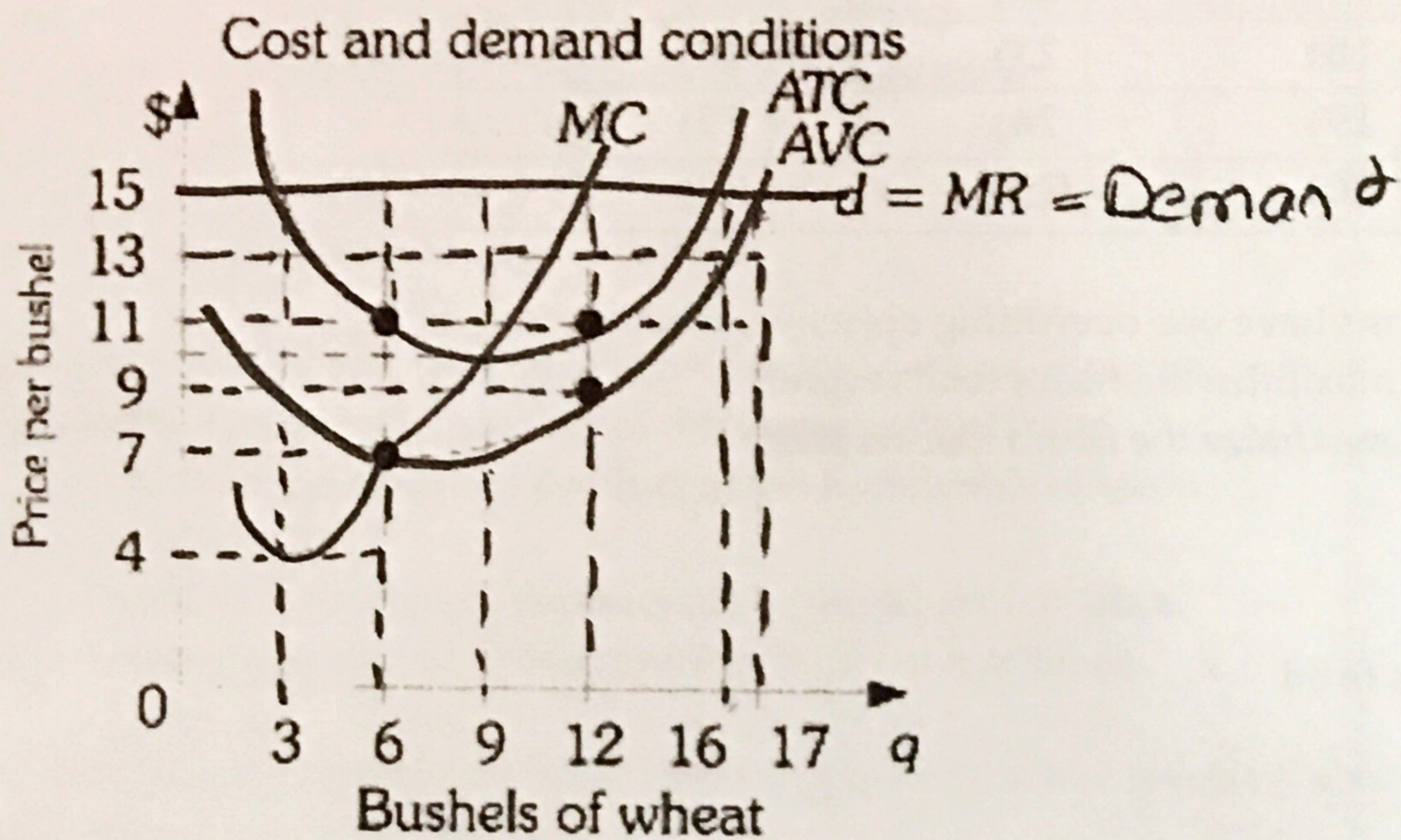


Name: -----
 GustID: 11823 -----
 Part I Grade : 36 ----- (out of 40)
 Part II Grade : 44 ----- (out of 60)

Bonus : 0 ----- (out of 4)
 Total: 80 ----- (out of 100)

PART I- SHORT ANSWER QUESTION



$4 \times 9 = 36$

Figure 3

- a) Refer to Figure 3. What kind of industry does this firm belong to? (4 points) Why? (4 points) 8
 it belongs to perfectly competitive, because $MR = MC$ MR = P
- b) Refer to Figure 3. Write the profit maximizing condition for the firm in graph. (4 points)
 it will supply to short run curve when firm $MR = MC = d$
- c) Refer to Figure 3. What is the profit maximizing quantity? (4 points)
 $Q = 12$ 4
- d) Refer to Figure 3. What is Total Revenue when profit is maximized? (4 points)
 $TR = P \times q = 12 \times 15 = 180$ 4
- e) Refer to Figure 3. What is the value of ATC when profit is maximized? (4 points)
 $ATC = 11$ 4
- f) Refer to Figure 3. What is the value of TC when profit is maximized? (4 points)
 $TC = ATC \times q = 11 \times 12 = 132$ 4
- g) Refer to Figure 3. What is the value of maximum profit? (4 points)
 $Profit = TR - TC = 180 - 132 = 48$ 4
- h) Refer to Figure 3. What is the value of AFC when quantity is 16? (4 points)
 $AFC = ATC - AVC = 13 - 11 = 2$ 4
- i) Refer to Figure 3. What is TFC? (4 points)
 $TFC = AFC \times q = 2 \times 13 = 26$ X

PART II- MULTIPLE CHOICE QUESTIONS (Each question is worth 2 points)

Write the answers of Part II to the table below.

Only the table will be graded. Please write either A or B or C or D as the answer.

If you think that the correct answer does not exist, write E as the answer.

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

1) All the decisions made by people who operate firms have one overriding objective, which is to _____.

- A) maximize the quantity that the firm sells
- B) maximize the firm's total revenue
- C) make maximum attainable profit
- D) maximize the firm's market share

2) The short run is a period of time in which

- A) the amount of output is fixed.
- B) the quantity of at least one factor of production is fixed.
- C) prices and wages are fixed.
- D) nothing the firm does can be altered.

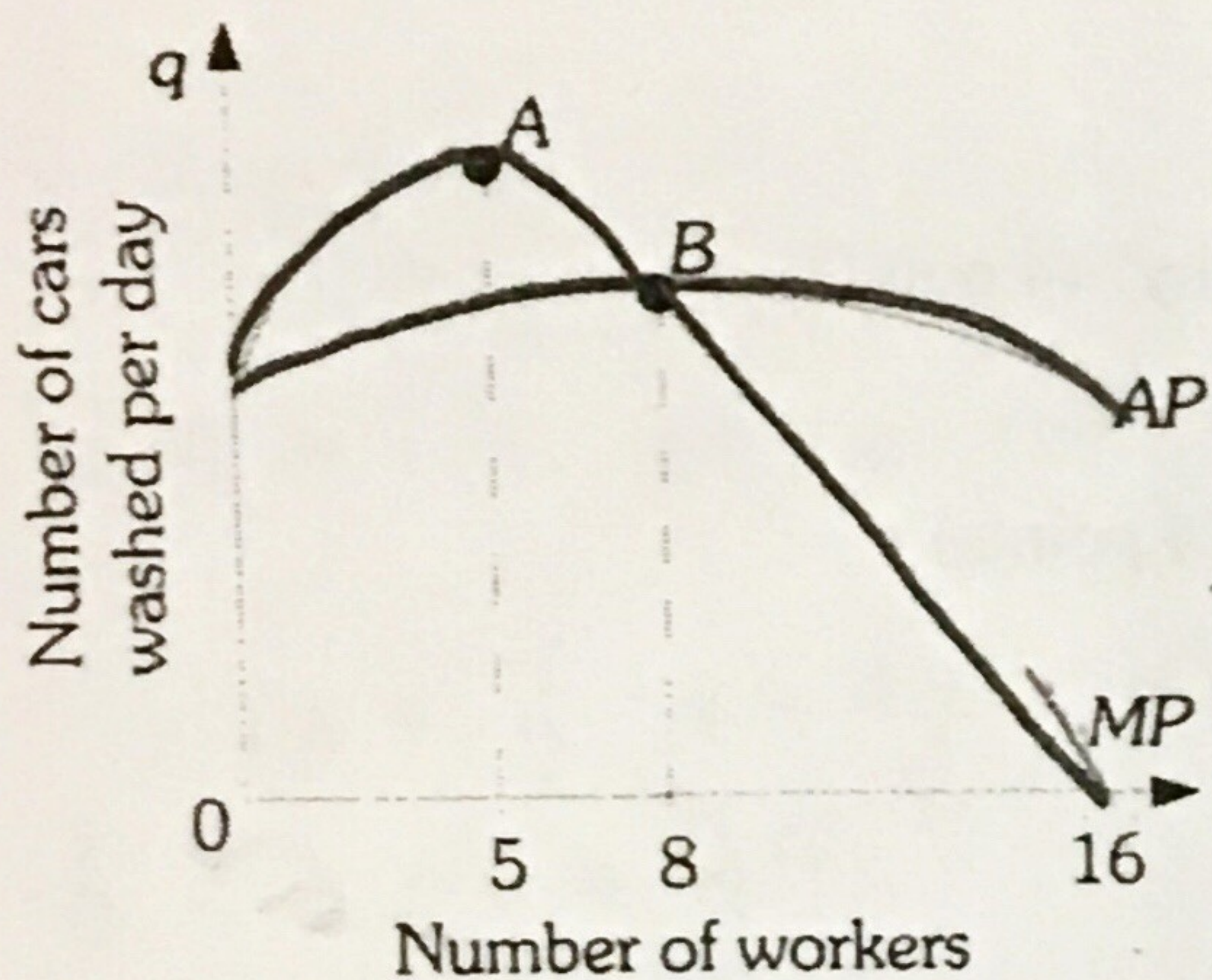


Figure 1

3) Refer to Figure 1. After hiring which worker, marginal cost of car washing service will start to increase?

- A) 5
- B) 8
- C) 16
- D) 1

4) The marginal product of labor is equal to the ~~X~~

- A) total product divided by the total number of workers hired.
- B) slope of the marginal product of labor curve.
- C) increase in the total product that results from hiring one more worker with all other inputs remaining the same.
- D) None of the above answers are correct.

Labor (workers)	TP Total product (units)	MPL Marginal product of labor	APL Average product of labor
0	0	-	-
1	3	3	3
2	9	3	4.5
3	13	4	4
4	16	3	
5	18	2	
6		1	

5) The above (incomplete) table provides information about the relationships between labor and various product measures. The total product that can be produced with 6 units of labor is

A) More information is needed to answer the question.

B) 19.

C) 20.

D) None of the above answers is correct.

6) The above (incomplete) table provides information about the relationships between labor and various product measures. The average product of the fourth unit of labor

A) is less than the marginal product of the fourth unit of labor.

B) is equal to 4.0.

C) is equal to the marginal product of the fourth unit of labor.

D) exceeds the marginal product of the fourth unit of labor.

7) Increasing marginal returns to labor might occur at low levels of labor input because of

A) differing factor proportions.

B) decreasing use of machinery and increasing use of technology.

C) increasing average costs.

D) increasing specialization of tasks.

8) At that amount of output where diminishing marginal returns first sets in,

A) marginal product will begin to decline.

B) average product will begin to decline.

C) total product will begin to decline.

D) all of the above

Labor (workers per day)	Total Product Quantity (T shirts per day)
0	0
1	10
2	22
3	30
4	34
5	35

9) The table above shows some data that describe Tom's T-Shirts' total product when Tom has 1 sewing machine. An increase in the number of workers from 1 to 2 a day increases average product of labor from 10 T shirts per worker and marginal product of labor is _____ T shirts per worker.

A) 10 to 22; 22

B) 10 to 11; 22

C) 10 to 11; 12

D) 10 to 22; 12

10) The table above shows some data that describe Tom's T-Shirts' total product when Tom's has 1 sewing machine.

Diminishing marginal returns begin after the _____ is employed.

A) fourth worker

B) second worker

C) third worker

D) fifth worker

11) When the marginal product of labor is greater than the average product of labor, the

- A) average product of labor must be increasing as labor increases.
- B) marginal product of labor must be increasing as labor increases.
- C) total product must be increasing at an increasing rate as labor increases.
- D) None of the above answers is correct.

12) "Diminishing marginal returns" refer to a situation in which the

- A) marginal product of the next worker hired is less than the marginal product of the previous worker hired.
- B) marginal cost of the next worker hired is less than the marginal cost of the previous worker hired.
- C) average product of the next worker hired is less than the average product of the previous worker hired.
- D) average cost of the next worker hired is less than the average cost of the previous worker hired.

13) A firm's total fixed cost (TFC) is a cost

- A) that is dependent on marginal cost.
- B) that does not change as output changes.
- C) it is certain ("fixed") that the firm must pay.
- D) that is paid in only the long run.

14) Which of the following would be classified as a fixed cost for the local supermarket? 18) _____

- A) The Social Security tax the store pays the federal government on the workers' income.
- B) The cost of the boxes of cereal sold in the store.
- C) The rent from the six-year lease for the building the store uses.
- D) The salary and any overtime paid the store's manager.

15) Average total cost minus average variable cost _____ as output increases because _____ as output increases.

- A) decreases; average fixed cost decreases
- B) decreases; marginal returns diminish
- C) decreases and then increases; marginal cost initially decreases and then increases
- D) decreases; economies of scale are present

16) As output increases, AVC approaches ATC because of

- A) diminishing marginal returns.
- B) decreasing average fixed cost.
- C) increasing marginal cost.
- D) diseconomies of scale.

Output (units)	TC Total cost (dollars)	AVC Average variable cost (dollars)	MC Marginal cost (dollars)
0	20	-----	-----
3			80
9		20	
14	290		
20	380		

17) The above (incomplete) table provides information about the relationships between output and various cost measures. The total fixed cost (TFC) for the firm is

- A) zero.
- B) \$10.
- C) \$20.
- D) None of the above answers is correct.

18) The above (incomplete) table provides information about the relationships between output and various cost measures. The total cost (TC) of producing 9 units of output is

- A) \$190.
- B) \$200.

$TVC = 180$

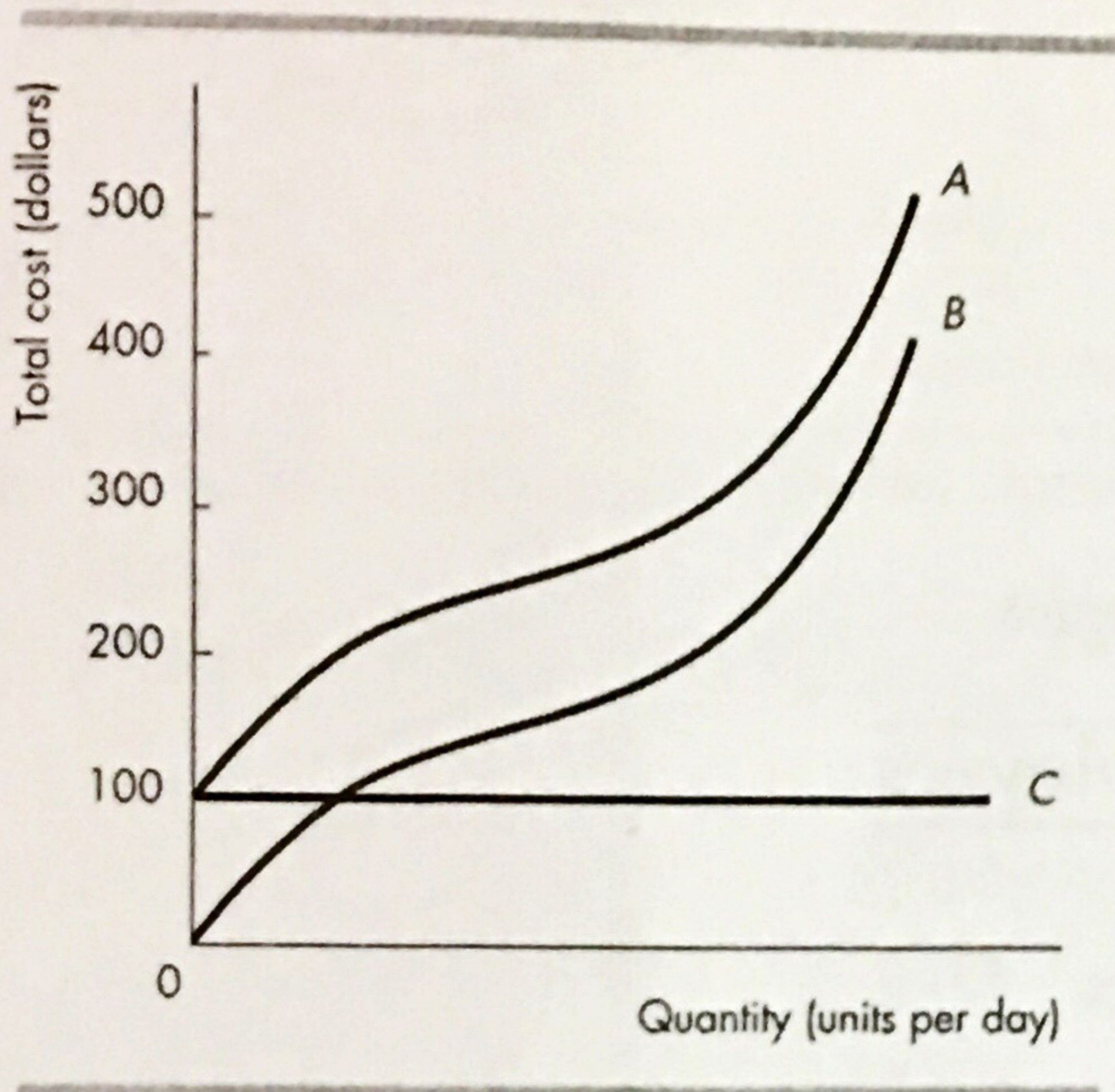
$20 + 9 = 180$

\$180

D) None of the above answers is correct.

19) The above (incomplete) table provides information about the relationships between output and various cost measures. The marginal cost per unit when increasing output from 14 to 20 units is

- A) \$30. B) \$380.
C) \$2. D) \$15



20) In the above figure, the relationship between costs indicates that the distance between curves

- A) A and B is equal to the fixed cost. B) A and B is equal to the variable cost.
C) B and C is equal to the fixed cost. D) B and C is equal to the average total cost.

21) In the above figure, the total fixed cost curve is curve

- A) A. B) B.
 C) C. D) none of the curves in the figure

22) In the above figure, the total cost curve is curve

- A) A. B) B.
C) C. D) none of the curves in the figure

23) In the above figure, the total variable cost curve is curve

- A) A. B) B.
C) C. D) none of the curves in the figure

24) In perfect competition, _____.

- A) only firms know their competitors' prices
B) there are restrictions on entry into the market
 C) there are many firms that sell identical products
D) firms in the market have advantages over firms that plan to enter the market

SCENARIO 1: Upon graduating with an accounting degree, you open your own accounting firm of which you are the sole employee. To start the firm you withdrew your money of 200000 from the bank which was paying you 10% interest rate. Last year you earned a total revenue of \$100,000. Rent and supplies last year were \$50,000.

25) Refer to Scenario 1. Your annual economic costs are

- A) \$0.
- B) \$60,000.
- C) \$70,000.
- D) \$110,000.

26) Refer to Scenario 1. Your annual accounting profit is

- A) \$0.
- B) \$50,000.
- C) \$60,000.
- D) \$110,000.

27) Refer to Scenario 1. Your annual economic profit is

- A) \$30,000.
- B) \$40,000.
- C) \$50,000.
- D) \$100,000.

Inputs Required to Produce a Product Using Alternative Technologies

Technology	Units of Capital ^K	Number of Employees ^L	
A	4	18	= 108
B	6	12	= 72
C	8	8	= 64
D	12	6	= 72

Table 4

28) Refer to Table 4 above. Which technology is the most capital intensive?

- A) A
- B) B
- C) C
- D) D

29) Refer to Table 4. If the hourly wage rate is \$6 and the hourly price of capital is \$10, which production technology should be selected? **Hint: choose the lower cost technology**

- A) A
- B) B
- C) C
- D) D

30) A negative economic profit

- A) means land would be better used elsewhere.
- B) means the resources would have a higher value in another use.
- C) means labor would be better used elsewhere.
- D) means capital would be better used elsewhere.

BONUS: (4 POINTS) → next page

$$\begin{array}{r} 18 \\ \times 6 \\ \hline 108 \end{array}$$

$$\begin{array}{r} 12 \\ \times 6 \\ \hline 72 \end{array}$$

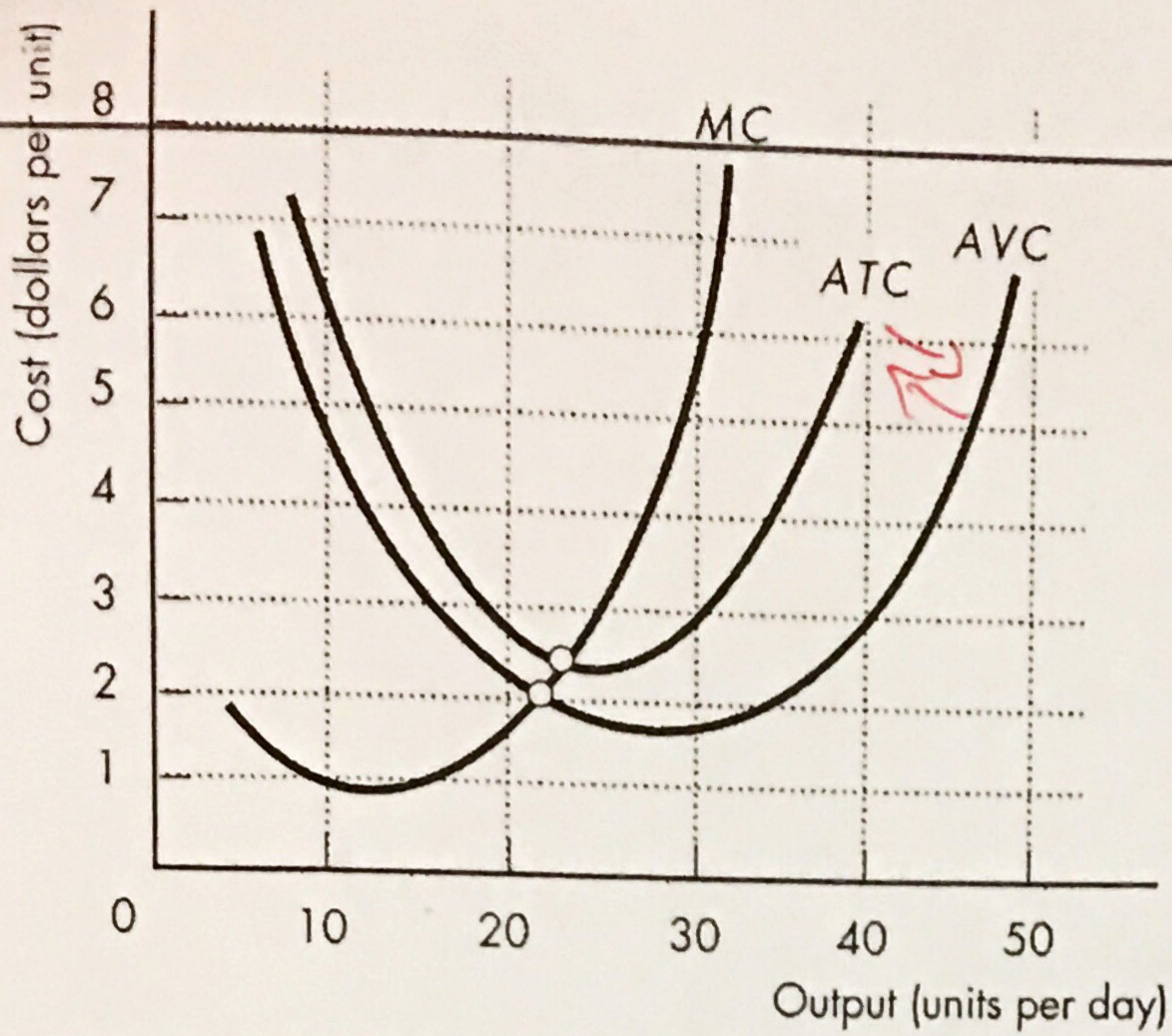
$$90 + = 108$$

$$60 +$$

$$80 + 18 =$$

$$120 + 36 = 156$$

BONUS (4 points)



ATC, AVC are not closer
Wrong →
✓

Are the curves in the figure above drawn correctly? If not, what's wrong?

it is correct

