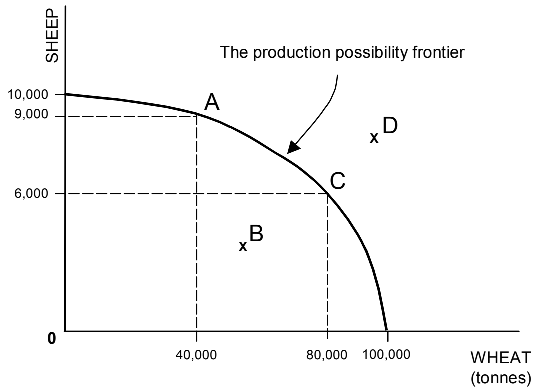
Chapter 16
Microeconomics

6-10 questions

2. Microeconomics: The Basics

The production possibility frontier and opportunity cost



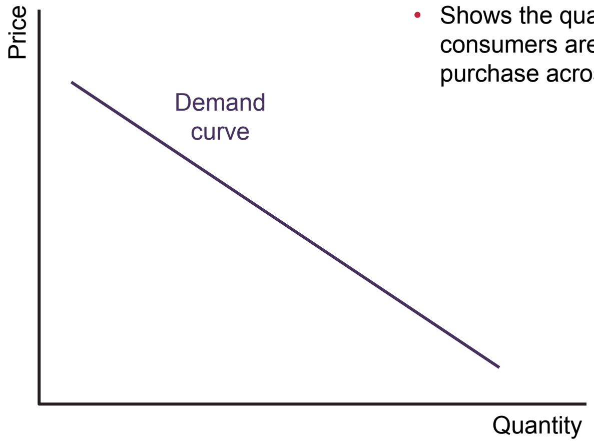
Hints

Microeconomics is about **choices:**

- Which goods or services will be produced
- What price to set for them
- Weighing up the costs and benefits of different options available

3. Supply and Demand

Demand curve



Demand curve

- Shows the quantity that consumers are willing and able to purchase across a range of prices

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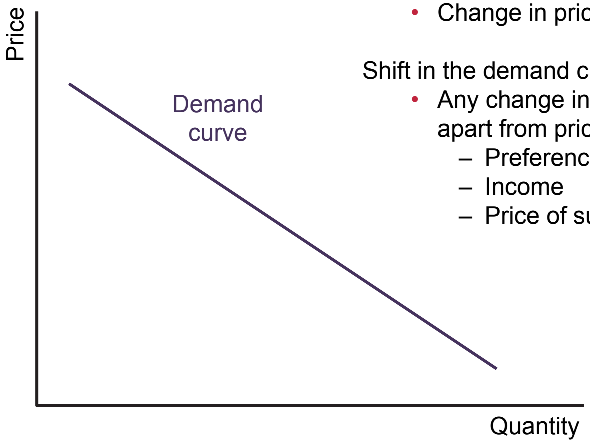
Hints

Why is the demand curve downwards sloping?

- The 'Income Effect'
  - Consumers have finite income
- The law of diminishing returns
  - The rarer something is, the more willing one is to pay for it

3. Supply and Demand

Demand curve

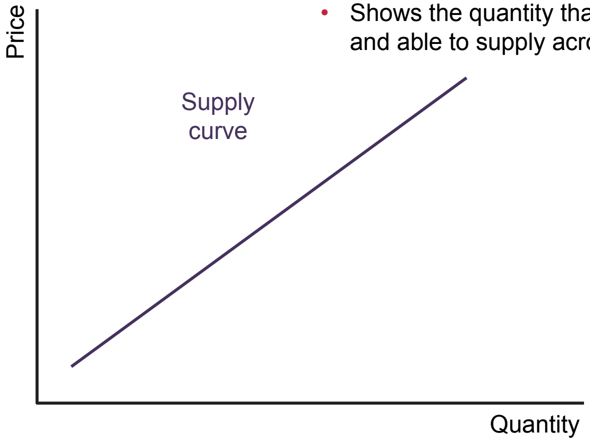


Movement along the curve
- Change in price

Shift in the demand curve
- Any change in any influencing factor apart from price
  - Preference
  - Income
  - Price of substitute/complement

3. Supply and Demand

Supply curve



Supply curve
- Shows the quantity that producers are willing and able to supply across a range of prices

4. Elasticity of Demand

Price elasticity of demand (PED)

Shows degree of consumer response to variations in a good's price.

$$e_P = \frac{\%\Delta Q}{\%\Delta P}$$

The sign (typically negative for PED) is ignored by economists; the magnitude is relevant

- >1 elastic
- <1 inelastic

Luxury goods tend to be elastic

Necessities tend to be inelastic

Giffen goods

Keeping on target

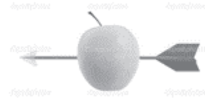
The price of footballs rises by 10% and the demand decreases by 5%. The relationship is:

A. Elastic

B. Inelastic

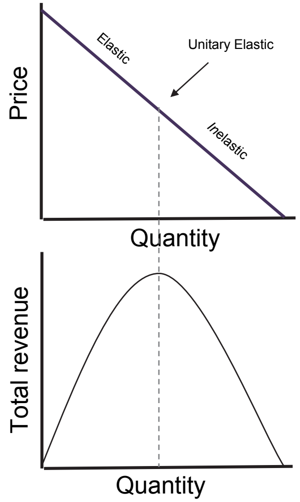
C. Unit Elastic

D. Cross elastic



4. Elasticity of Demand

Total revenue and elasticity



Quantity demanded	Price	Total revenue
0	16	0
1	14	14
2	12	24
3	10	30
4	8	32
5	6	30
6	4	24
7	2	14
8	0	0

- If a price cut increases total revenue, demand is elastic
- If a price cut decreases total revenue, demand is inelastic

Answer to the question on the previous slide:

B

(5%) / 10% = (0.5)

4. Elasticity of Demand

Cross elasticity of demand

$$\text{Cross elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price of a substitute or complement}}$$

Measures the responsiveness of the demand for a good to a change in the price of a substitute or complement, other things remaining the same.

- Positive for a substitute good
  - E.g. burgers and pizza
- Negative for a complement
  - E.g. cars and petrol

4. Elasticity of Demand

Income elasticity of demand

$$\text{Income elasticity of demand} = \frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in income}}$$

Measure of the responsiveness of the demand for a good or service to a change in income, other things remaining the same.
Greater than 1:

- Normal goods
  - Demand rises with increases in income
- Luxuries
  - High positive elasticity, demand rises strongly with income

Positive and less than 1:

- Necessities
  - Income elasticity between 0 and 1
  - Demand rises slightly with income

Negative

- Inferior goods

– Negative income elasticity, demand falls with income

5. The Production Process

- Short-run
  - Time frame in which the quantity of at least one factor of production is fixed
- Long-run
  - Time frame in which the quantities of all factors of production can be varied

- Short-run cost
- Fixed and variable costs
  - Total fixed costs (TFC)
    - Cost of the firm's fixed factors
    - Sum of costs that do not vary with level of output
  - Total variable costs (TVC)
    - Cost of the firm's variable factors
    - Sum of costs that change with the level of output

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Further information

Average costs

Average fixed cost (AFC)

Total fixed cost per unit of output

AFC = TFC ÷ quantity produced

Average variable cost (AVC)

Total variable cost per unit of output

AVC = TVC ÷ quantity produced

Average total cost (ATC)

Total cost per unit of output

ATC = AFC + AVC = TC ÷ quantity produced

5. The Production Process

Marginal cost

- Increase in total cost that results from a one-unit increase in output
- Decreases at low outputs because of economies from greater specialisation
- Eventually increases due to the law of diminishing returns

Short-run cost behaviour at different production volumes

- The average total cost is minimised at its intersection with the marginal cost curve
  - If MC < ATC, by producing an extra unit, ATC must fall
  - If MC > ATC, by producing an extra unit, ATC must rise
  - Therefore, ATC is at its lowest value when MC = ATC

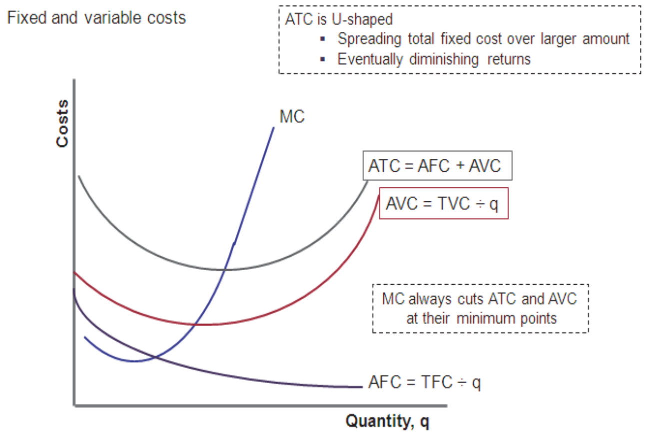
Hints

‘Marginal’ simply means ‘extra’ in this context:

- ‘Marginal revenue’ is the extra sales revenue gained from selling one extra unit; i.e. the selling price of that unit
- ‘Marginal cost’ is the extra cost incurred in producing one extra unit; i.e. the variable cost of that unit

5. The Production Process

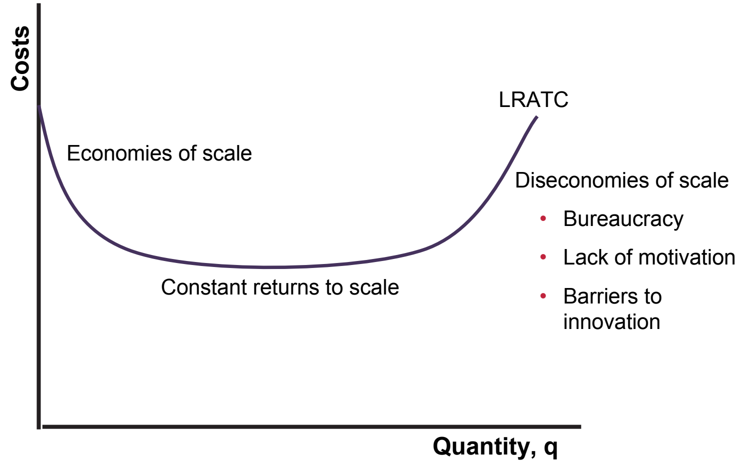
Short-run cost behaviour at different production volumes



5. The Production Process

Long-run cost

Long-run cost curves



5. The Production Process

Cost and revenues

Output	Price	Total revenue	Marginal revenue	Total cost	Average total cost	Marginal cost	Profit
0	14	0	-	2	-	-	-2
1	12	12	12	6	6	4	6
2	10	20	8	8	4	2	12
3	8	24	4	12	4	4	12
4	6	24	0	20	5	8	4
5	4	20	-4	35	7	15	-15

6. Market Structures

What is perfect competition?

- Characteristics of perfect competition
  - Many firms sell identical products (homogeneity) to many buyers
  - No barriers to entry/exit
  - Established firms have no advantage over new firms
  - Sellers and buyers are well informed about prices
- Price takers
  - Firms that take market price as given when selling their product
  - Each is small relative to the market and cannot affect price
  - Price = marginal revenue
    - Price remains constant when quantity sold changes
- Profit maximisation
  - Goal is to maximise economic profit
  - Marginal revenue (MR) equals marginal cost (MC)
  - MR = MC

Keeping on target

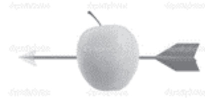
A firm in perfect competition acts as if :

A. There is product differentiation

B. There is brand loyalty

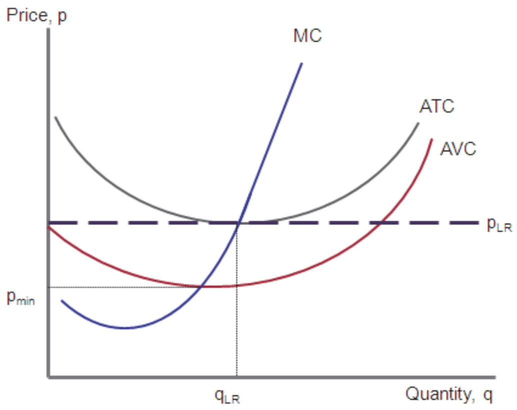
C. Market prices may be affected

D. Market prices are given



6. Market Structures

Long-run equilibrium position for perfect competition



Answer to the question on the previous slide:

D

In perfect competition:

1. There are a large number of firms.
2. No firm can impact on price.
3. There is no product differentiation.

6. Market Structures

What is a monopoly?

- Characteristics of monopoly
  - A single firm sells unique products to many buyers
  - Strong barriers to entry/exit
  - Established firms have a big advantage over new firms
- Price makers
  - Firms can choose to set their own market price when selling their product
  - The firm is large relative to the market
  - The demand curve is relatively inelastic
- Profit maximisation
  - Goal remains to maximise economic profit
  - Marginal revenue (MR) equals marginal cost (MC)
  - MR = MC
  - However, the monopolist enjoys ‘supernormal profits’ that cannot be competed away

6. Market Structures

Market power

- Two key characteristics of monopoly
  - No close substitutes
  - Barriers to entry

- Barriers to entry can take the form of:
  - Legal barriers
    - Patents, copyrights or 'public franchises' that is government license
  - Natural barriers
    - Economies of scale in, for example electricity generation and water supply
    - One firm can supply the whole market at a lower cost than two or more firms

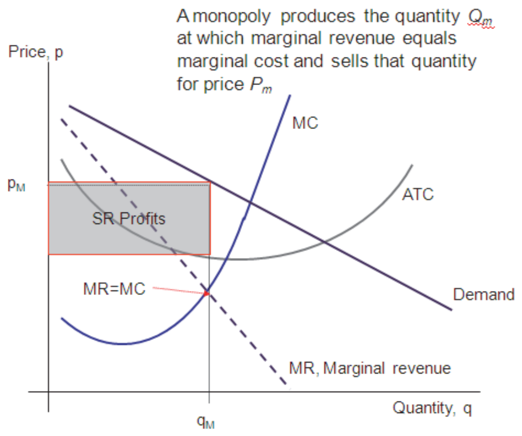
Further information

Price Discrimination

When a firm can charge different prices to different customers, we describe this as price discrimination. If all customers are charged different prices, we refer to this as perfect price discrimination. Most examples of price discrimination involve services which have to be consumed immediately. Much of industry is characterised by small groups of firms selling differentiated products.

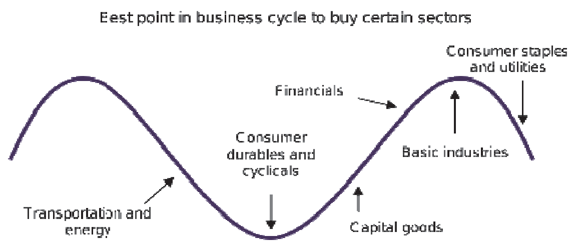
6. Market Structures

Monopoly



7. Assessing Industries and Companies

Economic cycle



7. Assessing Industries and Companies

Porter's five forces

- Competitor analysis
  - Bargaining power of suppliers
  - Bargaining power of customers
  - Threat of new entrants
  - Threat of substitutes
  - Rivalry between competitors

- Product life cycles
  - Introduction → Growth → Maturity → Decline → Obsolescence

7. Assessing Industries and Companies

SWOT Analysis

An assessment of a company's position in the marketplace.

- Strengths – What is the firm good at?
- Weaknesses – What is the firm weakest at doing?
- Opportunities – New markets/competitor weaknesses which can be exploited
- Threats – Adverse macroeconomic conditions/competitor actions

Marketing mix

Considering a firm's competitive advantage from a marketing perspective.

- Product
- Place
- Promotion
- Price