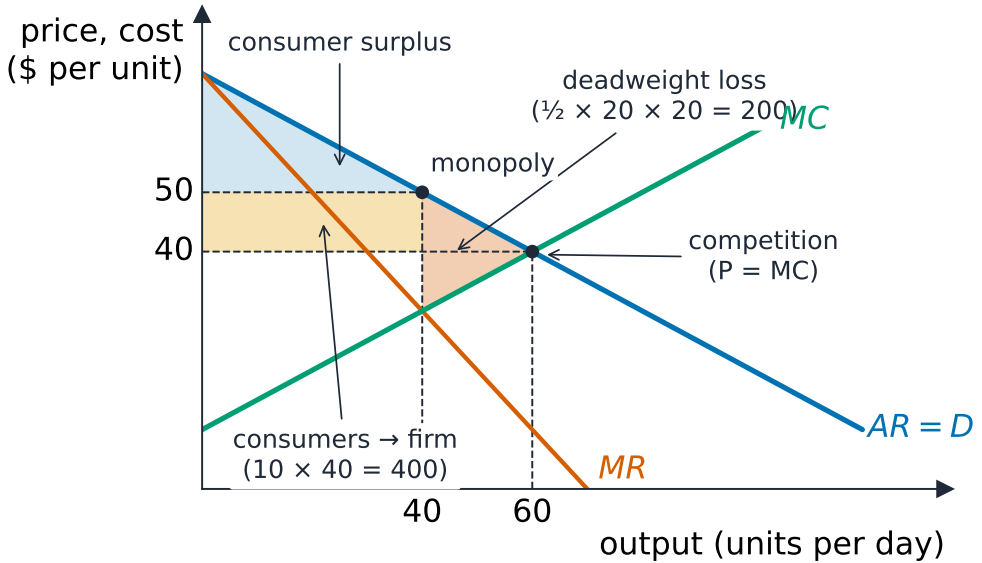
Exercise walk-through

4.3
Monopoly, monopolistic competition and oligopoly

International Baccalaureate · IB Diploma · Economics · HL

Figure: Monopoly ·



- Compared with competition, monopoly takes 400 from consumers and destroys 200 of welfare
- Read the axes and units first.

Monopolistic competition

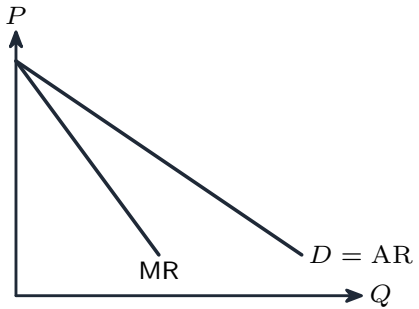
- **Monopolistic competition** has many firms, low **barriers to entry** and **product differentiation**: each firm's product is a little different.
- Milk-tea shops, hair salons and restaurants are examples.
- Each firm has a few loyal customers, so it faces its own downward-sloping demand curve (d).
- But there are many close **substitutes**, so demand is quite elastic.

Government responses to market power

- **Competition law** : bans cartels and the abuse of a dominant position, and can block **mergers** that would create too much power. In 2017 the European Commission fined Google 2.42 billion euros for favouring its own shopping service in search results.
- **Regulation**: price caps and quality targets for natural monopolies such as water and electricity.
- **Fines** that are large enough to make breaking the law unprofitable.

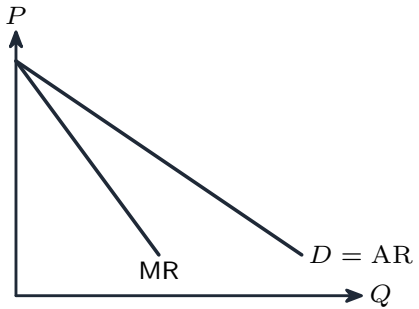
Exercise 2.1

2.1 Explain why a monopolist's marginal revenue is less than its price. [2]



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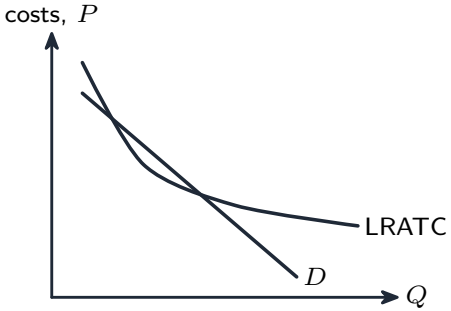


2.1

to sell one more unit, the monopolist must lower the price on all units it sells; so the extra revenue from the extra unit is less than its price: MR $<$ AR

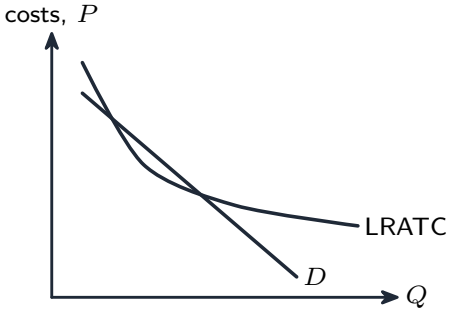
Exercise 2.2

2.2 Define **natural monopoly**. [2]



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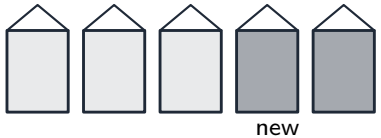


2.2

a market where one firm can supply the whole market at a lower average cost than two or more firms could; because economies of scale are very large / LRATC is still falling at the market output

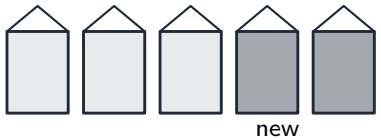
Exercise 2.3

2.3 Explain why a firm in monopolistic competition makes only normal profit in the long run. [4]



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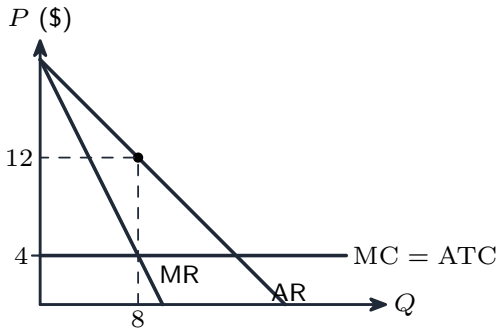


2.3

in the short run firms may make abnormal profit; barriers to entry are low, so new firms enter with similar (differentiated) products; each firm's demand falls and becomes more elastic (shifts left); entry continues until demand (AR) is tangent to ATC: P = ATC, normal profit

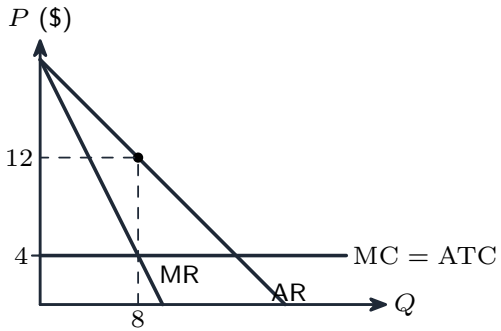
Exercise 2.4

2.4 A monopolist faces demand $P = 20 - Q$, so $\text{MR} = 20 - 2Q$. Its $\text{MC} = \text{ATC} = \$4$. Calculate its profit-maximizing output, price and profit. [3]



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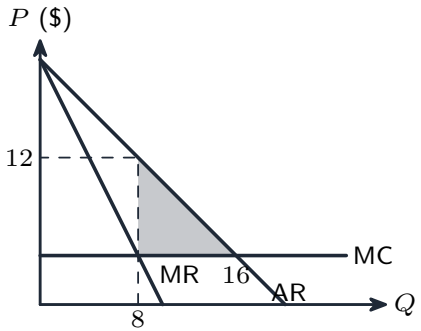


2.4

$20 - 2Q = 4$, so $Q = \mathbf{8}$; $P = 20 - 8 = \$\mathbf{12}$; profit $= (12 - 4) \times 8 = \$\mathbf{64}$

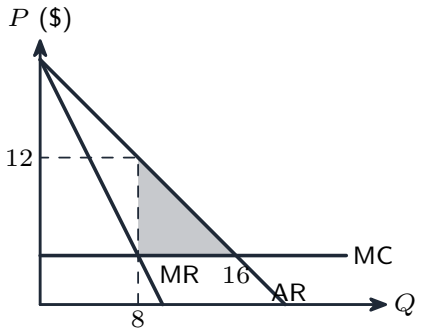
Exercise 2.5

2.5 Using the data in the previous question, calculate the output and price if the market were perfectly competitive, and the welfare loss of monopoly. [3]



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2.5

competition: P = MC = \$4, so $Q = 16$; welfare loss = $\frac{1}{2} \times (16 - 8) \times (12 - 4) = \$\mathbf{32}$

Exercise 3.1 (a)

3.1 Two airlines, A and B, choose a high or low fare. The table shows their profits ($ million), A's first.

(a) Identify A's best strategy if B chooses high, and if B chooses low. [2]

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(a) if B high: A chooses low ($14 > 10$); if B low: A chooses low ($6 > 4$)

Exercise 3.1 (b)

3.1 Two airlines, A and B, choose a high or low fare. The table shows their profits ($ million), A's first.

(b) Explain why both firms end up choosing low fares, and why they might try to collude. [4]

	B high	B low
A high	10, 10	4, 14
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(b) low is a dominant strategy for both firms, whatever the other does; so both choose low and earn $6 million each; but both choosing high would give $10 million each: a prisoner's dilemma; so they have an incentive to agree to keep fares high (collusion)

Exercise 3.1 (c)

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(c) any two: each firm can gain by cheating and cutting fares; collusion is illegal and firms risk large fines; new entrants or demand changes upset the agreement

Exercise 3.2

3.2 A government is deciding whether to regulate the only railway company in the country.

Explain **two** possible advantages of allowing the monopoly to continue. [4]



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3.2

economies of scale: one firm can run the network at the lowest average cost, avoiding wasteful duplication of track; abnormal profit can fund research and investment, e.g. faster trains (dynamic efficiency); one network can be planned and coordinated more easily