AAT Level 4

Applied Management Accounting

Chapter 5

Short Term Decision Making

Study Guide

Assessment Criteria: Relevant costs (LO 3.2)

Contents

PART ONE

Foundation Knowledge

1. Introduction to Short Term Decision Making

When managers need to make short-term business decisions, they shouldn't look at all costs and revenues—only those that are actually affected by the decision. This is a fundamental principle that makes decision-making more efficient and accurate.

Think of it this way: if you're deciding whether to take on a special one-off order, why would you consider the rent you're already paying? That rent stays the same regardless of your decision. Instead, you should focus only on what changes.

What This Chapter Covers

This chapter explores several key decision-making scenarios:

1. Relevant costing – understanding which costs and revenues matter for a decision
2. Make or buy decisions – should we produce in-house or outsource?
3. Discontinuation decisions – should we close a product line or department?
4. Further processing decisions – sell now or process further?

2. Understanding Relevant Costs and Revenues

Definition: Relevant Costs and Revenues

Costs and revenues that change as a direct result of a decision being taken. They represent the financial impact of choosing one option over another.

The Three Characteristics of Relevant Costs

A cost is relevant to a decision only if it meets ALL THREE of these criteria:

Characteristic	Explanation
1. Future	The cost must be incurred in the future. Past costs (already spent) cannot be changed by any decision.
2. Incremental	The cost must arise specifically because of this decision—an extra or additional cost that wouldn't exist otherwise.
3. Cash Flow	The cost must involve actual cash being spent or received. Accounting entries like depreciation don't count.

Definition: Avoidable Cost

A cost that would only occur if a particular decision is made. If you don't proceed with the decision, the cost is avoided—this is another way of identifying relevant costs.

Non-Relevant Costs: What to Ignore

Some costs should be excluded from decision-making because they don't change with the decision:

Non-Relevant Cost	Why It's Excluded
Sunk Costs	Past costs already incurred. Example: Research costs already spent on a project—these can't be recovered regardless of what you decide now.
Committed Costs	Future costs you're already legally obligated to pay. Example: Rent under a fixed lease—you'll pay it whether or not you take on the new project.
Non-Cash Flow Costs	Accounting entries that don't involve actual money. Example: Depreciation is just a book entry—no cash actually leaves the business.

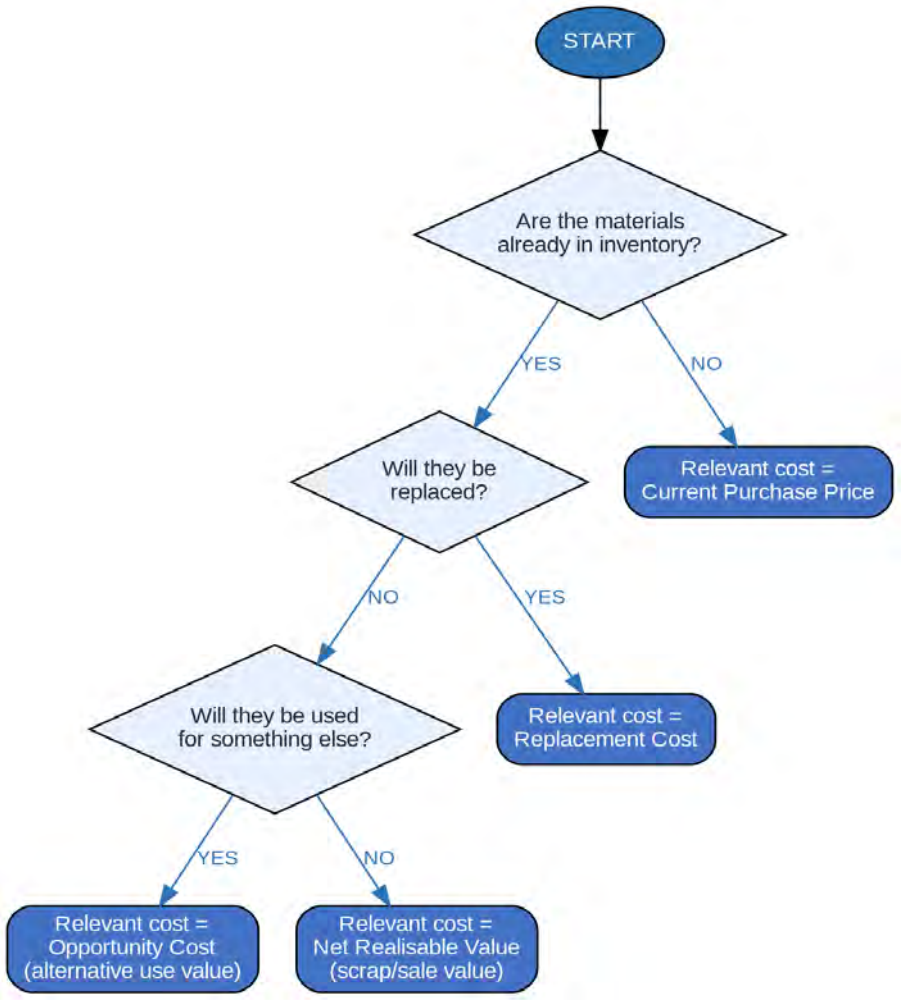
Exam Tip

When you see depreciation or net book value in a question, immediately think: 'This is NOT a relevant cost.' These are accounting concepts, not cash flows.

3. Materials: Determining Relevant Costs

Materials are usually variable costs and therefore typically relevant. However, the relevant cost depends on the specific circumstances. Here's a decision flowchart to follow:

Material Cost Decision Flowchart



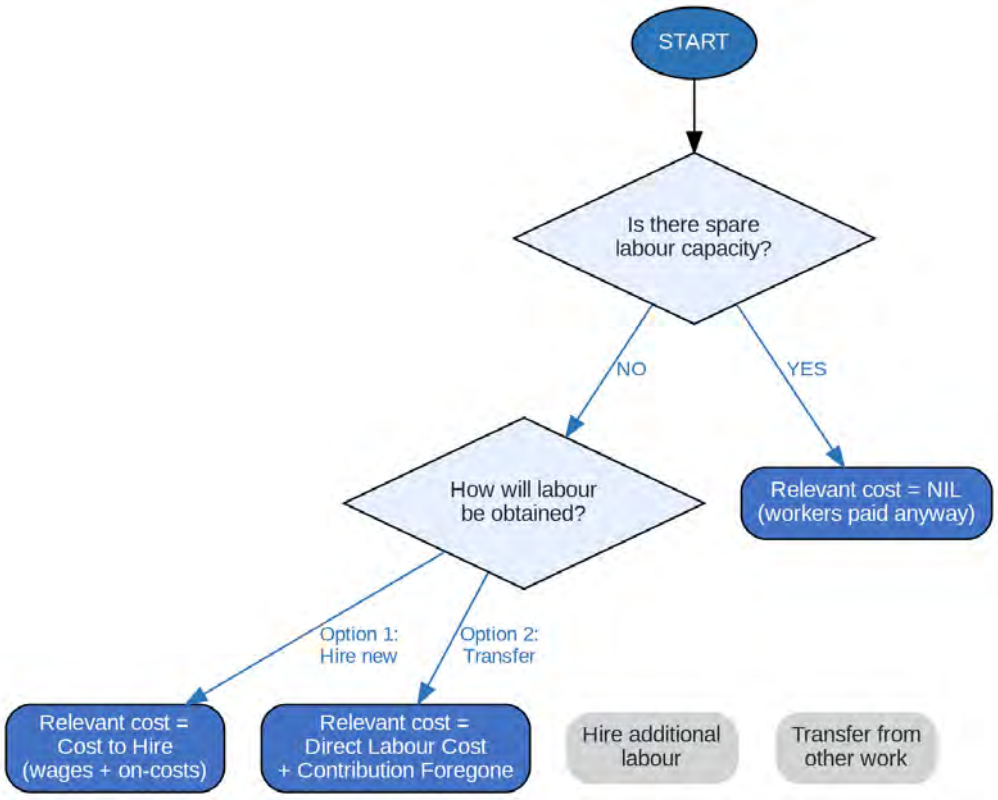
Key Point

The original purchase price of materials already in stock is a SUNK COST. Never use it as the relevant cost!

4. Labour: Determining Relevant Costs

Labour costs require careful analysis. The relevant cost depends on whether there's spare capacity and what alternatives exist:

Labour Cost Decision Flowchart



Understanding Contribution Foregone

When workers must be moved from other productive work, you lose the contribution (profit) they would have generated. The formula is:

```
Contribution per unit = Selling Price - Variable Costs per unit
```

```
Relevant Labour Cost = Direct Labour Cost + Contribution Foregone
```

5. Fixed Costs in Decision Making

A common exam trap is fixed costs. The general rule is:

- Most fixed costs are NON-RELEVANT (they don't change with the decision)
- EXCEPTION: If a fixed cost increases specifically because of the decision, that increase IS relevant

Important Distinction

Don't confuse the fixed overhead absorption rate with actual fixed cost changes. The absorption rate is for accounting purposes—it doesn't represent real cash flows. Only include fixed costs that will actually increase because of the decision.

Marginal Costing Approach

For short-term decisions, use the marginal costing technique: focus on variable costs and contribution. Fixed costs generally stay fixed regardless of the decision.

6. Make or Buy Decisions

A make or buy decision involves choosing between producing a product in-house or purchasing it from an external supplier. This is a common business dilemma that requires careful analysis.

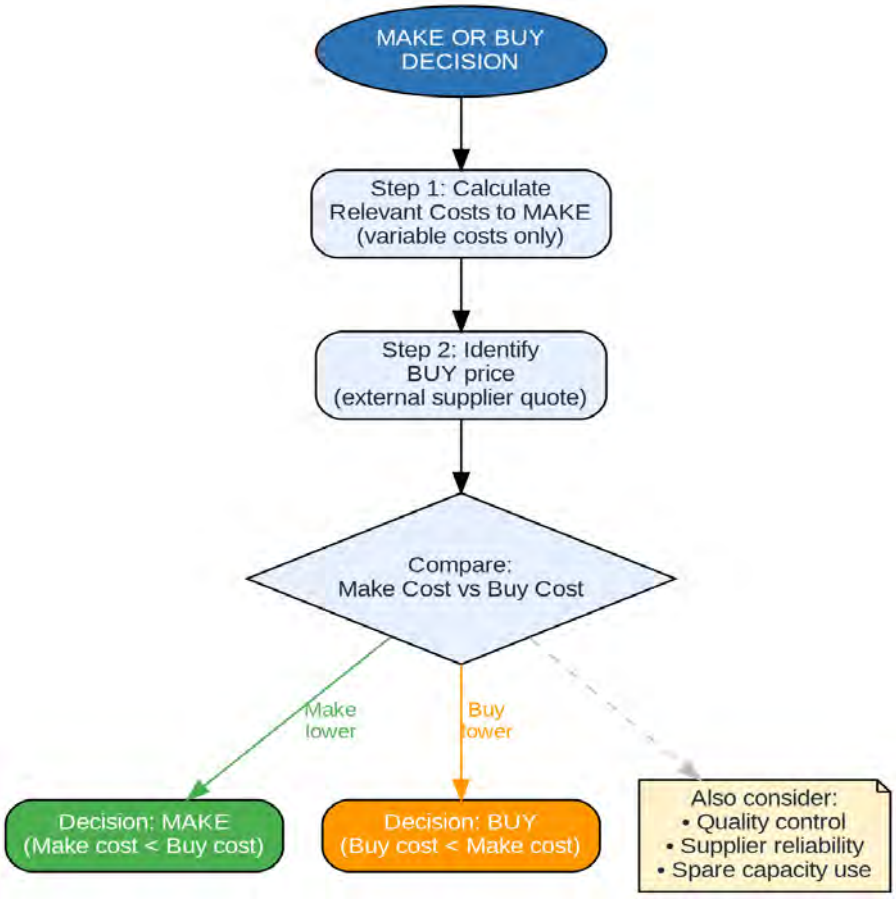
The Decision Framework

The basic approach is to compare:

1. Relevant cost of MAKING (variable costs + directly attributable fixed costs)
2. Relevant cost of BUYING (purchase price + any additional costs)

Decision: Choose the option with the LOWER relevant cost.

Make or Buy Decision Flowchart



Costs to Include When Making

- Direct materials (variable)
- Direct labour (variable)

- Variable overheads
- Directly attributable fixed costs (those that would be saved if we stopped making)

Qualitative Factors to Consider

Numbers don't tell the whole story. Also consider:

Factor	Questions to Ask
Supplier Reliability	Can they deliver on time? Will quality be consistent? Are prices stable?
Specialist Skills	Does the supplier have expertise we lack? Could outsourcing improve quality?
Social Impact	Will outsourcing lead to redundancies? What's the cost and morale impact?
Confidentiality	Is proprietary information at risk? Does the supplier work for competitors?
Customer Reaction	Do customers value 'made in-house'? Could outsourcing affect brand perception?
Alternative Use	If we buy, can freed-up capacity be used profitably elsewhere?

7. Discontinuation Decisions

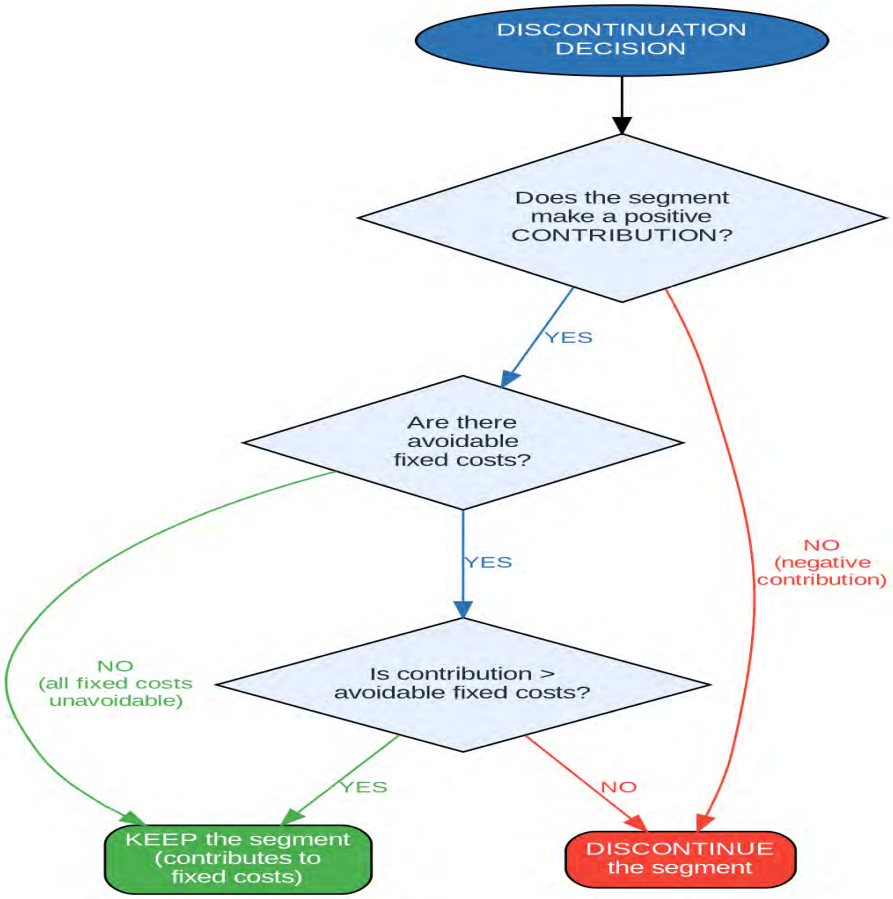
Sometimes a product line, service, or department appears to be making a loss. The question is: should we shut it down? The answer isn't always straightforward.

The Key Principle

A segment should only be closed if doing so improves overall company profit.

This is determined by looking at contribution, not apparent profit/loss. If a segment makes a positive contribution (sales minus variable costs), closing it could make things worse!

Discontinuation Decision Flowchart



The Discontinuation Analysis

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Impact of Closure = Lost Contribution - Fixed Costs Saved
```

If the result is negative, don't close. If positive, closure improves profit.

Understanding Fixed Cost Allocation

A common trap: Many 'losses' are actually caused by arbitrary allocation of shared fixed costs. When evaluating closure:

- Only consider fixed costs that would actually be SAVED (directly attributable)
- Ignore allocated shared costs—they'll just be reallocated elsewhere
- Calculate the controllable profit for each segment

Beware of 'Loss-Making' Segments

A segment showing an accounting loss may still be contributing positively to overall profits. The 'loss' often results from allocated overheads that won't disappear if the segment closes.

Other Factors in Discontinuation

- Knock-on effects: Does this product attract customers who buy other products?
- Employee morale: How will staff react to closures?
- Competitor reaction: Will competitors gain advantage?
- Non-quantifiable costs: Redundancy payments, reorganisation costs

8. Further Processing Decisions

Sometimes a product can be sold at an intermediate stage or processed further to sell at a higher price. The decision is: sell now or process further?

The Decision Rule

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Process further if: Additional Revenue > Additional Processing Costs
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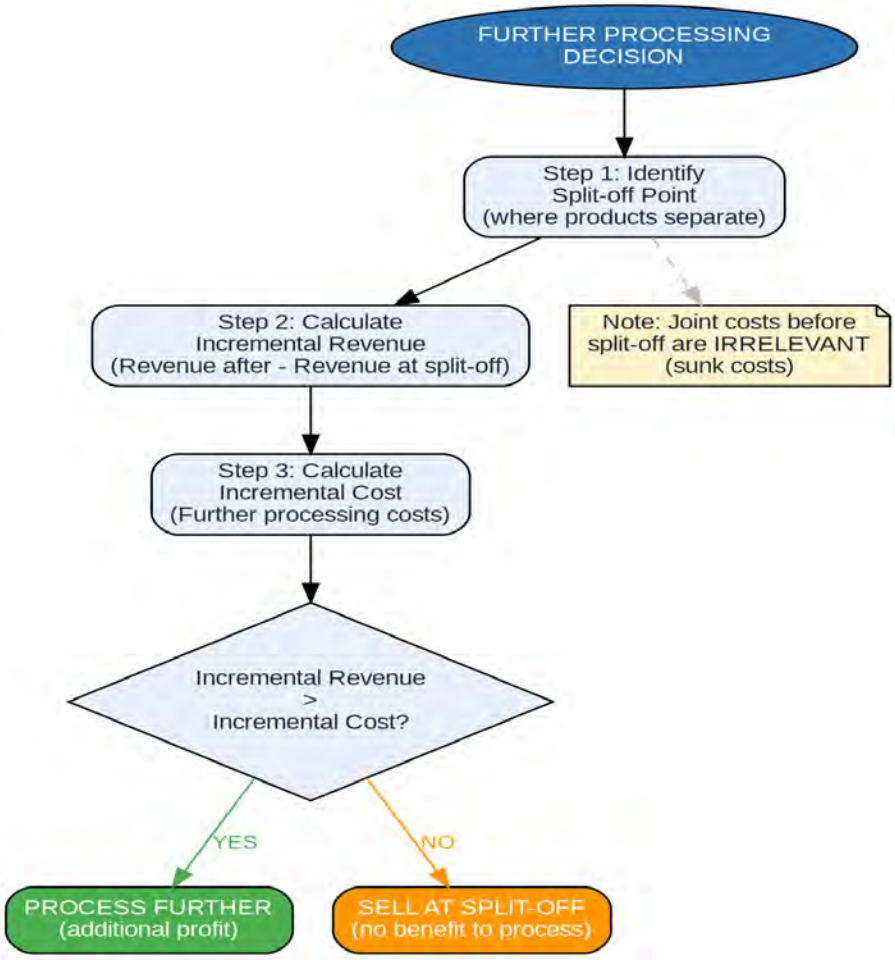
Further Processing Decision Flowchart



Key Principles

1. Joint costs (costs incurred before the split-off point) are SUNK and IRRELEVANT
2. Only compare: incremental revenue vs. incremental processing costs
3. Each product should be evaluated independently

Joint Costs Reminder

Think of a butcher cutting up a cow. The cost of the cow is the joint cost—it's already spent by the time you decide whether to sell basic cuts or make sausages. Focus only on what it costs to process further.

Calculation Framework

Item	Amount (£)
Revenue if processed further	X
Less: Revenue if sold now	(X)
= Incremental Revenue	**X**
Less: Additional processing costs	(X)
= Benefit/(Cost) of further processing	**X/(X)**

If the result is positive → Process further. If negative → Sell at the intermediate stage.

PART TWO

Practice and Assessment

9. Worked Examples

Example 1: Material Relevant Cost

Scenario:
Henderson Manufacturing is considering a special contract requiring 2,000 kg of Material Z. The following information is available:

• Current inventory: 1,500 kg (purchased last year at £5 per kg)
• Current purchase price: £6.50 per kg
• Current resale value: £4 per kg
• Material Z is used regularly in production and would be replaced if used

Required: Calculate the relevant cost of Material Z for this contract.

Solution

Step 1: Identify the key facts

- We need 2,000 kg but only have 1,500 kg in stock
- The stock IS used regularly and WILL be replaced
- The original £5 cost is a SUNK COST - ignore it!

Step 2: Apply the decision flowchart

For the 1,500 kg in stock: Materials in stock → Will be replaced → Use REPLACEMENT COST

For the additional 500 kg: Not in stock → Use CURRENT PURCHASE PRICE

Step 3: Calculate

1,500 kg from stock × £6.50 (replacement)	£9,750	
500 kg new purchase × £6.50	£3,250	
Total Relevant Cost		**£13,000**

Example 2: Make or Buy Decision

Scenario:
Phoenix Electronics produces Component A in-house. A supplier has offered to supply the component externally. Annual production: 8,000 units.

In-house costs per unit:
• Direct materials: £12
• Direct labour: £8
• Variable overhead: £3
• Fixed overhead (allocated): £7
• Total: £30

Additional information:

• External supplier price: £26 per unit
• £20,000 of the allocated fixed costs could be saved if production stopped

Required: Should Phoenix make or buy?

Solution

Step 1: Identify relevant costs of MAKING

Direct materials (8,000 × £12)	£96,000
Direct labour (8,000 × £8)	£64,000
Variable overhead (8,000 × £3)	£24,000
Avoidable fixed costs	£20,000
Total Relevant Cost of Making	**£204,000**

Step 2: Calculate relevant cost of BUYING

Purchase cost (8,000 × £26)	**£208,000**

Step 3: Decision

Making (£204,000) is cheaper than Buying (£208,000) by £4,000.

Recommendation: Continue making in-house.

Key Learning Point

Note that we only included £20,000 of fixed costs—the amount that would actually be saved. The remaining allocated fixed costs (8,000 × £7 = £56,000 minus £20,000 = £36,000) would continue regardless.

Example 3: Discontinuation Decision

Scenario:
Greenwood Retail operates three departments. Management is considering closing Department C which shows an accounting loss:

	Dept A	Dept B	Dept C	Total
Sales	£80,000	£100,000	£40,000	£220,000
Variable costs	(£48,000)	(£55,000)	(£26,000)	(£129,000)
Contribution	**£32,000**	**£45,000**	**£14,000**	**£91,000**
Fixed costs (allocated)	(£18,000)	(£24,000)	(£18,000)	(£60,000)
Profit/(Loss)	**£14,000**	**£21,000**	**(£4,000)**	**£31,000**

Additional information: Only £6,000 of Department C's fixed costs are directly attributable and would be saved if closed.

Solution

Step 1: Calculate impact of closing Department C

Lost contribution from Dept C	(£14,000)
Fixed costs saved	£6,000
Net impact on company profit	**(£8,000)**

Recommendation: DO NOT close Department C.

Although Dept C shows an accounting loss of £4,000, closing it would reduce total company profit by £8,000. The 'loss' is caused by allocated fixed costs (£12,000) that won't disappear—they'll just be reallocated to other departments.

10. Practice Questions

Multiple Choice Questions

Question 1

A company has 500 kg of Material X in inventory, purchased at £8 per kg. The material is used regularly and current replacement cost is £10 per kg. If used for a special project, what is the relevant cost of this material?

A. £4,000
B. £5,000
C. £0
D. £8,000

Question 2

Equipment with a net book value of £15,000 could be sold now for £8,000 or used on a two-year project after which it would have no value. What is the relevant cost of using the equipment?

A. £15,000
B. £8,000
C. £7,000
D. £0

Question 3

Which of the following is NOT a characteristic of a relevant cost?

E. It is a future cost
F. It is an incremental cost
G. It is a cash flow
H. It includes depreciation

Calculation Questions

Question 4: Make or Buy

Thompson Ltd produces a component with the following costs per unit:

• Direct materials: £15
• Direct labour: £10
• Variable overhead: £5
• Fixed overhead (allocated): £12

An external supplier offers to supply the component for £35 per unit. Annual production is 5,000 units. If production stops, £15,000 of fixed costs would be saved.

Required: Should Thompson make or buy? Show your calculations.

Question 5: Discontinuation

Metro Store has three departments with the following annual results:

	Fashion	Home	Food	Total
Sales	£200,000	£150,000	£300,000	£650,000
Variable costs	(£130,000)	(£120,000)	(£200,000)	(£450,000)
Fixed costs	(£50,000)	(£45,000)	(£80,000)	(£175,000)
Profit/(Loss)	**£20,000**	**(£15,000)**	**£20,000**	**£25,000**

If the Home department closes, £20,000 of its fixed costs would be saved.

Required: Advise whether the Home department should be closed.

Question 6: Further Processing

Riverside Dairy produces three products from a joint process. Joint costs total £50,000. Details:

Product	Split-off value	Further proc. cost	Final sale value
Cream	£12,000	£8,000	£22,000
Butter	£18,000	£6,000	£20,000
Cheese	£15,000	£10,000	£28,000

Required: Which products should be processed further?

11. Answers and Solutions

Multiple Choice Answers

Question 1: Answer B - £5,000

The material is used regularly, so it will be replaced. The relevant cost is the replacement cost: 500 kg × £10 = £5,000. The original £8 cost is a sunk cost—ignore it!

Question 2: Answer B - £8,000

Net book value (£15,000) is NOT a relevant cost—it's an accounting figure, not a cash flow. The relevant cost is the opportunity cost: what we give up by using the equipment. If we use it, we lose the £8,000 sale value.

Question 3: Answer D - It includes depreciation

Depreciation is NOT a cash flow—it's an accounting entry. Relevant costs must be future, incremental, AND cash flows. Depreciation fails the cash flow test.

Calculation Question Answers

Question 4: Make or Buy Solution

Cost of Making:

Direct materials (5,000 × £15)	£75,000
Direct labour (5,000 × £10)	£50,000
Variable overhead (5,000 × £5)	£25,000
Avoidable fixed costs	£15,000
Total cost of making	**£165,000**

Cost of Buying: 5,000 × £35 = £175,000

Decision: MAKE (saves £10,000 per year)

Question 5: Discontinuation Solution

Home department contribution: £150,000 - £120,000 = £30,000

Lost contribution if Home closes	(£30,000)
Fixed costs saved	£20,000
Net impact on profit	**(£10,000)**

Decision: DO NOT CLOSE Home department—closing would reduce profits by £10,000.

Question 6: Further Processing Solution

Product	Extra Rev.	Extra Cost	Benefit	Decision
Cream	£10,000	£8,000	£2,000	**Process**
Butter	£2,000	£6,000	(£4,000)	**Sell Now**
Cheese	£13,000	£10,000	£3,000	**Process**

Decisions: Process Cream and Cheese further; Sell Butter at split-off point.

Note: Joint costs (£50,000) are IRRELEVANT—they're sunk at the decision point.

PART THREE

Summary and Exam Preparation

12. Key Points Summary

Essential Formulas

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Relevant Cost = Future + Incremental + Cash Flow
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```
Contribution = Sales Revenue - Variable Costs
```

```
Discontinuation Impact = Lost Contribution - Fixed Costs Saved
```

```
Further Processing Decision: If Extra Revenue > Extra Cost → Process Further
```

Quick Reference: What Makes a Cost Relevant?

Type of Cost	Relevant?	Reason
Variable costs	Usually YES	Change with activity
Fixed costs (general)	Usually NO	Committed costs
Directly attributable fixed costs	YES	Avoidable if stopped
Sunk costs	NEVER	Already spent
Depreciation / NBV	NEVER	Not cash flow
Opportunity costs	YES	Benefit foregone
Joint costs (at decision point)	NO	Already incurred

13. Memory Aids and Quick Reference

FIC Test for Relevant Costs

Remember: FIC = Future, Incremental, Cash flow

A cost must pass ALL THREE tests to be relevant!

F - Is it a FUTURE cost? (Not already spent)

I - Is it INCREMENTAL? (Only arises because of this decision)

C - Is it a CASH FLOW? (Not just an accounting entry)

SCND - Non-Relevant Costs

SCND = Sunk, Committed, Non-cash, Depreciation

If you see these, they are NOT relevant!

S - SUNK costs (already spent, can't recover)

C - COMMITTED costs (legally obligated to pay)

N - NON-CASH items (accounting entries only)

D - DEPRECIATION (book entry, not real cash)

Decision Type Quick Checks

Decision Type	Key Question to Ask
Make or Buy	Which option has the LOWER relevant cost?
Discontinuation	Is contribution > directly attributable fixed costs?
Further Processing	Is extra revenue > extra processing cost?

14. Common Mistakes to Avoid

□ WRONG	✓ RIGHT
Using original purchase price for stock	Use replacement cost if regularly used
Including depreciation in decisions	Depreciation is NOT a cash flow—exclude it
Including ALL fixed costs	Only include incremental or avoidable fixed costs
Using absorption rate for fixed costs	Use actual incremental fixed cost changes
Closing segments that show losses	Check if contribution exceeds avoidable costs
Including joint costs in further processing	Joint costs are sunk—ignore them
Assuming spare labour has zero cost	Only zero if workers are paid regardless

15. Exam Tips

1. Read the question carefully – identify the decision type first (make/buy, discontinue, further process)
2. Apply the FIC test to every cost – if it fails ANY test, it's not relevant
3. Watch for depreciation and NBV – these are NEVER relevant costs
4. For materials in stock – don't use original cost; determine if replacement or NRV applies
5. For labour – check for spare capacity first
6. For fixed costs – only include the amount that actually changes
7. Don't forget qualitative factors – examiners often ask for these
8. Show your workings clearly – partial marks are available

□ **Final Reminder**

In short-term decision making, focus on what CHANGES. Ignore what stays the same regardless of the decision. Use marginal costing principles: contribution analysis is your friend!

— End of Chapter 5 Study Guide —