

5.1 Businesses, revenue, costs and profits

Name: _____ Class: _____ Date: _____ Total: 28 marks

KEY WORDS law of diminishing returns • normal profit

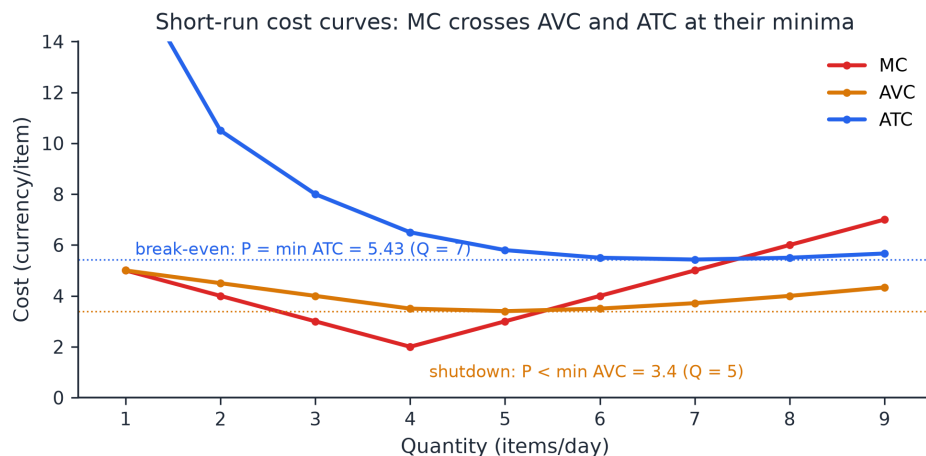
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Objective

Classify business types and growth routes, apply the business-objective formulae, and compute TR, AR, MR and the full cost family with the shutdown and break-even rules (spec 3.3.1–3.3.2). All data are the handout's shared model and cost table.

1 Key knowledge and worked examples

Revenue and costs. On AR $P = 70 - Q/2$: MR = $70 - Q$ and TR peaks at $Q = 70$. The cost table (TFC = 12; TVC 5, 9, 12, 14, 17, 21, 26, 32, 39 for $Q = 1 \dots 9$) gives MC 5, 4, 3, 2, 3, 4, 5, 6, 7; AVC is minimised at 3.4 ($Q = 5$) – the shutdown price; ATC at 5.43 ($Q = 7$) – the break-even price. Profit max: MR = MC. Revenue max: MR = 0.



Original table plotted; the two minima carry the shutdown and break-even rules.

2 Practice

2.1 Name the five business types in the specification. [2]

2.2 A brewer buys a chain of pubs. Name the integration type and give one advantage and one disadvantage. [3]

2.3 On AR $P = 70 - Q/2$, calculate TR and MR at $Q = 40$ (price 50). [3]

2.4 From the cost table, calculate ATC and AVC at $Q = 7$, and MC between $Q = 6$ and $Q = 8$. [3]

2.5 Using the cost table, state the short-run shutdown price and the break-even price for this firm. [2]

2.6 Where is revenue maximised on AR $P = 70 - Q/2$, and why? [3]

2.7 Distinguish normal profit from supernormal profit. [2]

3 Exam-style questions

3.1 (*Original.*) Explain the principal-agent problem and how the divorce of ownership from control changes a firm's objectives. [4]

3.2 (*Original.*) A firm's only fixed cost is 12 per day. At price 4 per item, the firm covers its variable costs exactly at $Q = 5$ (min $AVC = 3.4$) and its total costs at $Q = 7$ (min $ATC = 5.43$). Advise the firm what to do at prices 3.2, 4.5 and 6.0, with reasons. [6]
