

The following formula maybe useful: $MR = P(1 - 1/|E_p|)$

1. The perfectly competitive firm has $ATC = 10/Q + Q$, $MC = 2Q$, and $TC = 14 + Q^2$. If the profit maximizing output is 2, how much are fixed cost?
 - a. 4.
 - b. 7.
 - c. 10.
 - d. 14.
 - e. 18.

2. An industry in which total costs are kept to a minimum because only one firm serves the whole market is called a:
 - a. natural monopoly.
 - b. competitive monopoly.
 - c. patent monopoly.
 - d. limit monopoly.

Exhibit 1. Demand and cost information for a monopoly

<u>Q</u>	<u>P</u>	<u>TC</u>	<u>TR</u>	<u>MR</u>	<u>Profit</u>
0	40	10			
1	30	15			
2	20	25			
3	10	40			
4	0	60			

3. The marginal revenue of the second unit of output in Exhibit 1 is:
 - a. 10.
 - b. 20.
 - c. 30.
 - d. 40.
 - e. 60.

4. Refer to Exhibit 1. At the profit maximizing output, how much are profits?
 - a. 0.
 - b. 5.
 - c. 10.
 - d. 15.
 - e. 40.

5. Given the demand curve $P = 100 - 2Q$ and $MC = Q$ find the monopolist's profit maximizing quantity.
 - a. 20
 - b. 25
 - c. 33.33
 - d. 50
 - e. 66.66

6. Given the demand curve $P = 100 - 2Q$ and $MC = Q$ find the monopolist's profit maximizing price:
 - a. 10
 - b. 20
 - c. 33.33
 - d. 50
 - e. 60

7. Given the demand curve $P = 100 - 2Q$ and $MC = Q$ and $TC = 10 + Q^2$ find the monopolist's profit or loss (in the short run)

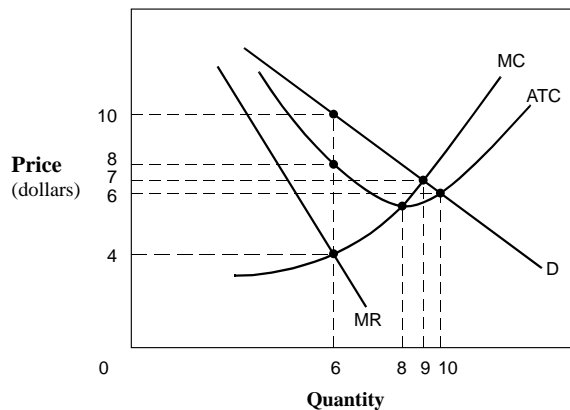
- a. 0
- b. 700.89
- c. 790
- d. 1180
- e. 1200

Exhibit 2. Demand and cost data for a monopolist

Price	Quantity	TR	MR	TC	Profit
\$10	1	10	10	4	_____
9	2	_____	_____	8	_____
8	3	_____	_____	12	_____
7	4	_____	_____	16	_____
6	5	_____	_____	20	_____
5	6	_____	_____	24	_____
4	7	_____	_____	28	_____
3	8	_____	_____	32	_____
2	9	_____	_____	36	_____
1	10	_____	_____	40	_____

8. Refer to Exhibit 2. The demand schedule and cost schedule for a monopolist are provided. Which output level maximizes profit?
- a. 2.
 - b. 6.
 - c. 4.
 - d. 5.
 - e. 7.
9. By calculating the data provided in Exhibit 2, how much is the profit if the firm decides to produce 7 units?
- a. 0.
 - b. 24.
 - c. 16.
 - d. 12.
 - e. 6.
10. A monopolist earning economic profit in the short run determines that at its present level of output, marginal revenue is \$23 and marginal cost is \$30. Which of the following should the firm do to increase profit?
- a. Raise price and lower output.
 - b. Lower price and lower output.
 - c. Raise price and raise output.
 - d. Lower price and raise output.
 - e. Keep output and price the same, since profits are maximized.

Exhibit 3. Monopoly (use this information to answer the next three questions)



11. The profit maximizing level of output for the monopolist in Exhibit 3 equals:
 - a. 0.
 - b. 6.
 - c. 8.
 - d. 9.
 - e. 10.

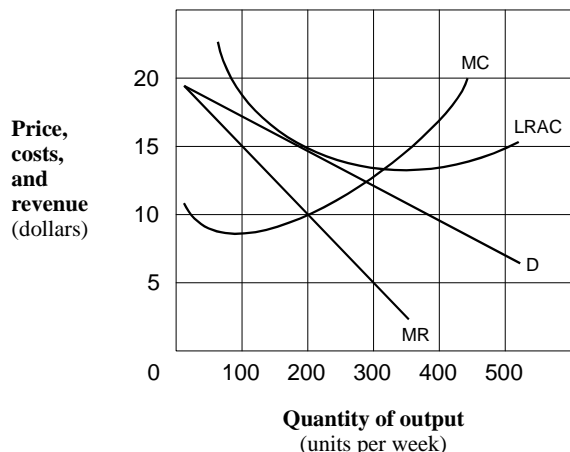
12. The monopoly price that maximizes profits in Exhibit 3 is:
 - a. \$4.
 - b. \$6.
 - c. \$7.
 - d. \$8.
 - e. \$10.

13. At the profit maximizing level of output, monopolist profits in Exhibit 3 are:
 - a. \$60.
 - b. \$36.
 - c. \$24.
 - d. \$18.
 - e. \$12.

14. In the long-run profit maximizing perfectly competitive firm earns:
 - a. zero economic profits.
 - b. positive economic profits.
 - c. negative economic profits.
 - d. positive or zero economic profits.
 - e. positive, negative, or zero economic profits.

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Exhibit 4. A Monopolist (use this graph to answer the next two questions)



16. At the profit maximizing output, how much are the monopolist's profits?

- a. 0
- b. 5
- c. 200
- d. 500
- e. 1,000

17. At the profit maximizing output, how much is consumer surplus?

- a. 0
- b. 5
- c. 200
- d. 500
- e. 1,000

18. In the short run, if the firm produces zero output, total cost equal

- A) fixed cost.
- B) variable cost.
- C) zero.
- D) average variable cost.
- E) average fixed cost.

The market demand for Air Jordan's is $P = 100 - 0.5Q$, where P is the price in dollars per pair of Air Jordan's and Q is the number of Air Jordan's sold daily. If the price of Air Jordan's is \$50, answer the following two questions:

19. Find the number of Air Jordan's sold daily

- A) 0.
- B) 25.
- C) 50.
- D) 75.
- E) 100.

20. Find the daily total revenue from Air Jordan's

- A) 0.
- B) \$1,250.
- C) \$2,500.
- D) \$3,750.
- E) \$5,000.

Exhibit 5

Firm	P	MR	TR	Q	TC	MC	ATC	AVC
A	3.90	3.00		2,000	7,400	2.90		3.24
B		9.00	44,000	4,000		9.00	11.90	10.74
C	5.90		59,000	10,000		5.90	4.74	4.24

Use Exhibit 5 to answer the next three questions. You are a consultant that specializes in profit maximization. These monopoly firms have hired you to inspect their books. You must make a short run recommendation to each firm.

21. Firm A should:

- a. Shut down.
- b. Keep output at current level.
- c. Increase output.
- d. Decrease output.

22. Firm B should:

- a. Shut down.
- b. Keep output at current level.
- c. Increase output.
- d. Decrease output.

23. Firm C should:

- a. Shut down.
- b. Keep output at current level.
- c. Increase output.
- d. Decrease output.

24. An economist calculates that the price elasticity for movie tickets by senior citizens equals -4 . If the marginal cost per person is \$1 per show, to maximize profits, how much should the theater charge senior citizens?

- a. \$1.25
- b. \$1.33
- c. \$1.50
- d. \$2.00
- e. \$2.50

25. Many examples of price discrimination were provided in class. Which of the following industries does not price discriminate?

- a. Airlines
- b. Gas Stations
- c. Movie Theaters

26. What is price differentiation?

- a. Charging a different price because of different costs of production.
- b. Charging a different price because of different willingness to pay.
- c. Charging a different price because of different rates of taxation.
- d. Charging a different price for cash transactions.
- e. Charging a different price because of advertising.

Use the following table to answer the next four questions. Fixed cost = \$60.

Total Product	AFC	AVC	ATC	TC	MC	TR	Profit
0	--	--	--		--		
1				105.00			
2				145.00			
3				180.00			
4				210.00			
5				245.00			
6				285.00			
7				330.00			
8				385.00			
9				440.00			
10				505.00			

27. At a price of \$41 what is the short-run profit maximizing output for the perfectly competitive firm?
- 0
 - 2
 - 4
 - 6
 - 7
28. How much profit (or loss) does the firm incur in the short-run at a price of \$41?
- \$60
 - \$39
 - \$0
 - \$43
 - \$46
29. How much is the producer surplus (in the short-run) at a price of \$41?
- \$0
 - \$60
 - \$106
 - \$21
 - \$103
30. At a price of \$41 what is the long-run profit maximizing output for the perfectly competitive firm?
- 0
 - 2
 - 4
 - 6
 - 7
31. How much profit (or loss) does the firm incur in the long-run at a price of \$41?
- \$60
 - \$39
 - \$0
 - \$43
 - \$46
32. What is the definition of economic profit?
- Total Revenue - Explicit Costs
 - Total Revenue - Implicit Costs
 - Total Revenue - Fixed Costs
 - Total Revenue - Variable Costs
 - Total Revenue - Explicit Costs - Implicit Costs

33. Which of the following is not an assumption of Perfectly Competitive markets?
- Many buyers and many sellers
 - Prices are regulated by government
 - Firms can enter and exit freely
 - All goods are identical
 - Buyers and sellers have perfect information
34. What rule do perfectly competitive firms use to maximize profits?
- Set $P = AVC$
 - Set $P = Q$
 - Set $MC = Q$
 - Set $AVC = MC$
 - Set $MC = MR$

Use the following information to answer the next four questions. The market demand for cotton is: $P = 70 - Q$ and $MC = 10 + 2Q$. Assume the cotton market is perfectly competitive.

35. Calculate the quantity of cotton sold.
- 15
 - 20
 - 30
 - 40
 - 50
36. Calculate the price of cotton.
- 20
 - 30
 - 40
 - 50
 - 55
37. Calculate the consumer surplus from cotton.
- 112.50
 - 200
 - 450
 - 800
 - 1,250
38. Calculate the producer surplus from cotton.
- 300
 - 337.50
 - 400
 - 500
 - 600

Use the following information to answer the last two questions of this test.

A small town has two residents Tony and Jill that own drinking wells. Each week, Tony and Jill jointly decide how many gallons of water to pump and sell at whatever price the market will bear. Tony and Jill can pump as much water without cost; so, the marginal cost of water equals zero.

The weekly town demand schedule and total revenue schedule for water is in the table below.

Weekly Quantity (in gallons)	Price	Weekly Total Revenue (and Total Profit)
0	\$12	\$0
10	11	110
20	10	200
30	9	270
40	8	320
50	7	350
60	6	360
70	5	350
80	4	320
90	3	270
100	2	200
110	1	110
120	0	0

39. If Tony and Jill operate as a profit-maximizing monopoly in the market for water, what price will they charge to sell 80 gallons of water?

- a. \$2
- b. \$4
- c. \$6
- d. \$9
- e. \$12

40. If the market for water is perfectly competitive instead of monopolistic, how many total gallons of water would be produced? (Hint, what rule does a perfectly competitive firm use to maximize profits?)

- a. 60
- b. 70
- c. 90
- d. 110
- e. 120

Have a Good Summer! ☺