

11

PROFIT

OVERVIEW

1. Profit is total revenue minus total cost. Total cost includes explicit and implicit costs. Economic profit occurs when total revenue is greater than total cost. Normal profit occurs when total revenue is equal to total cost. Economic loss occurs when total revenue is less than total cost.
2. The firm's goal is to maximize profit. The firm will choose the profit maximizing level of output, where marginal revenue equals marginal cost.
3. If the firm is not at the output where marginal revenue equals marginal cost, then the firm can increase profit by changing the level of output. If marginal revenue is greater than marginal cost, then by increasing output, profit goes up. If marginal revenue is less than marginal cost, then by reducing output, profit goes up.
4. Like the perfectly competitive firm, the monopoly firm maximizes profit by choosing the level of output where marginal revenue equals marginal cost. However, for the monopolist, the price is determined by demand at the profit maximizing level of output.
5. In the short run, a perfectly competitive firm cannot leave the industry because some factor is fixed. The firm may make an economic profit, economic loss, or a normal profit.

MATCHING

- | | | | | |
|-------|----|---------------------------|----|---|
| _____ | 1. | profit | a. | the change in profit when output rises by one unit |
| _____ | 2. | economic profit | b. | the intersection of demand and average total cost |
| _____ | 3. | normal profit | c. | total revenue minus total cost |
| _____ | 4. | economic loss | d. | the output where $MR = MC$ |
| _____ | 5. | profit maximization | e. | when the firm's revenue does not cover the explicit and implicit cost, total cost exceeds total revenue |
| _____ | 6. | marginal profit | f. | total revenue exactly covers opportunity cost, zero economic profit |
| _____ | 7. | profit maximization point | g. | making the greatest profit possible |
| _____ | 8. | break-even point | h. | when total revenue more than covers both explicit and implicit cost |

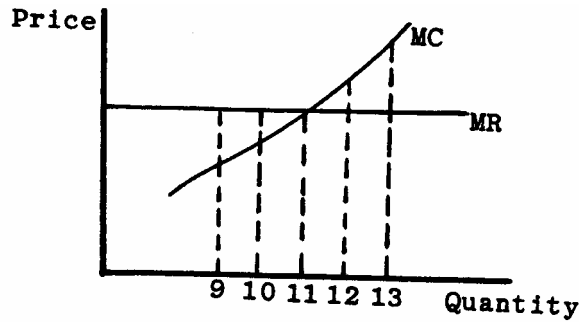
TRUE-FALSE

- | | | |
|-------|----|---|
| _____ | 1. | If marginal profit is positive and we increase output, profit will rise. |
| _____ | 2. | If marginal profit is positive then profit is positive. |
| _____ | 3. | If we decrease output and total revenue falls more than total cost, then profit will fall. |
| _____ | 4. | If at the profit maximizing point, ATC is greater than the price, then the firm suffers an economic loss. |
| _____ | 5. | If $MR = MC$, then profit is zero. |

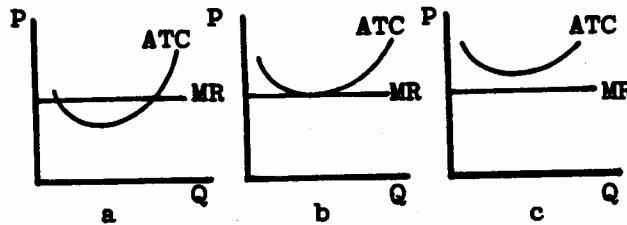
6. Profit is maximum at the output where the ATC is minimum.

PROBLEMS

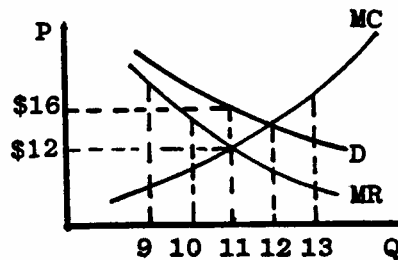
1. a. Suppose that the MC and MR for a perfectly competitive firm look as shown. The profit maximizing output is



- b. Suppose that the firm increases output from 9 to 10. What happens to profit? Why?
 c. Suppose that the firm decreases output from 13 to 12. What happens to profit? Why?
2. a. In the graphs below, circle the break-even points.



- b. In question 2a, which graph shows an economic profit? _____
 In question 2a, which graph shows a normal profit? _____
 In question 2a, which graph shows an economic loss? _____
3. a. At what level of output (1n the graph) does the monopoly firm maximize profit?



- b. If the firm increases output from 9 to 10, what happens to profit? _____

- c. If the firm decreases output from 13 to 12, what happens to profit? _____
- d. What price does this profit maximizing monopoly charge? _____

4. Indicate what happens to profit in the following table.

	MR > MC	MR < MC
increase output		
decrease output		

5. Fill in profit for 11 unit of output.

Output	MR	MC	Profit
10	-----	-----	37
11	15	8	

In The News

- A major department store closed its branch in a small Ohio town because the branch was not making "enough" profit.
 - Was the profit being made economic or accounting? _____
 - Was the store making an economic profit or an economic loss? How do you know?

 - Was the company's decision to close the branch based on profit in the accounting sense or the economic sense? _____
- A study of farming suggests that it should cost no more than \$2.84 a bushel to grow corn. Suppose that the price is \$3.00.
 - Based on these facts, would you expect the farmer to increase or decrease the amount of corn produced? Why? _____
 - Should the farmer hire all the workers possible and grow all the corn possible? _____

- Oddzon is the only producer of Koosh Balls. Koosh Balls soon became very popular and Oddzon had a winner.
 - When the balls caught on, what could we say about MR and MC? _____
 - Based on this information, should the firm increase or decrease output? _____
 - Should the firm increase its price? _____
- There has recently been some concern in the Toledo, Ohio area that the cost of electricity is higher than in other major Ohio cities. Some people think that the local utility charges the highest price that it can.
 - Do monopolies charge the highest possible price regardless of demand?

 - What would you expect to happen to the quantity demanded if a monopoly did charge the highest possible price? _____

PRACTICE TEST

Circle the correct answer.

1. Economic profit means that:
 - a. total revenue is greater than total cost.
 - b. total cost is greater than total revenue.
 - c. total revenue is just equal to total cost.
 - d. none of the above.
2. One cost included in economic cost but not in accounting cost is:
 - a. marginal cost.
 - b. implicit cost.
 - c. explicit cost.
 - d. average cost.
3. If the marginal revenue is greater than marginal cost:
 - a. expand output.
 - b. reduce output.
 - c. neither expand nor reduce output.
 - d. increase price.
4. Loss is minimized when:
 - a. marginal cost is greater than marginal revenue.
 - b. marginal cost equals marginal revenue.
 - c. marginal cost is less than marginal revenue.
 - d. the firm minimizes cost.
5. In the short run, a perfectly competitive firm can make:
 - a. economic profit.
 - b. economic loss.
 - c. normal profit.
 - d. any of these.

ANSWERS

Answers – Profit

Matching

1. c
2. h
3. f
4. e
5. g
6. a

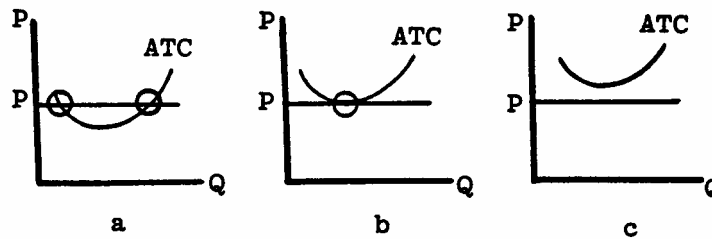
- 7. d
- 8. b

True-False

- 1. T
- 2. F
- 3. T
- 4. T
- 5. F
- 6. F

Problems

- 1. a. The profit maximizing output is at 11 units of output.
- b. Profits will go up. When the marginal revenue is greater than the marginal cost, the addition to total revenue due to the increase in output is greater than the addition to total cost. Thus profit rises.
- c. Profits will go up. When marginal revenue is less than marginal cost, decreasing output will increase profit since total cost goes down more than total revenue goes down.
- 2. a.



- b. Graph a shows economic profit potential. Graph b shows normal profit potential. Graph c shows economic loss potential.
- 3. a. The monopoly maximizes profit at 11 units of output.
- b. As output goes from 9 to 10, the increase in output causes total cost to rise by MC and total revenue to rise by MR. The MR is greater than the MC so profit rises. The increase in total cost is less than the increase in total revenue.
- c. As output goes from 13 to 12, the decrease in output causes cost to fall by MC and revenue to fall by MR. The MC is greater than the MR so profit rises. The decrease in total cost is greater than the decrease in total revenue.
- d. The monopoly chooses the price \$16 on the demand curve at the profit maximizing quantity, $MR = MC$.

4.

	MR > MC	MR < MC
increase output	profit rises	profit falls
decrease output	profit falls	profit rises

5.

Output	MR	MC	Profit
10	-----	-----	37
11	15	8	44

In The News

1. a. If the branch was making economic profit, it would not have been closed. Therefore, the branch was making accounting profit.
 b. Economic loss because the branch is leaving the market.
 c. The accounting profit did not determine that the branch would remain open. Apparently there were implicit costs not considered in the accounting costs that made the economic cost greater than the total revenue, resulting in an economic loss. It was the economic and not the accounting factors that closed the branch.
2. a. It would be more profitable to increase the output of corn since the marginal revenue, the selling price of \$3 a bushel for the perfect competitor, is greater than the marginal cost of producing another bushel, \$2.84.
 b. No, as possibly the output level would be beyond the profit maximizing level of output. If so, the marginal cost is greater than the marginal revenue and profits would be increased by producing less. The objective is to maximize profit, not to maximize output, therefore the farmer should produce the MR = MC amount.
3. a. Since the balls caught on, the demand for the balls increased. The increase in demand would make the MR increase so that MR would be above MC.
 b. Whenever marginal revenue exceeds marginal cost, the profit-maximizing firm will want to increase output to capture the positive marginal profit.
 c. If demand increases, the monopoly price increases.
4. a. A monopoly or any other firm can only expect to receive a price that people are willing and able to pay, a price that is on the demand facing the firm.
 b. If the price is increased from the profit-maximizing price, the quantity bought would fall below the profit-maximizing quantity, decreasing profit for the monopolist.

Practice Test

1.a., 2.b., 3.a.,4.b.,5.d.