AAT Level 4

Applied Management Accounting

Chapter 2

Target Costing and Life Cycle Costing

Study Guide

Assessment Criteria Covered

Reference	Assessment Criteria
LO 1.5	Evaluate the impact of internal and external factors on income and expenditure forecasts
LO 2.4	Apply target costing techniques to product costing
LO 2.5	Apply life cycle costing approaches to product costing

PART ONE: Foundation Knowledge

Section 1: Introduction - Two Different Ways of Thinking About Costs

Before we dive into the technical details, let's understand the big picture of this chapter.

Imagine you're opening a coffee shop. There are two fundamentally different ways to think about pricing your coffee:

Traditional Approach (Cost-Plus Pricing):

1. Calculate how much it costs you to make a cup of coffee (say, £2.00)

2. Add your desired profit (say, £1.00)

3. Set your selling price at £3.00

Market-Driven Approach (Target Costing):

1. Research what customers will pay for coffee in your area (say, £2.50)

2. Decide what profit you need (say, £0.50)

3. Work backwards: you MUST make your coffee for £2.00 or less

This chapter is all about the second approach - starting with what the market will bear, and then figuring out how to make your product within that constraint. We'll also look at how costs behave over a product's entire life, from the drawing board to the day it's discontinued.

Why does this matter for AAT exams?

The AAT syllabus specifically requires you to understand:

• How internal and external factors affect forecasts (LO 1.5)

• Target costing techniques (LO 2.4)

• Life cycle costing approaches (LO 2.5)

□ Knowledge Check 1

Complete the following statement about pricing approaches:

Traditional cost-plus pricing starts with ____Gap 1____ and adds profit to determine price.

Target costing starts with ____Gap 2____ and subtracts profit to determine ____Gap 3____.

Gap 1 options: A) market price B) internal costs C) competitor prices D) customer demand

Gap 2 options: E) internal costs F) market price G) profit margin H) production volume

Gap 3 options: I) selling price J) target cost K) profit margin L) market share

Section 2: Cost Reduction vs Cost Control - Know the Difference!

Before we explore target costing, we need to understand two related but different concepts.

2.1 Definitions

Cost Control is about hitting the targets you've already set. Think of it as "staying on budget."

Cost Reduction is about finding ways to permanently lower the cost per unit while maintaining quality. Think of it as "making the budget smaller."

Aspect	Cost Control	Cost Reduction
Focus	Meeting existing targets	Reducing the targets themselves
Question asked	"Are we on budget?"	"Can we lower the budget?"
Nature	Maintaining status quo	Continuous improvement
Example	Ensuring material costs stay at £5/unit	Finding a way to reduce material costs from £5 to £4/unit

 Important: Cost reduction aims to reduce UNIT costs (cost per item), not necessarily total costs. If you reduce unit costs and then sell more, your total costs might actually increase - but that's okay because you're making more profit per unit.

2.2 Implementing a Successful Cost Reduction Programme

For a cost reduction programme to succeed, five conditions must be met. Remember these with the mnemonic CPREG:

Letter	Condition	Explanation
C	Clear purpose	Specific targets (e.g., "reduce labour costs by 15%")
P	Persuasive reason	Why is this necessary? (survival, competition, growth)
R	Resolve from the top	Senior management must be committed and involved
E	Excellent communication	Staff need to understand and

		be consulted
G	Gradual introduction	Don't try to change everything overnight

 Exam Tip: If asked about conditions for successful cost reduction, don't just list them - explain WHY each one matters. For example, "Gradual introduction is important because sudden changes can disrupt operations and create resistance from staff."

Knowledge Check 2

Which of the following BEST describes the difference between cost control and cost reduction?

A) Cost control reduces costs; cost reduction maintains costs

B) Cost control maintains budgeted costs; cost reduction permanently lowers unit costs

C) Cost control is for manufacturing; cost reduction is for services

D) Cost control is short-term; cost reduction is long-term only

What does the "G" in CPREG stand for?

Answer: _____

Section 3: Target Costing - The Market-Driven Approach

3.1 What is Target Costing?

Target costing is a pricing and cost management technique where you:

1. Start with a competitive market price

2. Subtract your required profit margin

3. Arrive at a "target cost" that you must achieve

In simple terms:

Target Cost = Market Price - Required Profit

This is the OPPOSITE of traditional cost-plus pricing, where you start with costs and add profit to get the price.

3.2 Why Traditional Cost-Plus Pricing Can Fail

Let's see why the traditional approach has serious problems:

Example: BrightSound Headphones

BrightSound manufactures wireless headphones using traditional cost-plus pricing:

• Production cost per unit: £45

• Desired profit: £15 per unit

• Selling price: £45 + £15 = £60

The problems with this approach:

1. Ignores customer willingness to pay - What if customers think £60 is too expensive? They'll buy from competitors.

2. Ignores competitor pricing - If competitors sell similar headphones for £50, BrightSound's £60 price makes no sense.

3. No incentive to reduce costs - If costs go up to £50, BrightSound just raises the price to £65. There's no pressure to be efficient.

3.3 The Five Steps of Target Costing - Remember "PRICE"

The target costing process has five clear steps. Remember them with the mnemonic PRICE:

Step	Letter	Description
1	P - Price	Set a market-based target price based on customer research and competitor analysis
2	R - Required profit	Calculate the required profit margin (could be % of sales or return on investment)
3	I - Identify target cost	Calculate: Target Cost = Target Price - Required Profit
4	C - Cost gap	Calculate: Cost Gap = Estimated Cost - Target Cost
5	E - Engineer solutions	If there's a gap, find ways to close it (or abandon the product)

□ Knowledge Check 3

Put the five steps of target costing in the correct order using the PRICE mnemonic:

A) Calculate the cost gap

B) Engineer solutions to close the gap

C) Identify the target cost

D) Set the market-based target price

E) Determine required profit margin

Correct order: 1.___ 2.___ 3.___ 4.___ 5.___

Section 4: Complete Worked Example - Target Costing in Action

4.1 Scenario: FreshBrew Coffee Machines

FreshBrew Ltd is developing a new home coffee machine. Here's what they know:

Market research findings:

• Customers are willing to pay £150 for this type of machine

• Competitors charge between £140 and £160 for similar products

Company requirements:

• FreshBrew requires a 20% profit margin on sales

Current cost estimates:

Cost Element	Cost per Unit
Materials	£50
Labour	£35
Manufacturing overhead	£25
Distribution	£10
Total estimated cost	£120

4.2 Step-by-Step Target Costing Calculation

Step 1: Set the target price

Based on market research: Target Price = £150

Step 2: Calculate required profit

Required profit = 20% of selling price = 20% × £150 = £30

Step 3: Calculate target cost

Target Cost = Target Price - Required Profit = £150 - £30 = £120

Step 4: Calculate the cost gap

Cost Gap = Estimated Cost - Target Cost = £120 - £120 = £0

Step 5: Conclusion

In this case, there is NO cost gap! FreshBrew can proceed with the product as planned.

4.3 What If There's a Cost Gap?

Let's change the scenario. Suppose the estimated costs are higher:

Cost Element	Revised Cost per Unit
Materials	£55
Labour	£40
Manufacturing overhead	£30
Distribution	£15
Total estimated cost	£140

Now:

• Target Cost = £120 (unchanged)

• Estimated Cost = £140

• Cost Gap = £140 - £120 = £20 per unit

 Important: FreshBrew must find ways to reduce costs by £20 per unit, or the product will not achieve the required profit margin.

Knowledge Check 4

A company has the following information for a new product:

• Market price: £200

• Required profit margin: 25% of selling price

• Estimated production cost: £165

Calculate:

1. Target cost = £_____

2. Cost gap = £_____

3. Is there a cost gap? Yes / No

Section 5: Closing the Target Cost Gap

When there's a cost gap, companies must find ways to reduce costs without sacrificing quality or customer value. Here are the main techniques:

5.1 Questions to Ask When Closing the Gap

Area	Questions to Consider
Materials	Can we eliminate unnecessary materials? Can we use cheaper alternatives without affecting quality?
Labour	Can we use less skilled (cheaper) workers for some tasks? Can we improve productivity through training?
Volume	Can we increase production to achieve economies of scale?
Supply chain	Can we negotiate better prices with suppliers? Can we buy pre-assembled components?
Design	Can we simplify the product design? Can we reduce the number of components?
Processes	Can we combine departments or eliminate overlapping functions?

5.2 Value Engineering vs Value Analysis

Two powerful techniques for closing the cost gap:

Aspect	Value Engineering	Value Analysis
Applies to	NEW products (still in design)	EXISTING products (already sold)
Timing	Before production begins	After production has started
Focus	Design products to meet target cost from the start	Remove features that don't add customer value
Example	Designing a phone with fewer but better features	Removing paper manuals that customers don't read

 Exam Tip: Remember - Value Engineering = Early (design stage). Value Analysis = Afterwards (existing products).

5.3 Value Enhancement - The Other Side of the Coin

While cost reduction focuses on spending LESS, value enhancement focuses on getting MORE

from what you spend.

Value Added = Revenue - Cost of bought-in materials and services

Value enhancement means maximising the value you create with your resources. It's not just the accounts department's job - everyone (designers, marketers, engineers, quality control) must work together.

5.4 Benchmarking

Benchmarking is comparing your performance against others to identify areas for improvement.

Type	Description	Example
Internal benchmarking	Compare different divisions within your company	Comparing receivables days of UK vs European divisions
Competitive benchmarking	Compare against direct competitors	Comparing your production costs to a rival manufacturer

 Important: Closing the cost gap by increasing the selling price is generally NOT an option in target costing, because the price is determined by the market, not the company.

Knowledge Check 5

Match each term with its correct description:

1. Value Engineering A. Comparing performance against competitors
2. Value Analysis B. Applied to new products during design stage
3. Competitive Benchmarking C. Applied to existing products after production
4. Internal Benchmarking D. Comparing divisions within the same company

Answers: 1.___ 2.___ 3.___ 4.___

Section 6: Life Cycle Costing - The Big Picture View

6.1 The Problem with Traditional Costing

Traditional accounting systems have a major flaw: they focus on ONE YEAR at a time.

Imagine you launch a new product. In Year 1:

• You spent £5 million on R&D

• You sold 100,000 units at £50 each = £5 million revenue

• Your annual accounts show: Revenue £5m - R&D £5m = £0 profit

Does this mean the product is worthless? Of course not! The R&D will benefit sales for years to come. But traditional accounting doesn't show this.

6.2 What is Life Cycle Costing?

Life cycle costing tracks ALL costs and revenues for a product over its ENTIRE life - from initial concept to final discontinuation.

The Formula:

Life Cycle Cost per Unit = Total costs over entire product life ÷ Total units produced over entire life

This gives a much more accurate picture of whether a product is truly profitable.

6.3 The 90% Rule - Why Early Decisions Matter

Here's a crucial fact that appears frequently in exams:

 Important: Around 90% of a product's lifetime costs are determined by decisions made during the design and development stages.

Why? Because the design determines:

• What materials are needed

• How many components are required

• What production methods can be used

• How long assembly takes

• What quality controls are needed

Once the design is "locked in," most costs are committed - even if the actual spending happens later.

 Exam Tip: Management accounting systems should focus on controlling costs EARLY in the lifecycle, during design and development, when there's still time to make changes.

Knowledge Check 6

Complete the statements about life cycle costing:

1. Life cycle costing tracks costs over the _____ life of a product.

A) first year B) production phase C) entire D) profitable

2. Approximately _____% of a product's lifetime costs are determined at the design stage.

A) 50% B) 70% C) 90% D) 100%

3. Why is it important for management accountants to be involved early in product development?

Answer: _____

Section 7: Worked Example - Life Cycle Costing

7.1 Scenario: GameZone Console

GameZone Ltd is developing a new gaming console. Here are the projected figures:

Cost Projections:

Cost Category	Pre-Launch	Year 1	Year 2	Year 3	Year 4
R&D costs (£m)	15	-	-	-	-
Marketing (£m)	-	8	6	4	2
Production cost/unit (£)	-	180	150	130	130
Units produced (millions)	-	0.5	2	3	1.5
Disposal costs (£m)	-	-	-	-	3

7.2 Traditional (Annual) View - Year 1 Only

The accountant calculates Year 1 cost per unit:

• R&D amortised over 4 years: £15m ÷ 4 = £3.75m per year

• Marketing Year 1: £8m

• Production: 0.5m units × £180 = £90m

• Total Year 1 costs: £3.75m + £8m + £90m = £101.75m

• Units in Year 1: 0.5m

Year 1 Cost per Unit = £101.75m ÷ 0.5m = £203.50

If the launch price is £200, the accountant might say: "We're losing £3.50 per unit! This product is failing!"

7.3 Life Cycle View - The Complete Picture

Total Lifecycle Costs:

Category	Calculation	Total (£m)
R&D	Given	15.0
Marketing	8 + 6 + 4 + 2	20.0
Production	(0.5×180) + (2×150) + (3×130) + (1.5×130)	975.0
Disposal	Given	3.0
Total		1,013.0

Total Units: 0.5 + 2 + 3 + 1.5 = 7 million units

Life Cycle Cost per Unit = £1,013m ÷ 7m = £144.71

Conclusion:

The product is actually very profitable! If sold at an average price of £200, profit per unit = £200 - £144.71 = £55.29

The Year 1 analysis was misleading because it allocated too much R&D to too few units.

□ Knowledge Check 7

Using the GameZone example above, calculate:

1. What percentage of total costs is R&D?

   £15m ÷ £1,013m × 100 = _____%

2. What percentage of total units are produced in Year 1?

   0.5m ÷ 7m × 100 = _____%

3. This explains why Year 1 cost per unit (£203.50) is much _____ than lifecycle cost per unit (£144.71).

   A) lower B) higher

Section 8: Advantages of Life Cycle Costing

Life cycle costing provides several benefits over traditional annual accounting:

Advantage	Explanation
True profitability	Determines whether total lifecycle revenue covers all costs incurred
Better resource allocation	Knowing lifetime costs helps compare different product options
Individual product tracking	Traces R&D, marketing, and other costs to specific products
Design-cost links	Shows how early design decisions affect later costs
Informed pricing	Supports pricing decisions based on total costs
Early control	Emphasises the importance of controlling costs during design stage

Knowledge Check 8

List THREE advantages of life cycle costing compared to traditional annual costing:

1. _____
2. _____
3. _____

Section 9: Managing Life Cycle Costs - Practical Implications

To maximise profit over a product's lifecycle, managers should focus on:

9.1 Design Costs Out of the Product

Since 90% of costs are determined at the design stage, design teams should:

• Work as cross-functional teams (not in isolation)

• Consider manufacturing costs from the start

• Minimise the number of components

• Design for efficient production

9.2 Minimise Time to Market

In competitive markets, being first matters:

• Launch quickly to establish market position

• Longer selling period = more total profit

• Competitors can copy your product; speed is your advantage

9.3 Maximise the Length of the Life Cycle

Strategies to extend product life:

• Find new markets (e.g., launching internationally in stages)

• Find new uses for the product

• Modify and update the product (new versions, new features)

• Use market skimming (high initial price, then reduce over time)

□ Knowledge Check 9

Match each strategy with its purpose:

1. Cross-functional design teams A. Extend the product lifecycle
2. Quick time to market B. Design costs out of the product
3. Finding new markets C. Establish market position before competitors
4. Minimising components D. Reduce manufacturing complexity

Answers: 1.___ 2.___ 3.___ 4.___

Section 10: The Product Lifecycle - Understanding the Stages

Every product goes through predictable stages. Understanding these helps with forecasting and planning.

10.1 The Five Stages

Stage	Sales	Costs	Typical Actions
Development	Zero	High R&D	Design, testing, preparation
Launch	Low, growing slowly	High marketing, high setup	Build awareness, gain first customers
Growth	Rapidly increasing	Decreasing per unit	Expand production, may reduce price

Maturity	Stable/peak	Low and stable	Maximise profits, consider variations
Decline	Falling	May rise per unit	Reduce prices, manage inventory

10.2 Characteristics of Each Stage

Development Stage:

• No revenue yet

• Heavy investment in R&D

• High uncertainty

Launch Stage:

• Low sales as market becomes aware

• High advertising costs

• High production costs (no economies of scale yet)

• Often losses or low profits

Growth Stage:

• Rapid sales increase

• Production ramps up, costs fall

• Learning effect kicks in (workers become faster)

• Competitors may enter the market

• May need price reductions to stay competitive

Maturity Stage:

• Sales level off

• Highest unit sales volume

• Lowest costs (economies of scale fully achieved)

• Maximum profits

• May need product modifications to prevent decline

Decline Stage:

• Sales falling

• Revenue decreasing

• May need to cut prices to clear inventory

• Eventually, discontinue the product

 Exam Tip: When asked which lifecycle stage has the highest unit sales, the answer is Maturity (not Growth, even though sales are growing fastest during Growth).

10.3 Time Series Analysis Warning

Be careful when using past sales data to predict future sales:

• If your data comes from the Growth stage, the trend will be steeply upward

• But this trend won't continue forever - sales will eventually level off in Maturity

• Always consider where the product is in its lifecycle when making forecasts

Knowledge Check 10

For each characteristic, identify the product lifecycle stage:

1. Highest unit sales volume: _____
2. Rapidly increasing sales: _____
3. No revenue, high R&D costs: _____
4. Sales falling, prices being cut: _____
5. Low sales, high marketing costs: _____

Choose from: Development, Launch, Growth, Maturity, Decline

PART TWO: Practice Questions

Section 11: Practice Questions

Question 1: Multiple Choice (2 marks each)

1.1 What is the correct formula for target cost?

A) Target cost = Estimated cost - Profit margin

B) Target cost = Selling price + Profit margin

C) Target cost = Selling price - Profit margin

D) Target cost = Estimated cost + Profit margin

1.2 Which of the following BEST describes the difference between value engineering and value analysis?

A) Value engineering is more expensive than value analysis

B) Value engineering applies to new products; value analysis applies to existing products

C) Value analysis is done by engineers; value engineering is done by accountants

D) Value engineering focuses on marketing; value analysis focuses on production

1.3 According to research, approximately what percentage of a product's lifecycle costs are determined by decisions made during the design stage?

A) 50%

B) 70%

C) 90%

D) 100%

1.4 At which stage of the product lifecycle are unit sales typically at their highest?

A) Launch

B) Growth

C) Maturity

D) Decline

1.5 Which of the following is NOT a condition for a successful cost reduction programme?

A) Clear purpose

B) Immediate implementation

C) Senior management commitment

D) Good communication with staff

Question 2: Target Costing Calculation (15 marks)

TechStart Ltd is developing a new tablet computer. Market research indicates:

• Competitive market price: £400

• Required profit: 15% of selling price

• Expected sales volume: 50,000 units

Current cost estimates per unit:

Cost Element	£
Materials	180
Labour	85
Production overhead	45
Distribution	30

Required:

(a) Calculate the target cost per unit (3 marks)

(b) Calculate the cost gap (3 marks)

(c) Suggest TWO ways TechStart could close the cost gap (4 marks)

(d) Explain why increasing the selling price is not a suitable solution (5 marks)

Question 3: Life Cycle Costing Calculation (20 marks)

CleanAir Ltd manufactures air purifiers with a 5-year lifecycle. Projected costs are:

Costs (£000)	Year 1	Year 2	Year 3	Year 4	Year 5
R&D	400	-	-	-	-
Design	150	-	-	-	-
Production	-	200	350	280	120
Marketing	-	100	80	50	30
Distribution	-	25	45	35	15
Disposal	-	-	-	-	40

Expected unit sales: Year 2: 10,000; Year 3: 17,500; Year 4: 14,000; Year 5: 6,000

Required:

(a) Calculate the total lifecycle cost (6 marks)

(b) Calculate the lifecycle cost per unit (4 marks)

(c) If the average selling price is £45 per unit, calculate the lifecycle profit per unit (3 marks)

(d) Explain TWO advantages of using life cycle costing instead of traditional annual costing (7 marks)

Question 4: Target Cost with Mark-up (10 marks)

SportGear Ltd uses target costing for its new running shoes. Information:

• Target selling price: £120

• Required profit margin: 30% on cost (mark-up)

• The company uses 5 hours of labour per pair

• Material cost: £25 per pair

• Fixed overheads: £18 per pair

Required: Calculate the target labour cost per hour.

PART THREE: Answers and Explanations

Answers to Practice Questions

Answer 1: Multiple Choice

Q	Answer	Explanation
1.1	C	Target cost = Selling price - Profit margin. This is the fundamental formula.
1.2	B	Value engineering = new products (design stage); Value analysis = existing products
1.3	C	90% of lifecycle costs are determined at the design stage
1.4	C	Maturity stage has highest unit sales (even though growth stage has fastest increase)
1.5	B	Gradual (not immediate) implementation is required for success

Answer 2: Target Costing Calculation

(a) Target cost per unit:

• Target price = £400

• Required profit = 15% × £400 = £60

• Target cost = £400 - £60 = £340

(b) Cost gap:

• Total estimated cost = £180 + £85 + £45 + £30 = £340

• Cost gap = £340 - £340 = £0

There is no cost gap!

(c) If there were a cost gap, TechStart could:

1. Negotiate lower material prices with suppliers or find cheaper alternative materials

2. Redesign the product to use fewer components or simpler assembly methods

(d) Increasing selling price is not suitable because:

Target costing assumes the price is determined by the market. If TechStart raises prices above £400, customers will buy from competitors selling at £400 or less. The company has no control over the market price.

Answer 3: Life Cycle Costing Calculation

(a) Total lifecycle cost:

Category	Calculation	£000
R&D	Given	400
Design	Given	150
Production	200 + 350 + 280 + 120	950
Marketing	100 + 80 + 50 + 30	260
Distribution	25 + 45 + 35 + 15	120
Disposal	Given	40
Total		1,920

Total lifecycle cost = £1,920,000

(b) Lifecycle cost per unit:

• Total units = 10,000 + 17,500 + 14,000 + 6,000 = 47,500 units

• Cost per unit = £1,920,000 ÷ 47,500 = £40.42

(c) Lifecycle profit per unit:

• Selling price per unit = £45.00

• Cost per unit = £40.42

• Profit per unit = £45.00 - £40.42 = £4.58

(d) Two advantages of life cycle costing:

1. True profitability assessment: Life cycle costing determines whether total revenues over a product's life cover all costs incurred, including pre-production costs like R&D. This gives a more accurate picture than looking at one year in isolation.

2. Early cost focus: Since life cycle costing highlights that 90% of costs are determined at the design stage, it encourages management to focus on cost reduction during development when changes are still possible.

Answer 4: Target Cost with Mark-up

Step 1: Calculate target cost

• If profit = 30% mark-up on cost, then: Selling Price = Cost × 1.30

• Therefore: Cost = Selling Price ÷ 1.30

• Target cost = £120 ÷ 1.30 = £92.31 (rounded)

Step 2: Calculate maximum labour cost

Element	£
Target total cost	92.31
Less: Materials	(25.00)
Less: Fixed overheads	(18.00)
Maximum labour cost	49.31

Step 3: Calculate target labour cost per hour

• Labour hours required = 5 hours

• Target labour cost per hour = £49.31 ÷ 5 = £9.86

Knowledge Check Answers

Knowledge Check 1

Gap 1: B - internal costs

Gap 2: F - market price

Gap 3: J - target cost

Explanation: Traditional pricing starts with costs; target costing starts with market price and works backwards to determine what costs must be.

Knowledge Check 2

First question: B - Cost control maintains budgeted costs; cost reduction permanently lowers unit costs

Second question: G - Gradual introduction

Explanation: The CPREG mnemonic helps remember the five conditions for successful cost reduction.

Knowledge Check 3

Correct order: 1.D 2.E 3.C 4.A 5.B

P = Price (D), R = Required profit (E), I = Identify target cost (C), C = Cost gap (A), E = Engineer solutions (B)

Knowledge Check 4

1. Target cost = £200 - (25% × £200) = £200 - £50 = £150

2. Cost gap = £165 - £150 = £15

3. Yes, there is a cost gap of £15

Knowledge Check 5

1. B - Value Engineering applies to new products during design

2. C - Value Analysis applies to existing products

3. A - Competitive Benchmarking compares against competitors

4. D - Internal Benchmarking compares divisions within same company

Knowledge Check 6

1. C - entire

2. C - 90%

3. Because 90% of costs are determined during design, accountants can influence major cost decisions only if involved early.

Knowledge Check 7

1. £15m ÷ £1,013m × 100 = 1.48%

2. 0.5m ÷ 7m × 100 = 7.14%

3. B - higher (Year 1 allocates R&D to only 7% of units)

Knowledge Check 8

Any three from: True profitability assessment, Better resource allocation, Individual product tracking, Design-cost links, Informed pricing, Early cost control

Knowledge Check 9

1. B - Cross-functional teams help design costs out

2. C - Quick launch establishes market position

3. A - New markets extend lifecycle

4. D - Fewer components reduce complexity

Knowledge Check 10

1. Maturity

2. Growth

3. Development

4. Decline

5. Launch

PART FOUR: Chapter Summary

Key Formulas Quick Reference

Formula	Expression
Target Cost	Selling Price - Required Profit
Cost Gap	Estimated Cost - Target Cost
Required Profit (margin)	Selling Price × Profit %
Required Profit (mark-up)	Target Cost × Mark-up %
Life Cycle Cost per Unit	Total Lifecycle Costs ÷ Total Units
Value Added	Revenue - Cost of Bought-in Materials and Services

Memory Aids

Target Costing Steps: "PRICE"

P	R	I	C	E
Price (market)	Required profit	Identify target cost	Cost gap	Engineer solutions

Cost Reduction Success Factors: "CPREG"

C	P	R	E	G
Clear purpose	Persuasive reason	Resolve from top	Excellent communication	Gradual introduction

Product Lifecycle Stages: "DLGMD"

D	L	G	M	D
Development	Launch	Growth	Maturity	Decline

Memory trick: "Don't Leave Good Money Dying" - reminding you to manage products through all stages!

Key Reminders

• Value Engineering = Early (new products, design stage)

• Value Analysis = Afterwards (existing products)

• 90% of costs are determined during Design - not during production!

Common Mistakes to Avoid

□ Mistake 1: Confusing margin and mark-up

• Margin is % of selling price

• Mark-up is % of cost

• If selling price is £100 and cost is £80: Margin = 20%, Mark-up = 25%

□ Mistake 2: Suggesting price increases to close the cost gap

• Target costing assumes the price is set by the market

• You cannot close a cost gap by raising prices

□ Mistake 3: Saying Growth stage has highest sales

• Growth stage has the fastest INCREASE in sales

• Maturity stage has the highest TOTAL sales volume

□ Mistake 4: Forgetting pre-production costs in lifecycle costing

• R&D costs, Design costs, Testing costs must all be included

□ Mistake 5: Confusing value engineering and value analysis

• Value engineering = NEW products (design stage)

• Value analysis = EXISTING products

Exam Tips

□ **Exam Tip:** When calculating target costs with mark-up percentages, remember: If mark-up is 25% on cost, then Price = 125% of cost. To find cost: Cost = Price ÷ 1.25

□ **Exam Tip:** In lifecycle costing questions, create a clear table with all cost categories and years before calculating totals.

□ **Exam Tip:** For target costing questions about "closing the cost gap," structure your answer around: materials, labour, production methods, design changes, and supply chain improvements.

Quick Revision Checklist

Before your exam, make sure you can:

☐Explain the difference between cost control and cost reduction

☐List the five conditions for successful cost reduction (CPREG)

☐Calculate target cost from selling price and profit margin

☐Calculate cost gap from estimated cost and target cost

☐List methods for closing a target cost gap

☐Explain the difference between value engineering and value analysis

☐Define value added and value enhancement

☐Explain what benchmarking is and its types

☐Calculate lifecycle cost per unit from multi-year data

☐Explain why 90% of costs are determined at design stage

☐List advantages of lifecycle costing

☐Name and describe the five stages of the product lifecycle

— End of Chapter 2 Study Guide —

Good luck with your AAT Level 4 exam!