

**Economics 101**  
**Spring 2000**  
**Section 4 - Hallam**  
**Exam 1A**

1. Consider the following supply and demand curves,  $D = 23 - P$     $S = 4P - 2$ . The equilibrium price and quantity are given by
  - a.  $P = 7, Q = 16$
  - b.  $P = 4, Q = 14$
  - c.  $P = 4, Q = 19$
  - d.  $P = 5, Q = 18$
  - e.  $P = 6, Q = 22$
  
2. Demand now increases to  $D = 33 - P$ . The equilibrium price and quantity are given by
  - a.  $P = 9, Q = 34$
  - b.  $P = 5, Q = 18$
  - c.  $P = 6, Q = 22$
  - d.  $P = 8, Q = 25$
  - e.  $P = 7, Q = 26$
  
3. With demand at the original level of  $D = 23 - P$ , supply changes to  $S = -4 + 8P$ . The equilibrium price and quantity are given by
  - a.  $P = 5, Q = 18$
  - b.  $P = 6, Q = 22$
  - c.  $P = 3, Q = 20$
  - d.  $P = 3, Q = 19$
  - e.  $P = 4, Q = 28$
  
4. Opportunity cost is best described as
  - a. the value of the time needed to make a choice.
  - b. the value of the alternative opportunity given up when a choice is made.
  - c. the most cost efficient way to produce an opportunity.
  - d. the cost of discovering an opportunity.
  - e. the cost of the inputs in a production process.
  
5. An Iowa farmer has 1000 acres of land. He currently plants 500 acres to corn and 500 acres to soybean. He also buys feeder pigs and feeds them his own corn and other purchased ingredients before selling them to slaughter. A research scientist at ISU discovers a new way to make ethanol from corn so that it is much cheaper to produce the ethanol, increasing the demand for corn. This has a permanent impact of the price of corn. How would this influence the opportunity cost of the farmer?
  - a. The opportunity cost of growing soybean would rise.
  - b. The opportunity cost of growing corn would rise.
  - c. The opportunity cost of feeding pigs would rise.
  - d. Both a and c are correct.
  - e. It would have no bearing on the farmer's opportunity cost because he feeds the corn to the pigs.
  
6. Most individuals would prefer which of the following situations when all income must be spent on food, housing, and clothing, or be forfeited.
  - a. an annual income of \$50,000 with monthly housing, food and clothing expenses of \$5,000.
  - b. an annual income of \$22,000 with monthly housing, food and clothing expenses of \$2,000.
  - c. an annual income of \$72,000 with monthly housing, food and clothing expenses of \$8,000.
  - d. an annual income of \$108,000 with monthly housing, food and clothing expenses of \$12,000.

Consider the following data on cookie and brownie production.

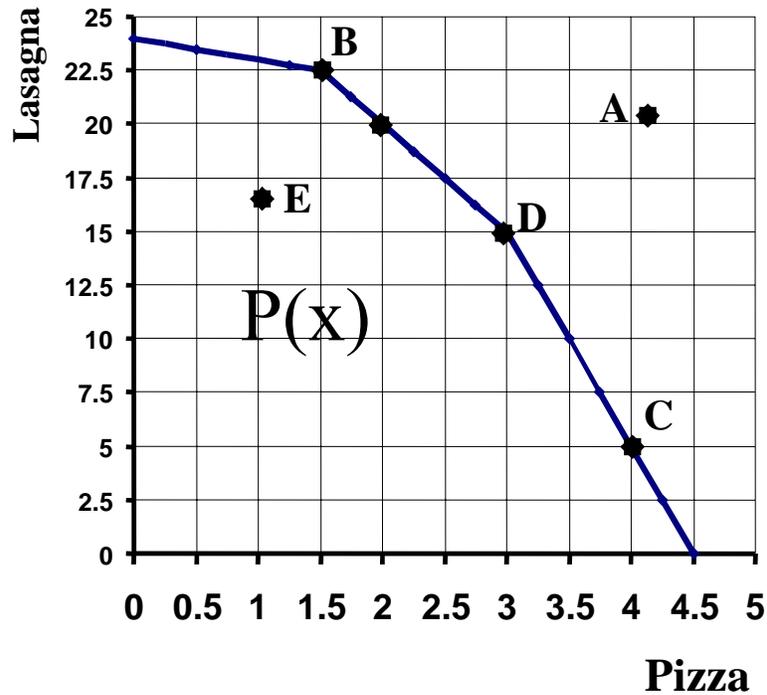
Cookies	Brownies
100	0
94	10
86	20
74	30
60	40
44	50
24	60
0	70

7. What is the opportunity cost of 14 more cookies when the firm is already producing 60?
- 8 brownies
  - 14 brownies
  - 20 brownies
  - 10 brownies
  - 16 brownies
8. What is the opportunity cost of 10 more brownies when the firm is already producing 20?
- 8 cookies
  - 14 cookies
  - 20 cookies
  - 12 cookies
  - 10 cookies
9. If the slope of the production possibility frontier (PPF) is given by  $\frac{\Delta \text{ cookies}}{\Delta \text{ brownies}}$ , then what is the slope of the PPF when brownies change from 50 to 60?
- 1.8
  - 2
  - 1.6
  - 2
  - 2.4
10. Which of the following is a reasonable method to construct the production possibility set, which is the set of all output combinations that are *producible* for a given set of inputs.
- pick a level of the two outputs and then find all levels of inputs that are able to produce this specific output combination.
  - set a level for all inputs, pick a level of one of the two outputs, find the maximum level of the other output for this level of the first output, and then repeat for other levels of the first output.
  - set a level for all inputs, pick a level of one of the two outputs, find all feasible levels of the other output for this level of the first output, and then repeat for other levels of the first output.
  - pick a level of the two outputs and hold this fixed, pick a level of one of the two inputs and then find the minimum level of the other input that is required to produce the chosen output combination given the fixed level of the first input, and then repeat for other levels of the first input.

11. Which of the following is a correct statement concerning expendables, capital, and capital services?
- Expendable factors of production are completely used up or consumed during a single production period. Capital is machinery, buildings and equipment. Capital services are the flows of financial assets and other services provided by the banking sector.
  - Expendable factors of production are completely used up or consumed during a single production period. Capital is a stock that is not used up during a single production period, and provides services over time. Capital services are the flow of productive services that can be obtained from a given capital stock during a production period.
  - Expendable factors of production are inputs that are purchased outside the firm. Capital is machinery, buildings and equipment along with human capital. Capital services are the flows of financial assets and other services provided by the banking sector.
  - Expendable factors of production are inputs that are purchased outside the firm. Capital is a stock that is not used up during a single production period, and provides services over time. Capital services are the flow of productive services that can be obtained from a given capital stock during a production period.
12. Which of the following is a capital service?
- Computer
  - Tire
  - 100 hours of a lawyers time
  - College Professor
  - Oil
13. Under market capitalism, resources are allocated by
- command and owned privately.
  - the market and owned by the state.
  - the market and owned privately.
  - command and owned by the state.
  - tradition and owned by all.
14. What is a technology in economics?
- A description of the set of outputs that can be produced by a given set of factors of production using a given method or process.
  - A major at DMACC.
  - A method of achieving a practical purpose.
  - A description of the way a firm makes its decisions.
  - A description of the set of inputs used by the firm.
15. Economics is the
- study of unfettered choice.
  - study how business firms make their choices.
  - study of choice with constraints.
  - study of how to maximize profit.
  - study of how markets work.
16. Why is the boundary of the production possibility frontier usually concave to the origin?
- Some inputs are better suited to some uses.
  - The more we produce of something, the smaller is the opportunity cost of producing more.
  - Both a and d are correct.
  - Some allocated inputs may be shared between uses.
  - Machines are inefficient when used to produce two products.

The following graph should be used for questions 17, 18 and 19.

## Production Possibility Set Pizza and Lasagna



17. Which point is inefficient?
- A.
  - B.
  - C.
  - D.
  - E.
18. At what points is the firm making a change in the use of inputs or in how it produces the product?
- a. A and B
  - b. B and C
  - c. B and D
  - d. A and D
  - e. A and E
19. When the firm is producing between 1.5 and 3 pizzas, what is the opportunity cost of one more pizza?
- a. 3 lasagna
  - b. 5 lasagna
  - c. 7.5 lasagna
  - d. 2.5 lasagna
  - e. 4 lasagna

Huck Finn and his friend Jim live on a raft in the middle of the river. The following table represents their output in a day of work.

	Fish	Crawdads
Huck	20	80
Jim	25	75

20. Which individual has the absolute advantage in crawdad production?
- Jim
  - Tom Sawyer
  - Aunt Sally
  - Huck
  - The Duke

21. Which of the following statements is true?
- Jim has an absolute advantage in both products and a comparative advantage in fishing.
  - Jim has an absolute advantage in fishing and a comparative advantage in fishing.
  - Huck has an absolute in fishing while Jim has an absolute advantage in crawdads.
  - Samuel Clemens has a comparative disadvantage in both products.
  - Huck has an absolute advantage in crawdads and a comparative advantage in fishing.

The Scarecrow and the Tinman live in the land of OZ. The following table represents their output in a day of work.

	Trees felled	Birds scared
Scarecrow	18	90
Tinman	20	120

22. Which of the following statements is true?
- The Scarecrow has an absolute advantage in scaring birds.
  - The Scarecrow has an absolute disadvantage in both products and a comparative advantage in scaring birds.
  - The Tinman has an absolute advantage in both products and a comparative advantage in scaring birds.
  - The Scarecrow has an absolute advantage in both products and a comparative advantage in felling trees.
  - The Tinman has an absolute advantage in both products and a comparative advantage in felling trees.
23. When is a market purely competitive?
- When buyer or sellers in a market are not able affect the price of a product.
  - When there are many buyers and sellers in the market.
  - When there are few barriers to entry in the market.
  - When buyer or sellers in a market are able affect the price of a product.
  - When there are few firms in the market.

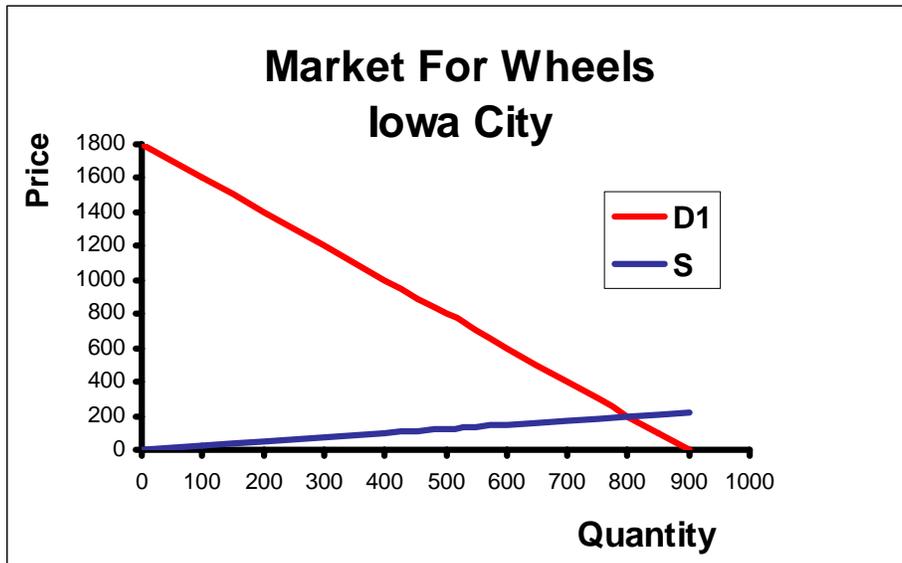
24. Consider the following table which shows the supply and demand functions for bike wheels in Ames, IA.

Price (per wheel)	Quantity supplied	Quantity demanded
0	0	1020
100	500	1010
150	750	1005
200	1000	1000
300	1500	990
400	2000	980
500	2500	970
700	3500	950
900	4500	930
1000	5000	920
1200	6000	900

The equilibrium price is:

- a. 100
- b. 150
- c. 200
- d. 300
- e. 500

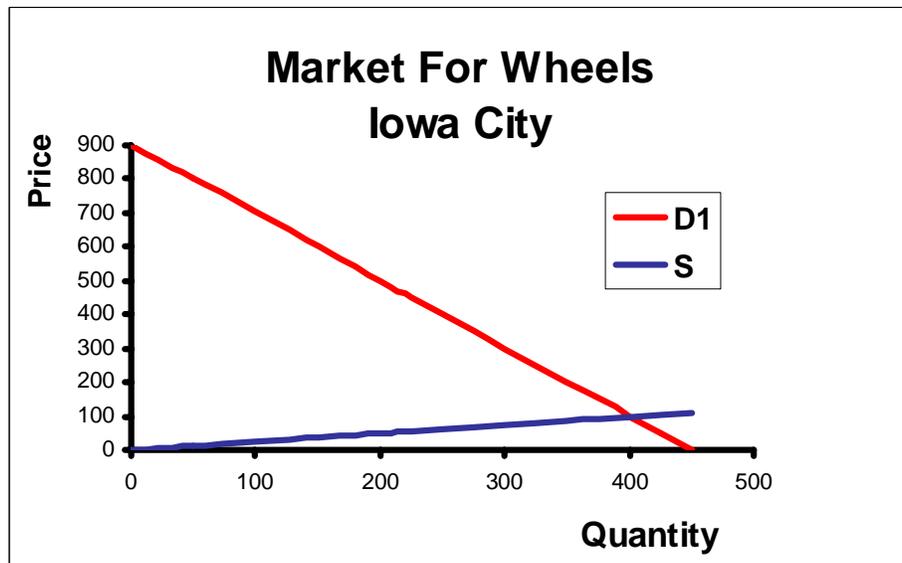
25. Consider the following supply-demand graph for bike wheels in Iowa City, IA.



What are the equilibrium price and quantity?

- a.  $P = 100, Q = 400$
- b.  $P = 200, Q = 800$
- c.  $P = 400, Q = 700$
- d.  $P = 500, Q = 2000$
- e.  $P = 600, Q = 600$

26. Now consider situation where demand shifts due to a lower prices for wheels in Ames.



What are the new equilibrium price and quantity?

- a.  $P = 50, Q = 200$
- b.  $P = 400, Q = 400$
- c.  $P = 0, Q = 500$
- d.  $P = 100, Q = 400$
- e.  $P = 200, Q = 300$

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**Key**

Question	Correct Answer		Question	Correct Answer	
1	d		14	a	
2	e		15	c	
3	c		16	c	
4	b		17	e	
5	d		18	c	
6	b		19	b	
7	d		20	d	
8	d		21	b	
9	b		22	c	
10	c		23	a	
11	b		24	c	
12	c		25	b	
13	c		26	d	