

1.7 Evidence-based case analysis

Name: _____ Class: _____ Date: _____ **Total: 24 marks**

KEY WORDS fact • assumption • conclusion • case analysis
• review metrics

Objective

Structure a case analysis that separates facts from assumptions, choose between options with a weighted decision table built honestly, and send every recommendation out with its assumptions and review metrics attached.

1 Key knowledge and worked examples

■ **Fact, assumption, conclusion – sort every claim**

A **fact** carries a source and a definition: "Nimbus' two shops sold an average of 420 loaves per day in October (shop tills)". An **assumption** is something treated as true for now: "pre-order customers would have bought less without pre-order". A **conclusion** follows from both under stated criteria.

Case analysis fails at this sorting step more than anywhere else: numbers quoted without a source are assumptions wearing fact costumes.

■ **The weighted decision table**

Fix the criteria and weights BEFORE scoring, or the scores will quietly arrange themselves around the option you already like.

Worked example (Nimbus). Third shop vs pre-order expansion. Weights fixed first: profit impact 0.5, risk 0.3, fit with staff skills 0.2.

Criterion (weight)	Third shop	Pre-order
Profit impact (0.5)	6	5
Risk (0.3)	4	7
Staff fit (0.2)	7	8
Weighted total	5.6	6.2

Pre-order wins on the weights as stated. The table's value is not the number – it is that a disagreement now has a location: change the weights, and you can see exactly how the answer changes.

■ **A recommendation travels with its monitoring**

The final structure: situation (facts, sourced) → problem (a decision question with real options) → analysis (frameworks carrying evidence, not adjectives) → recommendation (one option, chosen against the criteria, risks named) → **review metrics** (what would prove it wrong, and by when).

"Open a stall for eight Saturdays; if average daily stall profit is below the shop break-even within eight weeks, stop" is a recommendation. "Expand because bakery demand is growing" is not – no option, no criteria, no falsifier.

2 Practice

2.1 For each claim, label fact or assumption and say why in one clause: (a) "Our customers love us"; (b) "Till records show repeat purchases by 55% of customers each month"; (c) "A third shop would pay back in two years". [3]

2.2 In the Nimbus table, profit impact is scored 6 for the third shop but 5 for pre-order. State two questions you would ask before accepting those two scores, one about the numbers and one about what "profit impact" means. [4]

2.3 Recompute both weighted totals with weights changed to profit 0.6, risk 0.2, staff fit 0.2 (scores unchanged). State which option wins and what the change demonstrates about the method. [3]

3 Exam-style questions

3.1 Nimbus is offered a lease on a third shop near a new university campus (opens in 9 months, no bakery within 1 km today). The owner also has a pre-order expansion plan (existing shops, app costs 8,000 fixed per year).

Build a decision table with three criteria you choose and justify (state each weight and one sentence why). Score both options with a stated basis for each score, compute the weighted totals, and recommend one option. Then list the two assumptions your recommendation most depends on and one review metric with a deadline. [8]

3.2 A consultant reports: "Nimbus should open the third shop – the campus will bring thousands of customers and the brand is strong."

Rewrite this as an evidence-based recommendation by: (a) naming the hidden assumption in “will bring”, (b) stating what evidence would test it, and (c) writing one review metric with a falsifying threshold. Explain in one sentence why a recommendation without a falsifier cannot be reviewed. [6]

Solutions

2.1

- (a) Assumption – “love” is unmeasured opinion with no source or definition.
- (b) Fact – it cites a source (till records), a defined measure and a period.
- (c) Assumption – a future outcome projected, not yet observed.

2.2

- About the numbers: what period and data produced each score – e.g. shop profit forecasts based on what comparable-site sales?
- About the criterion: is “profit impact” first-year profit, payback speed, or long-run margin? The two options can rank differently under each.

2.3

- Third shop: $0.6 \times 6 + 0.2 \times 4 + 0.2 \times 7 = 5.8$.
- Pre-order: $0.6 \times 5 + 0.2 \times 7 + 0.2 \times 8 = 6.0$.
- Pre-order wins 6.0 to 5.8 – and the method makes weight-setting explicit, so disagreement moves to the weights, where it can be argued with reasons instead of preferences.

3.1

- Criteria justified with weights, e.g. profit impact 0.5 (the owner’s stated goal), risk 0.3 (limited cash reserves), speed to revenue 0.2 (loan repayments start in a year). (Any three defensible criteria with reasons.)
- Scores with stated basis, e.g. third shop: profit 7 (new-site monopoly but lease cost), risk 3 (no comparable site owned before), speed 2 (9 months to opening); pre-order: profit 5 (app cost 8,000/yr against existing footfall), risk 7 (reversible pilot), speed 8 (runs within weeks).
- Totals: third shop $0.5 \times 7 + 0.3 \times 3 + 0.2 \times 2 = 4.8$; pre-order $0.5 \times 5 + 0.3 \times 7 + 0.2 \times 8 = 6.2$.
- Recommendation: pre-order expansion, chosen against the stated weights.
- Key assumptions: (1) existing customers will adopt pre-order at a rate that covers the 8,000 app cost; (2) no competitor opens near the campus within the 9 months.
- Review metric: e.g. “pre-order covers its monthly app share by week 12; otherwise cancel the subscription.”

3.2

- (a) Hidden assumption: campus footfall converts to bakery customers at the assumed rate – “will bring thousands” is a projection about behaviour, not a fact about leases or enrolment.
- (b) Evidence: footfall counts at comparable campus-adjacent shops, or survey/pilot data on conversion; signed enrolment numbers rather than forecasts.
- (c) Metric with falsifier: e.g. “average daily sales at the new shop below 300 loaves by the third month after opening $\rightarrow$ exit the lease early”.
- A recommendation without a falsifier cannot be reviewed because nothing it claims can be shown false by evidence.