

## 4.2 Monopoly

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

Total: 8 marks

### Objective

Build the skills to answer exam questions on **monopoly**.

**You must be able to:**

- explain why a **monopoly** 垄断 is a price maker whose **marginal revenue** lies below its demand
- determine the profit-maximizing quantity and price using  $MR = MC$
- identify the **deadweight loss** 无谓损失 a monopoly creates
- describe a **natural monopoly** 自然垄断

### 1 Worked examples

Study these first. Each one shows the method for a question type used later.

#### ■ Price maker

To sell more, a monopolist must **lower its price** on all units, so **marginal revenue lies below** the demand curve.

#### ■ Profit maximization

Produce where  $MR = MC$ , then read the **price** off the **demand** curve above that quantity.

#### ■ Inefficiency and natural monopoly

A monopoly produces where  $P > MC$ , so it is **allocatively inefficient** and creates a **deadweight loss**. A **natural monopoly** has such large fixed costs that one firm is the least-cost producer.

### 2 Practice

2.1 State why a monopolist's marginal revenue lies below its demand curve. [1]

2.2 State the rule a monopolist uses to choose its quantity. [1]

2.3 State why a monopoly is allocatively inefficient. [1]

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### 3 Exam-style questions

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3.1 A monopoly maximizes profit where [1]

- A  $P = MC$
  - B  $MR = MC$
  - C  $P = ATC$
  - D  $MR = 0$
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3.2 A monopoly is allocatively inefficient because it produces where [1]

- A  $P = MC$
  - B  $P > MC$
  - C  $P < MC$
  - D  $P = 0$
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3.3 A monopolist produces where  $MR = MC$  at  $Q = 40$ , charging  $P = \$25$  (from demand), with  $ATC = \$18$ .

(a) Find the economic profit per unit. [1]

(b) Find the total economic profit. [1]

(c) State why the monopoly creates a deadweight loss. [1]

### 4 Go further

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- work through the **4.2 Monopoly** lesson on the **Learn** page;
- read the **Imperfect Competition** section of the AP Microeconomics handout on the **Know** page.

## Solutions

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**2.1** to sell an extra unit it must lower the price on all units, so the added revenue is less than the price.

**2.2** produce where marginal revenue equals marginal cost.

**2.3** it produces where price exceeds marginal cost, so some beneficial units are not made.

**3.1 B.**

**3.2 B.**

**3.3** (a)  $25 - 18 = \$7$ . (b)  $7 \times 40 = \$280$ . (c) it underproduces (relative to  $P = MC$ ), so mutually beneficial trades are lost.