Exercise walk-through

Cost-Benefit Analysis ▪ 1.5

eXercise

You must be able to

- explain that rational decision-makers weigh **total benefits** and **total costs**
- distinguish **explicit costs 显性成本** from **implicit costs 隐性成本**
- apply the rule that an action is worthwhile only if its benefits at least equal its costs
- explain why **sunk costs 沉没成本** should be ignored

Method — The decision rule

Undertake an action only if its **total benefit** is at least as large as its **total cost**.

Method — Explicit vs implicit costs

Explicit costs are out-of-pocket payments; **implicit** costs are the opportunity cost of resources you already own (e.g. wages you could earn elsewhere).

Method — Ignore sunk costs

A **sunk cost** is already spent and cannot be recovered, so it should **not** affect the decision going forward — only future costs and benefits matter.

Practice 2.1 ▪ 1 mark

State the rule for deciding whether an action is worthwhile.

Solution 2.1

Method: The decision rule

Worked steps

proceed only if the total benefit is at least as large as the total cost B1.

Practice 2.2 ▪ 2 marks

State the difference between explicit and implicit costs.

Solution 2.2

Method: Explicit vs implicit costs

Worked steps

explicit costs are out-of-pocket payments; implicit costs are the opportunity cost of resources you already own **B1** **B1**.

Practice 2.3 ▪ 2 marks

Explain why sunk costs should be ignored in decisions.

Solution 2.3

Method: Ignore sunk costs

Worked steps

they are already spent and cannot be recovered, so they do not change the future benefits or costs of the decision **B1** **B1**.

Exam-style 3.1 ▪ 1 mark

A sunk cost is one that

A can be recovered

B cannot be recovered

C is always small

D is really a benefit

Solution 3.1

Method: Ignore sunk costs

A can be recovered

B cannot be recovered ✓

C is always small

D is really a benefit

Worked steps

B.

Exam-style 3.2 ▪ 1 mark

The implicit cost of running your own business includes

A the rent you pay

B the wages you could have earned elsewhere

C your electricity bills

D the materials you buy

Solution 3.2

Method: Explicit vs implicit costs

A the rent you pay

B the wages you could have earned elsewhere ✓

C your electricity bills

D the materials you buy

Worked steps

B.

Exam-style 3.3 ▪ 1 mark

A firm has already spent $\$10\,000$ on a project (unrecoverable). Finishing it costs $\$3000$ more and earns $\$4000$.
(a) State whether it should finish the project.
(b) Explain, correctly ignoring the sunk cost.

Solution 3.3

Method: Ignore sunk costs

Worked steps

(a) yes, it should finish **B1**. (b) the $\$10\,000$ is sunk and irrelevant; the extra benefit ($\$4000$) exceeds the extra cost ($\$3000$), so finishing adds $\$1000$ of net benefit **B1** **B1**.