through
- A) cooperation.
 - B) competition.
 - C) market mechanisms.
 - D) command mechanisms.
 - E) none of the above.

Use the following to answer question 20:

Table 2 Quantities demanded and supplied in equilibrium before and after a drought strikes potato farmers.

	<u>Potatoes</u>		<u>Hamburgers</u>		<u>Rice</u>	
	<u>before</u>	<u>after</u>	<u>before</u>	<u>after</u>	<u>before</u>	<u>after</u>
Region 1	100	30	50	20	3	50
Region 2	10	5	4	50	50	60



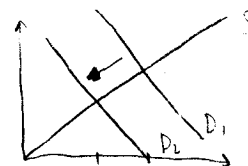
20. According to the information in Table 2, in Region 1 there is
- A) an increase in the quantity of rice supplied.
 - B) a decrease in the quantity of rice supplied
 - C) an increase in the supply of rice.
 - D) a decrease in the supply of rice.
 - E) an increase in the quantity of rice demanded.

Use the following to answer question 21:

Table 3

Year	Coffee Price	Tea Price	Cola Price
1997	\$1.25	\$1.10	\$0.80
1998	\$1.50	\$1.00	\$1.00
1999	\$1.25	\$1.20	\$1.00

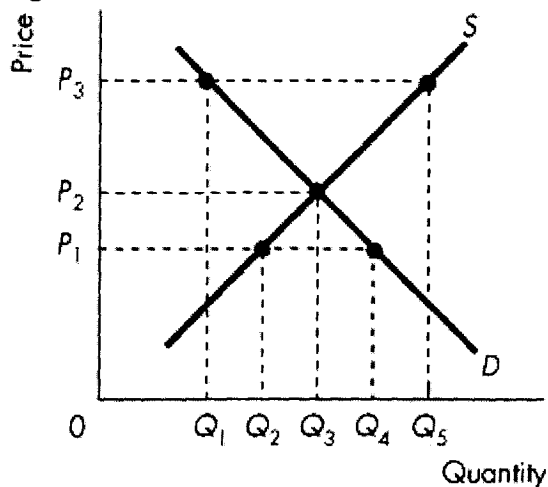
21. Consider Table 3. In 1999, the relative price of cola in terms of tea is
- A) 1.00.
 - B) 1.20.
 - C) 0.83.
 - D) 1.25.
 - E) not determinable without more information.
22. Turnips are inferior goods if
- A) an increase in the price of turnips decreases the quantity of turnips that consumers want to buy.
 - B) an increase in income decreases the demand for turnips.
 - C) an increase in income increases the demand for turnips.
 - D) turnips violate the law of demand.
 - E) turnips are a low quality good.
23. A decrease in quantity demanded is represented by a
- A) rightward shift of the demand curve.
 - B) leftward shift of the demand curve.
 - C) movement upward and to the left along the demand curve.
 - D) movement downward and to the right along the demand curve.
 - E) rightward shift of the supply curve.
24. If an increase in the price of good *A* causes the demand curve for good *B* to shift to the left, then
- A) *A* and *B* are substitutes in consumption.
 - B) *A* and *B* are complements in consumption.
 - C) *B* is an inferior good.
 - D) *B* is a normal good.
 - E) *A* and *B* are complements in production.
25. A decrease in the quantity supplied is represented by a
- A) movement down the supply curve.
 - B) movement up the supply curve.
 - C) rightward shift of the supply curve.
 - D) leftward shift of the supply curve.
 - E) rightward shift of the demand curve.



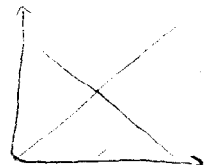
26. A shift of the supply curve for rutabagas will be caused by
- A) a change in preferences for rutabagas.
 - B) a change in the price of a related good that is a substitute in consumption for rutabagas.
 - C) a change in income.
 - D) a change in the price of rutabagas.
 - E) none of the above.

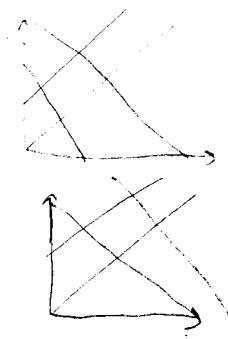
Use the following to answer questions 27-28:

Figure 1



27. At price P_3 in Figure 1,
- A) this market is in equilibrium.
 - B) there is a shortage in the amount of $Q_5 - Q_1$.
 - C) there is a tendency for the price to rise.
 - D) equilibrium quantity is Q_5 .
 - E) there is a surplus in the amount $Q_5 - Q_1$.
28. At price P_2 in Figure 1, which one of the following is *not* true?
- A) This market is in equilibrium.
 - B) The quantity demanded is equal to the quantity supplied.
 - C) The quantity demanded is Q_1 .
 - D) There is no surplus.
 - E) The quantity supplied is Q_3 .
29. If A and B are substitutes in production and the price of A falls, the supply of B will
- A) increase, and thus the price of B will increase.
 - B) increase, and thus the price of B will decrease.
 - C) decrease, and thus the price of B will decrease.
 - D) decrease, and thus the price of B will increase.
 - E) shift depending on whether A and B are substitutes in consumption.





30. Which one of the following will definitely decrease the equilibrium quantity?
- A) An increase in both demand and supply.
 - B) A decrease in both demand and supply.
 - C) An increase in demand combined with a decrease in supply.
 - D) A decrease in demand combined with an increase in supply.
 - E) None of the above.

burger & fries

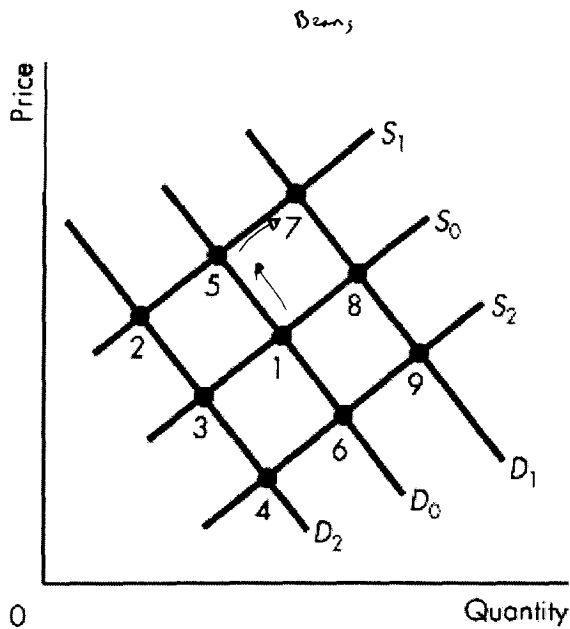
31. If A and B are complementary goods (in consumption) and the cost of a resource used in the production of A decreases, then the price of
- A) B will fall but the price of A will rise.
 - B) B will rise but the price of A will fall.
 - C) both A and B will rise.
 - D) both A and B will fall.
 - E) A will fall and the price of B will remain unchanged.

32. There have been severe problems in the Atlantic fishing industry, with large falls in the fish stocks. As a result of this,
- A) the price of fish will fall, since no one will be able to purchase them.
 - B) the quantity of fish sold will increase, as fishermen will catch more to make up for the shortage.
 - C) equilibrium price and quantity will fall or rise depending on how large is the fall in fish stocks.
 - D) both equilibrium price and quantity will rise, as consumers will desire even more fish, since they are scarce.
 - E) the fall in the fish stocks will lead to a shortage, and therefore, a rise in price and a fall in equilibrium quantity.

Use the following to answer questions 33-34:

Figure 2

The figure shows some demand curves and supply curves in the market for beans. The original equilibrium in this market is at the point labelled 1.



Supply
 ↑ price ↓ beans
 ↓ price ↓ beans

Demand
 ↑ price ↑ beans
 ↓ price ↑ beans

↑ P, Q ↑

33. Consider Figure 2. If the price of peas, a substitute in production for beans, increases and if beans and peas *are not* substitutes in consumption, what is the new equilibrium point in the market for beans?
- A) 8.
 - B) 3.
 - C) 9.
 - D) 5.
 - E) 6.
34. Consider Figure 2. If the price of peas, a substitute in production and a substitute in consumption for beans, increases what is the new equilibrium point in the market for beans?
- A) 2.
 - B) 3.
 - C) 9.
 - D) 4.
 - E) 7.

Use the following to answer questions 35-37:

Table 4 Demand and supply schedules for belly-button piercing each month by CoolU students.

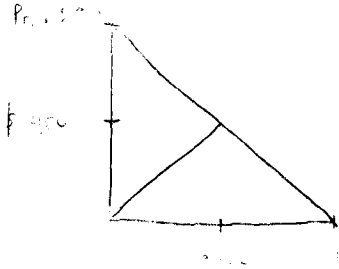
<u>Price</u>	<u>Quantity Supplied</u>	<u>Quantity Demanded</u>		
\$3	150	300	150	300
\$4	160	280	120	320
\$5	170	260	90	340
\$6	180	240	60	360
\$7	190	220	30	380
\$8	200	200	0	400
\$9	210	180	30	420
\$10	220	160	60	440
\$11	230	140	90	460
\$12	240	120	120	480

35. Consider Table 4. Suppose that the price of a belly-button piercing is \$6. There will be a(n) _____ leading to _____.
- A) equilibrium; no change in prices
 - B) shortage; a fall in prices
 - C) shortage; a rise in prices
 - D) surplus; a fall in prices
 - E) surplus; a rise in prices
36. Consider Table 4. In a school newspaper interview, Joe Cool shows off his belly-button stud, setting off a new craze that doubles business at the local belly-button establishments. The new equilibrium price will be \$___ and there will be _____ piercings.
- A) 12; 240
 - B) 8; 400
 - C) 16; 400
 - D) 12; 120
 - E) 16; 200
37. Consider Table 4. A new store opens up on the edge of campus, Peter's Perfectly Prickly Piercing Parlour, which has the capacity to do as much business as all the existing businesses. In addition, in a school newspaper interview, Joe Cool shows off his belly-button stud, setting off a new craze that doubles business at the local belly-button establishments. The new equilibrium price will be \$___ and there will be _____ piercings.
- A) 8; 400
 - B) 8; 200
 - C) 3; 400
 - D) 12; 240
 - E) 16; 400

Use the following to answer question 38:

Table 5 Demand Schedule for Good A.

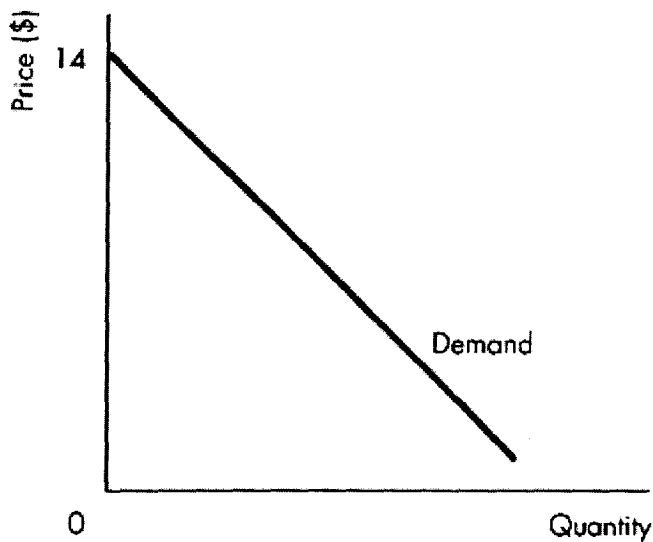
Price (\$ per unit)	Quantity demanded (units)
9.00	0
8.00	2,000
7.00	4,000
6.00	6,000
5.00	8,000
4.00	10,000
3.00	12,000
2.00	14,000
1.00	16,000
0	18,000



38. Refer to Table 5. Demand is unit elastic when the price falls from
- A) \$8 to \$7.
 - B) \$7 to \$6.
 - C) \$6 to \$5.
 - D) \$5 to \$4.
 - E) \$4 to \$3.

Use the following to answer question 39:

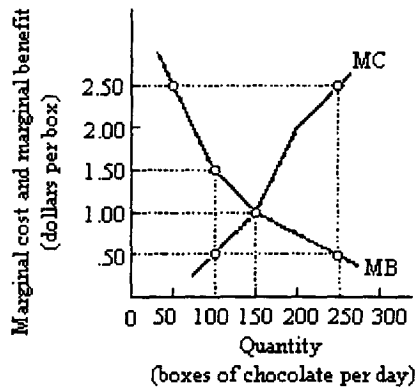
Figure 3



39. Figure 3 illustrates a linear demand curve. If the price falls from \$4 to \$2, we know
- total revenue will increase.
 - total revenue will decrease.
 - total revenue will remain unchanged.
 - quantity demanded will increase by more than 10 percent.
 - the percentage change in quantity demanded will be more than the percentage change in price.
40. You have been hired as an economic consultant by the government of Alberta. The current price of oil is \$20 per barrel, with quantity demanded equal to 50 million barrels a day. It is estimated that the elasticity of demand is constant at 0.6. If supply is restricted so that price rises to \$30, then quantity demanded will fall by
- 24 percent, and total revenue will rise.
 - 6 percent, and total revenue will rise.
 - 60 percent, and total revenue will fall.
 - 40 percent, and total revenue will fall.
 - 24 percent, and total revenue will fall.
- $$\epsilon_D = \frac{\Delta Q}{\Delta P}$$
- $$0.6 = \frac{\Delta Q}{0.4}$$
- $$0.24 = \Delta Q$$
41. Suppose there is a 20 percent increase in income that causes the quantity of good *A* demanded to increase from 19,200 to 20,800 units. The income elasticity of demand for good *A* is
- 0.05.
 - 0.8.
 - 0.4.
 - 1.2.
 - 2.0.
- $$\epsilon_I = \frac{1600}{20000}$$
- $$= 0.2$$
- $$= 0.4$$
42. An increase in the price of good *A* will shift the
- demand curve of good *B* rightward if the cross elasticity of demand between *A* and *B* is negative. *Complement*
 - demand curve of good *B* rightward if the cross elasticity of demand between *A* and *B* is positive. *substitute*
 - supply curve of *B* rightward if the cross elasticity of demand between *A* and *B* is negative. *complement*
 - supply curve of *B* rightward if the cross elasticity of demand between *A* and *B* is positive. *substitute*
 - demand curve of *B* rightward if the income elasticity of demand for *B* is positive. *Normal good*
43. Suppose the price of television sets rises by 10 percent. Which one of the following would we expect to be the most elastic following such a price change?
- The momentary supply of television sets.
 - The short-run supply of television sets.
 - The long-run supply of television sets.
 - The momentary demand for television sets.
 - The normal demand for television sets.

Use the following to answer question 44:

Figure 6.3



44. Figure 6.3 shows the marginal benefit and marginal cost curves of chocolate in the nation of Kaffenia. When 250 boxes of chocolate are produced and consumed in Kaffenia each day, that is
- A) better than 200 boxes because more is always better than less.
 - B) more than the efficient quantity because the opportunity cost of the 250th box exceeds its marginal benefit.
 - C) less than the efficient quantity because the opportunity cost of the 250th box exceeds its marginal benefit.
 - D) more than the efficient quantity because the marginal cost of the 250th box exceeds its marginal benefit.
 - E) both b) and d).

Use the following to answer question 45:

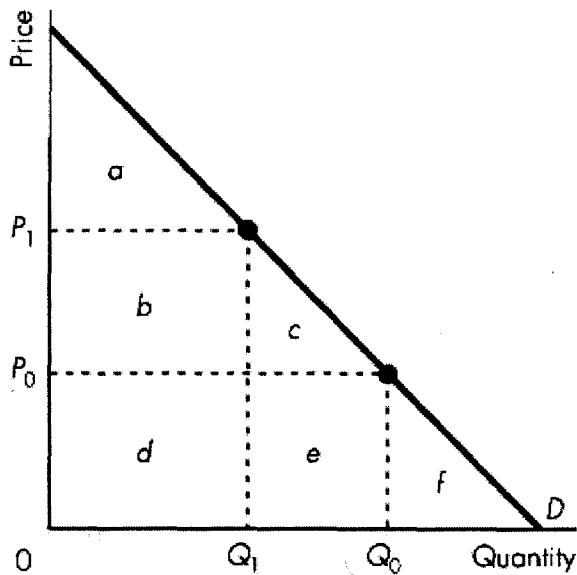
Table 6 Jim's Demand for Tickets.

Price (\$ per ticket)	Quantity Demanded
20	1
10	2
3	3
1	4

45. Jim wants to go to a basketball game but it is sold out. He has a demand schedule as shown in Table 6. He meets a ticket scalper who offers to sell him one ticket for \$20 and a second ticket for \$10. What is Jim's consumer surplus if he buys the two tickets?
- A) \$10.
 - B) \$20.
 - C) \$0.
 - D) \$30.
 - E) \$34.

Use the following to answer questions 46-47:

Figure 4



46. Refer to Figure 4. If the price is P_1 , consumer surplus is
- A) a .
 - B) b plus c .
 - C) d plus e .
 - D) a plus b plus c .
 - E) a plus b plus c plus d plus e .
47. Refer to Figure 4. If the price is P_0 , then the value of the last unit consumed is
- A) P_0 .
 - B) P_1 .
 - C) area $a + b + c$.
 - D) 0.
 - E) none of the above.

48. The marginal cost for Morgan's Marvellous Movies is given in the following table:

Quantity	Marginal Cost (\$)
1	4
2	4.50
3	5
4	5.50
5	6

If the firm sells 4 units at \$7 each, what is its producer surplus?

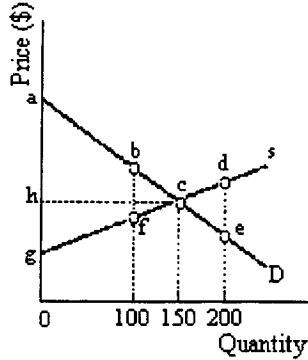
- A) \$28.
- B) \$3.
- C) \$7.
- D) \$6.
- E) \$9.

	1 st	2 nd	3 rd	4 th
Price	7	7	7	7
MC	4	4.50	5	5.50

$$\begin{aligned}
 \text{Producer Surplus} &= (7 - 4) + (7 - 4.50) + (7 - 5) + (7 - 5.50) \\
 &= 3 + 2.5 + 2 + 1.5 = 9
 \end{aligned}$$

Use the following to answer question 49:

Figure 6.7



49. Refer to Figure 6.7. If the level of output is 100, the deadweight loss is area

- A) *bcf*.
- B) *acg*.
- C) *dce*.
- D) *ach*.
- E) *hcg*.

50. Which of the following ideas describes the concept of "utilitarianism"?

- I. Utilitarianism gained popularity in the 1930s.
- II. Utilitarians believed that a society should strive to make as many people as happy as possible.
- III. Utilitarians claimed that taking money from rich people and giving it to poorer people would not make an economy better off.

- A) I only.
- B) II only.
- C) I and III.
- D) II and III.
- E) I, II, and III.

Review For Midterm 1:

1. E	6. A	11. A	16. C	21. B	26. C
2. A	7. E	12. C	17. C	22. A	27. E
3. A	8. D	13. B	18. D	23. B	28. D
4. B	9. B	14. A B	19. D	24. D	29. D
5. E	10. E	15. B	20. A	25. E	30. A

Midterm 1:

1. C	11.	21. C	31. B	41. C
2. D	12. C	22. B	32. E	42. B
3. B	13. A	23. C	33. D	43. C
4. D	14. B	24. B	34. E	44.
5. A	15. E	25. A	35. C	45.
6. B	16. C	26. E	36. A	46. A
7. A	17. D	27. E	37. A	47. A
8. D	18. E	28. C	38. D	48. E
9. E	19. E	29. B	39. B	49. A
10.	20. A	30. B	40. A	50. B



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