Unit 4.2 Monopoly

AP Microeconomics Homework

Multiple-Choice Questions

1. 2021 AP Micro MCQ Q32

As the quantity of a good increases, which of the following is true in the elastic region of a monopolist's demand curve?

(A) Marginal revenue and total revenue are both negative.

(B) Marginal revenue is increasing and total revenue is positive.

(C) Marginal revenue is decreasing and total revenue is negative.

(D) Marginal revenue is positive and total revenue is increasing.

(E) Marginal revenue is negative and average revenue is decreasing.

2. 2021 AP Micro MCQ Q35

A monopoly is producing the allocatively efficient output if, for the last unit produced,

(A) price equals minimum average total cost

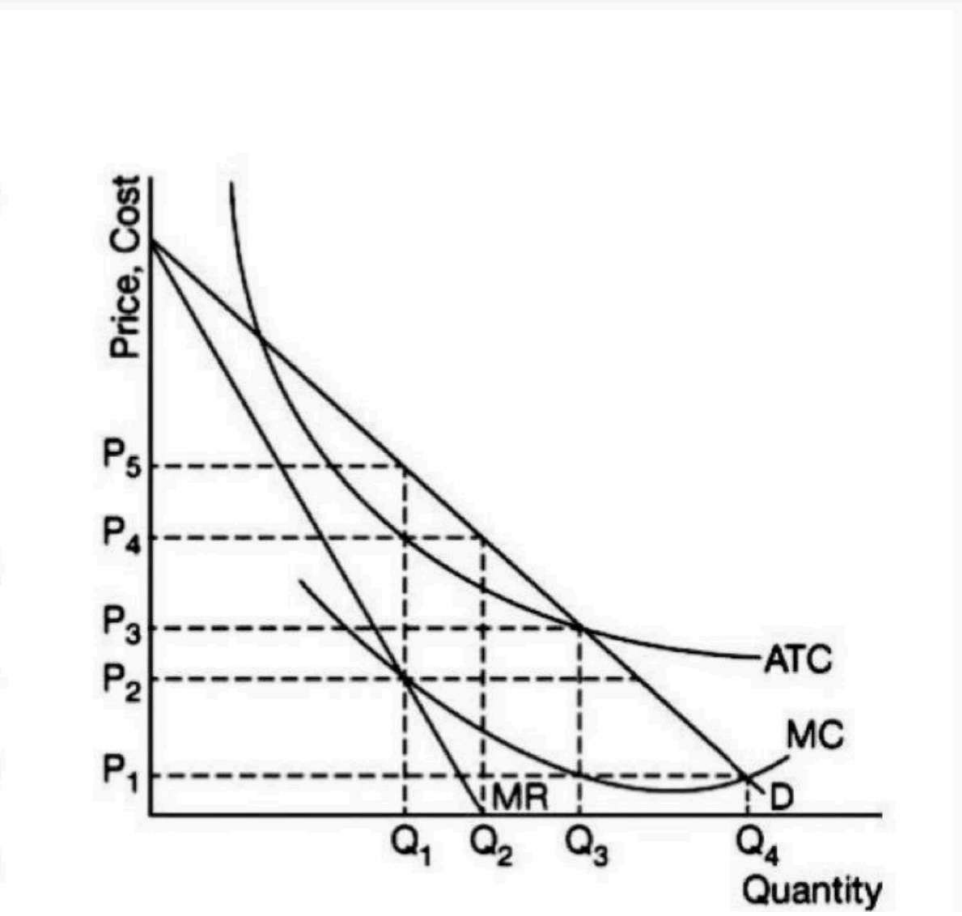
(B) price equals marginal cost

(C) marginal cost equals marginal revenue

(D) marginal cost equals average variable cost

(E) marginal revenue equals average variable cost

3. 2021 AP Micro MCQ Q38



The graph provided shows the demand (D), marginal revenue (MR), marginal cost (MC), and average total cost (ATC) curves for a monopolist. If a regulatory agency requires that the monopolist set a price that earns the monopolist a normal profit, what price will the monopolist set?

(A) P_1

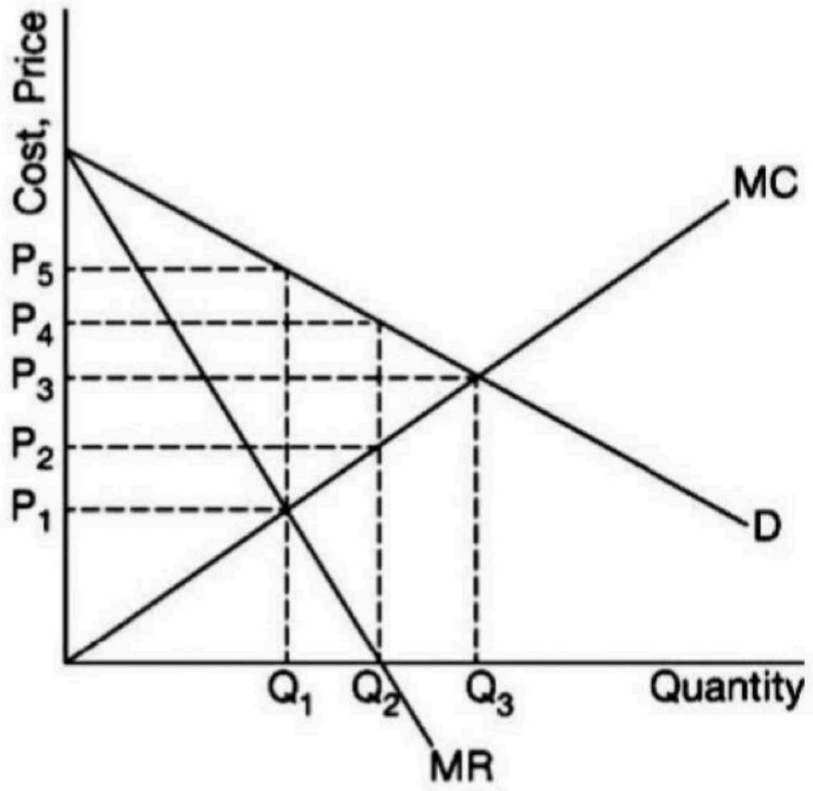
(B) P_2

(C) P_3

(D) P_4

(E) P_5

4. 2021 AP Micro MCQ Q50



Given the information in the graph provided, what is the monopolist's profit-maximizing quantity and price combination?

(A) Q_1, P_1

(B) Q_1, P_5

(C) Q_2, P_3

(D) Q_2, P_5

(E) Q_3, P_3

5. 2022 AP Micro MCQ Q33

Which of the following is true in the inelastic region of a monopolist's demand curve as output increases?

(A) Marginal revenue and total revenue are both negative.

(B) Marginal revenue is increasing and total revenue is positive.

(C) Marginal revenue is decreasing and total revenue is negative.

(D) Marginal revenue is positive and total revenue is increasing.

(E) Marginal revenue is negative and total revenue is decreasing.

6. 2022 AP Micro MCQ Q38

Which of the following actions would a government take when regulating a natural monopoly to produce the socially optimal quantity?

(A) Impose a lump-sum tax on the monopolist's profit.

(B) Impose a per-unit tax on the monopolist's profit.

(C) Open the market for competition to lower the monopoly price.

(D) Regulate the monopoly to charge a price equal to the average total cost.

(E) Grant a lump-sum subsidy to the monopoly.

7. 2022 AP Micro MCQ Q60

Prosper Company is a profit-maximizing monopoly producing toy cubes. Which of the following combinations of events will definitely cause Prosper Company's profit to increase?

(A) A decrease in demand for toy cubes and a decrease in fixed costs to produce toy cubes

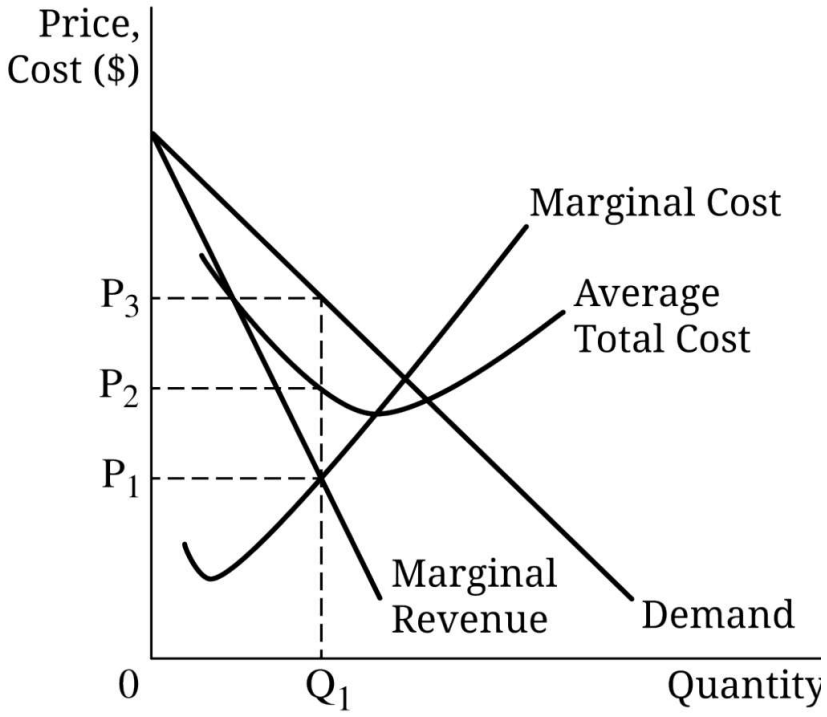
(B) A decrease in demand for toy cubes and an increase in fixed costs to produce toy cubes

(C) A decrease in demand for toy cubes and a decrease in variable costs to produce toy cubes

(D) An increase in demand for toy cubes and an increase in government subsidies to produce toy cubes

(E) An increase in demand for toy cubes and an increase in fixed costs to produce toy cubes

8. 2023 AP Micro MCQ Q27



The graph shows the cost and revenue curves for a profit-maximizing firm. Which of the following is true about the firm?

(A) The firm operates in a perfectly competitive market, producing the allocatively efficient quantity and charging P_1.

(B) The firm is a monopolist, producing the allocatively efficient quantity and charging P_1.

(C) The firm is a natural monopoly, producing Q_1 and earning positive economic profit.

(D) The firm operates in an imperfectly competitive market, producing Q_1 and earning positive economic profit.

(E) The firm operates in a monopolistically competitive market, producing Q_1 and earning negative economic profit.

9. 2024 AP Micro MCQ Q19

The table provided shows cost and revenue information for Sigmoid, a profit-maximizing monopolist that produces and sells rocket toys.

	Value
Marginal revenue	$10
Marginal cost	$10
Price	$30
Average variable cost	$5
Average fixed cost	$3
Quantity	10 units

If Sigmoid's average fixed cost increases to $4 because of a change in rent, then its economic profit will

(A) remain the same

(B) decrease by $1

(C) decrease by $10

(D) decrease by $20

(E) decrease by $30

10. 2024 AP Micro MCQ Q58

Tack-It Basket is a firm with some market power. The firm produces and sells baskets for $50 each. At the current quantity of baskets, the firm's marginal revenue is $27 and marginal cost is $34. Tack-It Basket should do which of the following to maximize its profit?

(A) Produce fewer baskets because marginal revenue is less than marginal cost.

(B) Produce fewer baskets because marginal revenue is less than price.

(C) Produce fewer baskets because price is greater than marginal cost.

(D) Produce more baskets because price is greater than marginal cost.

(E) Produce more baskets because price is greater than marginal revenue.

11. 2025 AP Micro MCQ Q26

Which of the following will definitely result in a decrease in a monopoly's profit-maximizing quantity of output?

(A) A decrease in variable costs and the ability to perfectly price discriminate

(B) A decrease in variable costs and a decrease in demand for the monopoly's output

(C) An increase in variable costs and a decrease in demand for the monopoly's output

(D) An increase in fixed costs and an increase in demand for the monopoly's output

(E) An increase in fixed costs and the ability to perfectly price discriminate

12. 2025 AP Micro MCQ Q50

Two monopolies with identical cost structures are compared. One is an unregulated profit-maximizing monopoly, and the other is regulated to produce the quantity at which it breaks even (earns zero economic profit). Which of the following accurately describes the difference between the two monopolies?

	The Unregulated Monopoly	**The Regulated Monopoly**
(A)	Charges a price equal to average total cost	Charges a price equal to marginal cost
(B)	Creates deadweight loss in the market	Eliminates deadweight loss from the market
(C)	Experiences economies of scale	Experiences diseconomies of scale
(D)	Collects all consumer surplus from the consumers	Transfers all consumer surplus to the government
(E)	Produces where marginal revenue equals marginal cost	Produces where price equals average total cost

13. 题库 Unit 2 S&D Q131

Assume that a monopolist is producing in the inelastic portion of its demand curve. Which of the following will occur if the monopolist decreases its price?

(A) Marginal revenue will decrease, but profits will increase.

(B) Marginal revenue will increase, but profits will decrease.

(C) Total revenue will decrease, but profits will increase.

(D) Both total revenue and profits will decrease.

(E) Both total revenue and profits will increase.

Free-Response Questions

14. 2021 AP Micro FRQ Q1

The government of an island nation grants SkyRunner Airlines exclusive monopoly rights to serve the island. SkyRunner is earning positive economic profits.

(a) Draw a correctly labeled graph for SkyRunner, and show each of the following.

(i) The profit-maximizing quantity of tickets, labeled Q_M

(ii) The profit-maximizing price of a ticket, labeled P_M

(iii) The area representing profits, shaded completely

Now the island's tourist bureau asks the government to consider the following two proposals.

Proposal I: Set a price ceiling on tickets that eliminates all deadweight loss.

Proposal II: Eliminate SkyRunner's monopoly rights, which will remove all barriers to entry.

(b) Suppose the government adopts proposal I. On your graph in part (a), indicate the quantity of tickets sold in the short run, labeled Q_C.

(c) Suppose instead the government adopts proposal II. How will each of the following be affected in the long run compared to the market conditions in part (a)? Explain.

(i) The quantity of tickets sold by SkyRunner. Explain.

(ii) The price elasticity of demand for SkyRunner's airline service. Explain.

(iii) SkyRunner's profits

(iv) The deadweight loss in the market. Explain.

15. 2022 AP Micro FRQ Q1

A firm has a patent on a new carbon-capture technology, making it the only producer of that device. The firm is currently earning a positive economic profit and is producing the profit-maximizing level of output.

(a) Draw a correctly labeled graph for the firm and show each of the following.

(i) The quantity of carbon-capture devices produced by the firm, labeled Q_M

(ii) The price charged by the firm, labeled P_M

(iii) The area representing consumer surplus, shaded completely

(b) The government is considering different options to regulate the firm.

(i) Suppose the government is considering taxing the firm. Could using a per-unit tax change the firm's output to the socially optimal quantity? Explain.

(ii) Instead, suppose the government imposes a price ceiling so that the firm produces the socially optimal quantity. On your graph in part (a), label the quantity and price after the price ceiling is imposed as Q_C and P_C.

(iii) At the price and the quantity identified in part (b)(ii), is the firm earning positive economic profit? Explain.

(c) Assume the government decides not to regulate the firm and instead the firm produces the quantity of output that maximizes total revenue.

(i) If the firm now increases its output by one unit, would marginal revenue be positive, negative, or zero? Explain.

(ii) Starting at the total-revenue-maximizing quantity, if the firm reduces the price by 10%, would the quantity demanded increase by less than 10%, by more than 10%, or by exactly 10%?

16. 2023 AP Micro FRQ Q1

RKB is a profit-maximizing monopoly that produces a new, patented electronic device. RKB is earning positive economic profit.

(a) Draw a correctly labeled graph for RKB, and show each of the following.

(i) The profit-maximizing quantity, labeled Q_M

(ii) The profit-maximizing price, labeled P_M

(iii) The average total cost curve consistent with RKB earning positive economic profit

(iv) The area representing the deadweight loss, shaded completely

(b) The government wants RKB to produce the allocatively efficient quantity. Would the government impose a binding price ceiling, a binding price floor, a per-unit tax, or a lump-sum tax?

(c) Suppose that the government does not impose the policy you identified in part (b). Consumers now become aware of research that confirms the use of this new device harms users' vision. Given widespread consumer awareness of this research, what will happen to RKB's profit-maximizing quantity in the short run? Explain.

17. 2025 AP Micro FRQ Q1(a)-(d)

Voda Reservoir is a profit-maximizing firm and the only producer of bottled water in a country. Currently, Voda Reservoir is earning negative economic profit.

(a) Draw a correctly labeled graph for Voda Reservoir and show each of the following.

(i) The profit-maximizing quantity, labeled Q_M

(ii) The profit-maximizing price, labeled P_M

(iii) The average total cost curve consistent with Voda Reservoir earning negative economic profit, labeled ATC

(iv) The area of deadweight loss, shaded completely

(b) Suppose the government requires Voda Reservoir to produce the socially optimal quantity of bottled water. On your graph in part (a), show the socially optimal quantity of bottled water, labeled Q_S.

(c) Suppose instead the government grants a per-unit subsidy to Voda Reservoir. What will happen to Voda Reservoir's profit-maximizing quantity of bottled water? Explain.

(d) Suppose new producers have entered the bottled-water market and Voda Reservoir continues to operate in the bottled-water market. Will the demand for Voda Reservoir's bottled water become more elastic, become less elastic, or stay the same as new producers enter the market?