

**Economics 101**  
**Spring 2000**  
**Section 4 - Hallam**  
**Quiz 6**

1. Ignoring all other goods, if Jessica's marginal utility per pound of bread is 10 and per pound of cheese is 40, her
  - a. total utility would be maximized if the price per pound of cheese is 3 times 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 1/4 the price per pound of bread
  - e. total utility would be maximized if the price per pound of cheese is 4 times the price per pound of bread
  
2. Jeff spends all his income on warm-up suits and running shoes. The price of a warm-up suit is three times as large as the price for a pair of running shoes. In order to maximize total utility, Jeff should
  - a. buy three times as many warm up suits as pairs of running shoes
  - b. buy both items until the marginal utility of a warm-up suit is three times the marginal utility of a pair of running shoes
  - c. buy four times as many pairs of running shoes as warm up suits
  - d. cannot tell from the information given his income equally between running shoes and warm up suits
  - e. buy both items until the marginal utility of a pair of running shoes is three times the marginal utility of a warm-up suit
  
3. In an equilibrium for an individual consumer,
  - a. the slope of the budget line and the slope of the indifference curve are equal
  - b.  $\frac{-p_2}{p_1} = \frac{\Delta q_1}{\Delta q_2}$
  - c.  $\frac{p_2}{p_1} = \frac{MU_{q_2}}{MU_{q_1}}$
  - d. both a and b
  - e. a, b, and c
  
4. For this problem  $p_1 = 4$ ,  $p_2 = 4$  and  $I = 76$ . Below is a table of alternative consumption choices and the utility and the marginal utility they provide. Which is the optimal choice?

$q_1$	$q_2$	cost	u	$MU_1$	$MU_2$
19	0	76	8.659	9.2	1.2
17	2	76	10.819	8.4	2.4
15	4	76	11.982	7.6	3.6
13	6	76	12.575	6.8	4.8
11	8	76	12.755	6	6
7	12	76	12.114	4.4	8.4
5	14	76	11.33	3.6	9.6
0	19	76	7.765	1.6	12.6

- a.  $q_1 = 17$ ,  $q_2 = 2$
- b.  $q_1 = 15$ ,  $q_2 = 4$
- c.  $q_1 = 11$ ,  $q_2 = 8$
- d.  $q_1 = 7$ ,  $q_2 = 12$
- e.  $q_1 = 5$ ,  $q_2 = 14$

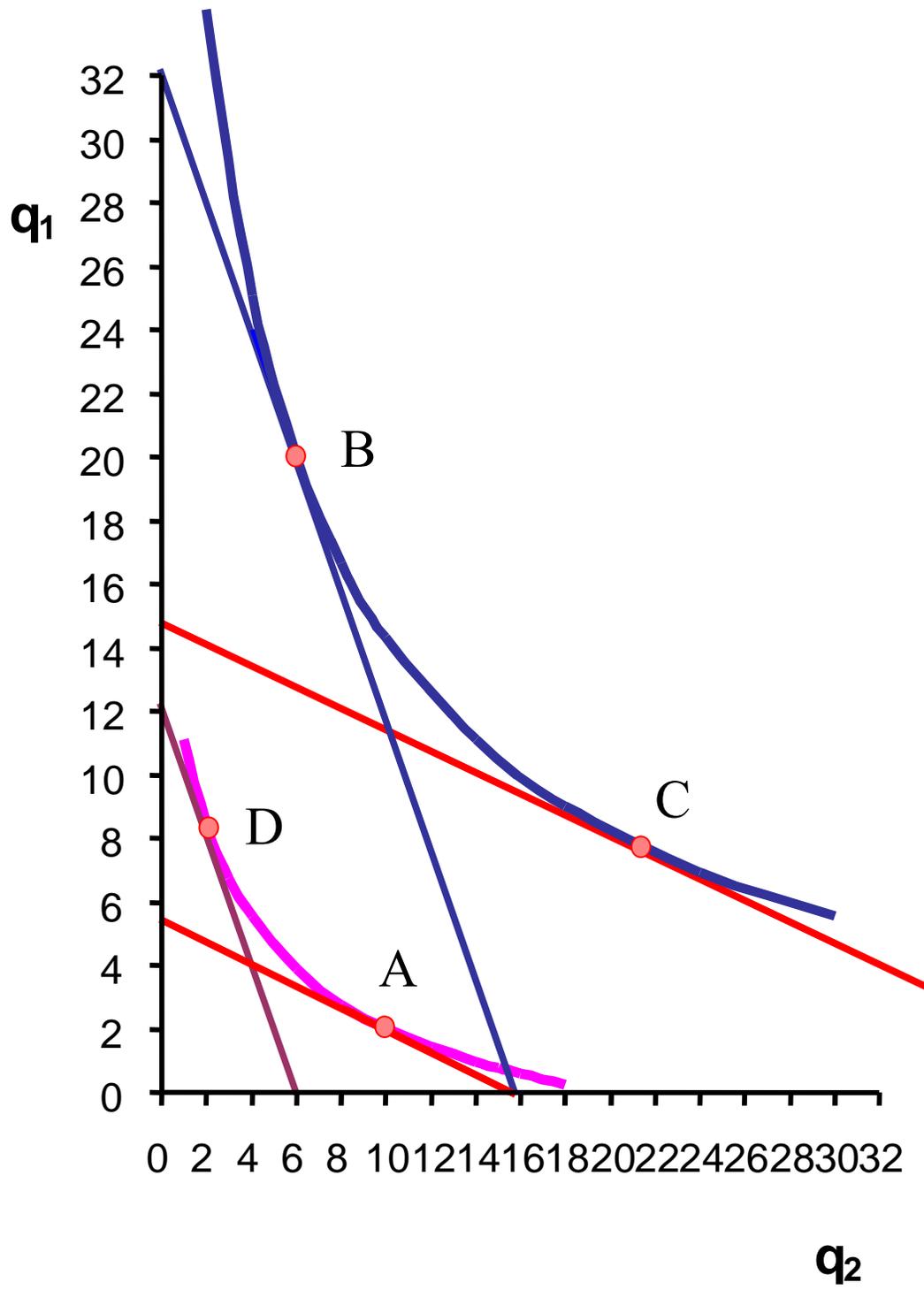
5. On the graph on the attached page, there is a decrease in the price of good 1. The initial situation is  $p_1 = 12$ ,  $p_2 = 4$ , and income = 64. The equilibrium is at point A. Then the price of  $p_1$  falls to 2. The consumer buys more of good one as its price falls. The new equilibrium is at point B. Substitution and income effects are evaluated at the new utility level. Which of the following statements is true?
- The income effect of the price change is from point A to point B
  - The substitution effect of the price change is from point C to point B
  - The income effect of the price change is from point B to point D
  - The substitution effect of the price change is from point D to point A
  - Both c and d are correct
6. Marginal (physical) product measures
- the change in cost from the production of one more unit of output
  - the change in an input required to produce one more unit of output
  - the change in output that can be obtained from one more dollar of expenditure
  - the change in output that results from one more unit of an input
  - the level of output divided by the level of input
7. When marginal product is falling but positive
- total product is falling
  - average product is falling
  - total product is rising at a decreasing rate
  - average product is at a maximum
  - marginal product is less than average product

8. Below is some data on use of an input and total product. What is the marginal product in going from 14 to 16 units of input.

$x_1$	$y$	APP	D MPP
0	0		
2	9.6		
4	18.4		
6	26.4	4.4	4
8	33.6	4.2	
10	40		
12	45.6		
14	50.4		
16	54.4		
18	57.6		
20	60	3	
22	61.6		0.8

- a. 4  
b. 2  
c. -2  
d. 50.4  
e. 3.6
9. For the data in problem 8, what is average product when  $x_1 = 10$ ?
- a. 3.2  
b. 2.8  
c. 4  
d. 3.8  
e. None of the above
10. Fixed costs are those costs
- a. That the firm cannot recover if it liquidates  
b. That are affected by the firm's actions in the current period  
c. That the firm is committed to pay for factors of production, regardless of the firm's current decisions  
d. That can be depreciated  
e. That are owed on loans

# Decrease in the price of good 1



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**Answer Key**

Question	Correct Answer
1	e
2	b
3	e
4	c
5	b
6	d
7	c
8	b
9	c
10	c