Exercise walk-through

Firms' costs, revenue and objectives ▪ 3.6

eXercise

You must be able to

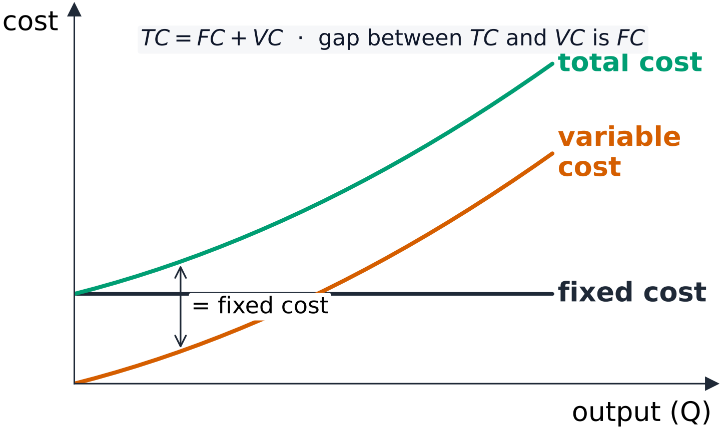
- distinguish fixed from variable costs and calculate total/average cost
- calculate total revenue and profit
- explain the different objectives of firms

Method — Costs, revenue and profit

- **Fixed costs 固定成本**: do not change with output (rent). **Variable costs 可变成本**: change with output (materials).
- **Total cost** = fixed + variable. **Average cost** = total cost ÷ output.
- **Total revenue 总收益** = price × quantity. **Profit** = total revenue − total cost.
- **Objectives:** profit, **survival 生存**, **growth 增长**, social objectives.

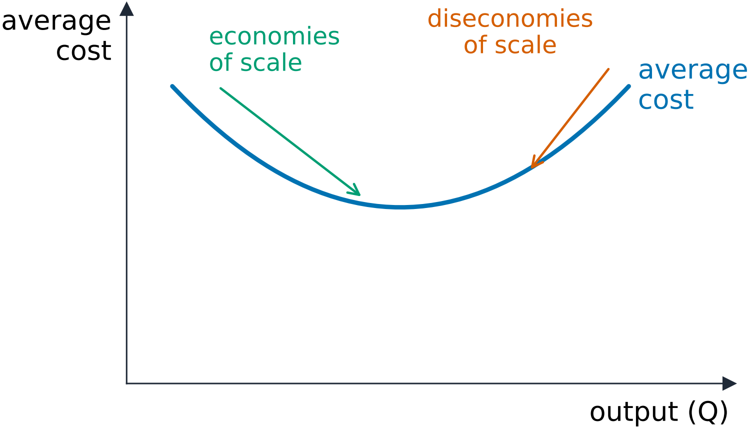
Answer shapes: K + App + An + Ev (a justified judgement, for discuss questions).

Method — Costs, revenue and profit



Total cost is fixed cost plus variable cost

Method — Costs, revenue and profit



Average cost falls (economies of scale) then rises (diseconomies)

Practice 2.1 ▪ 2 marks

State the difference between a *fixed* and a *variable* cost.

Solution 2.1

Method: Costs, revenue and profit

Worked steps

a fixed cost does not change with output (rent, insurance); a variable cost changes with output (materials, power) (2 for a clear difference; 1 for a partial idea).

Practice 2.2 ▪ 2 marks

A firm sells 500 units at $8 each. Calculate its total revenue.

Solution 2.2

Method: Costs, revenue and profit

Worked steps

$500 \times \$8 = \$4{,}000$ (2; award 1 for a correct method with the wrong figure).

Practice 2.3 ▪ 1 mark

State the formula for *profit*.

Solution 2.3

Worked steps

profit $=$ total revenue $-$ total cost (1).

Exam-style 3.1 ▪ 1 mark

A firm has total revenue of $10,000 and total cost of $7,000. Its profit is:

- **A** $3,000
- **B** $7,000
- **C** $10,000
- **D** $17,000

Solution 3.1

Method: Costs, revenue and profit

A \$3,000 ✓

B \$7,000

C \$10,000

D \$17,000

Worked steps

A. Profit $= \$10{,}000 - \$7{,}000 = \$3{,}000$.

Exam-style 3.2 ▪ 4 marks

Explain why a new firm might aim for **survival** rather than maximum profit.

Solution 3.2

Method: Costs, revenue and profit

Worked steps

[4] K 1 + An up to 3 — a new firm is still building customers and may make losses at first → it has little cash and many rivals → so its first aim is simply to stay open (survive) and not run out of cash → once established, it can aim for profit and growth.

Exam-style 3.3 ▪ 6 marks

Analyse how a firm could increase its profit.

Solution 3.3

Worked steps

[6] K/App/An — profit = revenue − cost, so a firm can raise profit by raising **revenue** (sell more, e.g. through advertising; or raise the price if demand is inelastic) **or** by cutting **costs** (use cheaper suppliers, raise productivity, gain economies of scale) → it must be careful: raising the price too far may lose sales if demand is elastic, and cutting costs too far may harm quality → so the best route depends on the market.