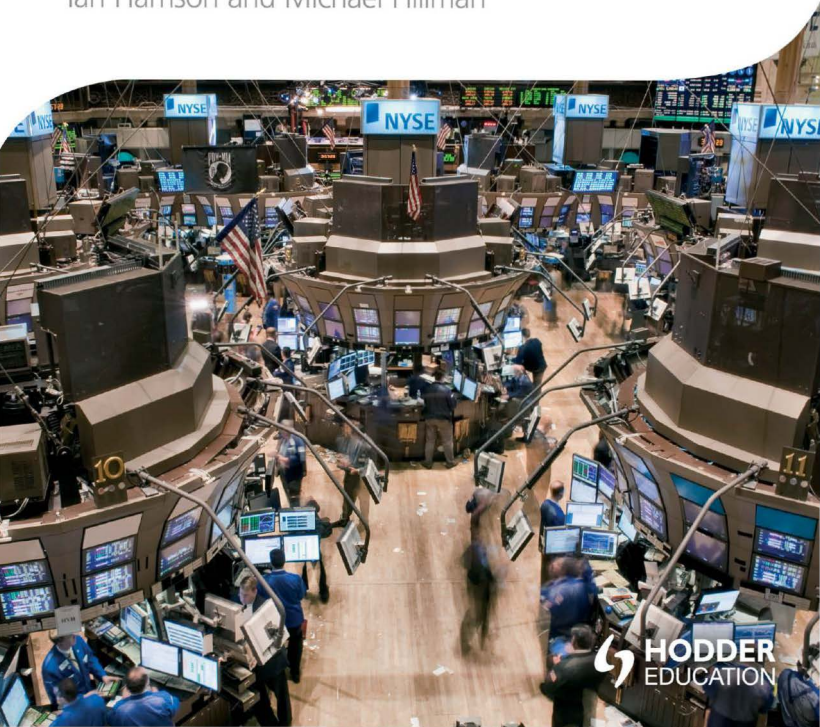
Revision Guide

Cambridge
International AS and A Level

Accounting

Ian Harrison and Michael Hillman



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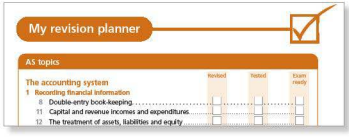
P2269

Get the most from this book

Everyone has to decide his or her own revision strategy, but it is essential to review your work, learn it and test your understanding. This Revision Guide will help you to do that in a planned way, topic by topic. Use this book as the cornerstone of your revision and don't hesitate to write in it — personalise your notes and check your progress by ticking off each section as you revise.



Tick to track your progress

Use the revision planner on pages 4–6 to plan your revision, topic by topic. Tick each box when you have:

- revised and understood a topic
- tested yourself
- practised the exam-style questions

You can also keep track of your revision by ticking off each topic heading in the book. You may find it helpful to add your own notes as you work through each topic.

Features to help you succeed

Expert tips

Throughout the book there are tips from the experts on how to maximise your chances.

Typical mistakes

Advice is given on how to avoid the typical mistakes students often make.

Definitions and key terms

Clear, concise definitions of essential key terms are provided on the page where they appear.

Key terms from the syllabus are highlighted in bold for you throughout the book.

Questions and answers

Use the exam-style questions and answers to consolidate your revision and practise your exam skills.

Now test yourself

These short, knowledge-based questions provide the first step in testing your learning. Answers are at the back of the book.

Tested

Revision activities

The activities will help you to understand each topic in an interactive way.

My revision planner

AS topics

		Revised	Tested	Exam ready
The accounting system				
1	**Recording financial information**			
8	Double-entry book-keeping	☐	☐	☐
11	Capital and revenue incomes and expenditures	☐	☐	☐
12	The treatment of assets, liabilities and equity	☐	☐	☐
2	**Accounting principles**			
14	Principles, concepts and conventions	☐	☐	☐
16	Other features of the recording system	☐	☐	☐
3	**Control systems**			
18	The trial balance	☐	☐	☐
20	Bank reconciliations	☐	☐	☐
22	Control accounts	☐	☐	☐
24	Adjustments to income statements and statements of financial position	☐	☐	☐
Financial accounting				
4	**Preparation of financial statements**			
26	Manufacturing statements	☐	☐	☐
30	Income statements	☐	☐	☐
32	Statements of financial position	☐	☐	☐
33	Cash flows	☐	☐	☐
5	**Partnerships**			
36	Features of partnerships	☐	☐	☐
37	The preparation of partnership accounts	☐	☐	☐
41	Changes in partnership	☐	☐	☐
6	**Non-profit making (not for profit) organisations**			
45	Clubs and societies	☐	☐	☐
7	**Financial statements prepared from incomplete records**			
51	Deficient or incorrect financial records	☐	☐	☐
8	**Valuation of inventory**			
59	Principles and application	☐	☐	☐
60	Methods of valuing inventory	☐	☐	☐
62	Accounting concepts applied to inventory valuation	☐	☐	☐
62	Inventory reconciliations	☐	☐	☐
9	**Depreciation**			
64	Principles and application	☐	☐	☐
65	The calculation of depreciation	☐	☐	☐
67	Disposal of non-current assets	☐	☐	☐

My revision planner

		Revised	Tested	Exam ready
10 Capital (equity)				
70	Raising capital	☐	☐	☐
70	Short-term financing	☐	☐	☐
72	Long-term financing	☐	☐	☐
Financial reporting and interpretation				
11 Interpretation and analysis				
75	Users of financial statements	☐	☐	☐
75	Analysis and interpretation of accounting information	☐	☐	☐
76	Calculation of ratios	☐	☐	☐
80	The limitations of accounting information	☐	☐	☐
Elements of managerial accounting				
12 Costing principles and systems				
81	Cost accounting for materials, labour and overheads	☐	☐	☐
83	Marginal (variable) costing	☐	☐	☐
87	Absorption (total) costing	☐	☐	☐
89	Costing systems	☐	☐	☐
(AS Budgets: the preparation of cash budgets is dealt with in Topic 20)				
92	**AS questions and answers**			

A level topics

		Revised	Tested	Exam ready
Financial accounting				
13 Preparation of financial statements				
98	Cash flow statements	☐	☐	☐
105	Partnership changes	☐	☐	☐
14 Capital (equity)				
108	Redemption of shares	☐	☐	☐
111	Capital reduction and reconstruction	☐	☐	☐
112	Bonus and rights issues	☐	☐	☐
114	Reserves	☐	☐	☐
15 Business purchase				
115	The purchase of an unincorporated business by a limited company	☐	☐	☐
117	The purchase of a partnership by a limited company	☐	☐	☐
119	The purchase of assets and the assumption of liabilities	☐	☐	☐
122	Evaluating a business with a view to acquiring it	☐	☐	☐

My revision planner

Countdown to my exams

6–8 weeks to go

- Start by looking at the syllabus — make sure you know exactly what material you need to revise and the style of the examination. Use the revision planner on pages 4–6 to familiarise yourself with the topics.
- Organise your notes, making sure you have covered everything on the syllabus. The revision planner will help you to group your notes into topics.
- Work out a realistic revision plan that will allow you time for relaxation. Set aside days and times for all the subjects that you need to study, and stick to your timetable.
- Set yourself sensible targets. Break your revision down into focused sessions of around 40 minutes, divided by breaks. This Revision Guide organises the basic facts into short, memorable sections to make revising easier.

Revised

4–6 weeks to go

- Read through the relevant sections of this book and refer to the expert tips and key terms. Tick off the topics as you feel confident about them. Highlight those topics you find difficult and look at them again in detail.
- Test your understanding of each topic by working through the 'Now test yourself' questions in the book. Look up the answers at the back of the book.
- Make a note of any problem areas as you revise, and ask your teacher to go over these in class.
- Look at past papers. They are one of the best ways to revise and practise your exam skills. Write or prepare planned answers to the exam-style questions provided in this book. Check your answers with your teacher.
- Use the revision activities to try different revision methods. For example, you can make notes using mind maps, spider diagrams or flash cards.
- Track your progress using the revision planner and give yourself a reward when you have achieved your target.

1 week to go

- Try to fit in at least one more timed practice of an entire past paper and seek feedback from your teacher, comparing your work closely with the mark scheme.
- Check the revision planner to make sure you haven't missed out any topics. Brush up on any areas of difficulty by talking them over with a friend or getting help from your teacher.
- Attend any revision classes put on by your teacher. Remember, he or she is an expert at preparing people for examinations.

Revised

The day before the examination

- Flick through this Revision Guide for useful reminders, for example the expert tips and key terms.
- Check the time and place of your examination.
- Make sure you have everything you need — extra pens and pencils, tissues, a watch, bottled water, sweets.
- Allow some time to relax and have an early night to ensure you are fresh and alert for the examinations.

Revised

My exams

Paper 1

Date: .....

Time: .....

Location: .....

Paper 2

Date: .....

Time: .....

Location: .....

Paper 3

Date: .....

Time: .....

Location: .....

Paper 4

Date: .....

Time: .....

Location: .....

1 Recording financial information

Double-entry book-keeping

The double-entry system

Revised

The AS and A level examinations do not generally examine basic double-entry book-keeping methods of recording financial transactions. It is assumed that students sitting such examinations have already mastered these techniques. Most examination questions start after transactions using the double-entry system have been completed. However, some double-entry topics do occasionally appear in either AS or A level examinations.

Expert tip

Use basic double-entry techniques as 'workings' when complex calculations are needed. Not only will you find this useful, but examiners can refer to your workings if there are errors in your final answer and you may be able to gain part marks.

Journal entries

Revised

Transactions start their journey through the system with entries in one of the books of prime entry shown in Table 1.1.

Books of **prime entry** are also known as books of original entry.

Table 1.1 Books of prime entry

Name	Source documents	Debit entry	Credit entry
Purchases book	Purchases invoices	Purchases account (GL)	Credit supplier (PL)
Sales book	Copy sales invoices	Credit customer (SL)	Sales account (GL)
Sales returns book	Credit notes received	Credit supplier (PL)	Sales account (GL)
Purchases returned book	Copy credit notes	Purchases (GL)	Credit customer (SL)
Journal	Purchases and sales invoices sent to customer for entries relating to transactions involving non-current assets, managers' memos, minutes of meetings etc. authorising actions	Debit entries as shown in journal	Credit entries as shown in journal
Cash book	Till rolls, receipts, paying-in slips, bank statements, cheque counterfoils etc.	Cash/bank (monies received) Payee	Drawer Cash/bank (monies paid)

Revision activity

Select a transaction from the following list, identify the source document and identify all the entries made in the business books of account. Your list should end with an entry in one of the financial statements.

- purchases for resale
- purchase of a non-current asset
- introduction of additional capital by the proprietor
- payment of wages by direct debit

Now test yourself Tested

1 What is a personal account?
2 **(a)** Name two nominal accounts.
(b) In which ledger would you find nominal accounts?
3 **(a)** Explain why ledgers are divided into three parts.
(b) What are the names of each of the three parts?
4 Name a source document used to prepare a cash book.
5 List the books of prime entry.
6 Which book of prime entry is also part of the double-entry system?

Answers on p.185

Expert tip

If you find the use of the journal difficult, enter the data into 'T' accounts, then ask which 'T' account has been debited, which account has been credited. Place the debit entry in the debit column of the journal and the credit entry in the credit column. Don't forget to include the description of the entries or a brief narrative (description) of why the entries are necessary.

Techniques undertaken after a trial balance has been extracted

Revised

Provisions and reserves

A **provision** is an amount set aside out of profits for a known expense, the amount of which is uncertain.

A **reserve** is any amount set aside out of profits that is not a provision. Reserves are made at the discretion of the directors of a limited company.

Expert tip

Increases to provisions are expenses in an income statement. Decreases increase the gross profit of a business. The balance on a provision account reduces the value of an asset in a statement of financial position. Transfers to reserves do not affect the profit from operations.

Bad debts

There will always be some credit customers who will not or cannot pay the money they owe. These **trade debtors** cannot remain in the sales ledger, otherwise the amount of **trade receivables**, current assets, total assets and therefore capital will be overstated. The balances in the accounts of debtors who are known to be unable to settle their debt are transferred to a bad debts account in the general ledger.

At the end of the financial year the bad debts account is closed, along with all other nominal accounts in the general ledger, by entering the total amount in the income statement.

A **trade debtor** is a credit customer who still owes money. Collectively, trade debtors are known as **trade receivables**; they are current assets.

A **trade creditor** is a supplier that is still owed money. A number of trade creditors are known as **trade payables**; they are current liabilities.

Provision for doubtful debts

As well as actual bad debts, there might be other outstanding debts that could prove to be bad in the future. A provision for doubtful debts is an amount set aside out of profits to cover debts whose recovery is in doubt.

The amount of the provision is calculated in two ways:

- an estimation based on past experience of receivables as a whole, or experience based on knowledge of individual debtors. For example, a trader may know from past experience that 2% of receivables will not pay. The provision would be calculated at 2% of receivables at the year end
- using an age profile of trade receivables. All outstanding debts are categorised according to the time they have been outstanding. The longer a debt is outstanding, the more likely it is to prove bad. An ageing schedule for doubtful debts may look as follows:

Expert tip

You may sometimes see a provision for doubtful debts described as a provision for bad debts.

Period outstanding (months)	Amount $	Estimated percentage of bad debts	Provision for doubtful debts $
0–1	30000	1	300
1–3	17000	2	340
3–6	4000	3	120
6–12	1000	4	40
Over 12 months	600	50	300
	52600		1100

The credit balance shown in the provision account in the general ledger at the year end would be $1100.

An entry in a statement of financial position would show:

	$	$
Current assets		
Trade receivables	52600	
Less provision for doubtful debts	1100	51500

Example

Thaof wishes to make provision for doubtful debts as follows:

year 1 $200 year 2 $700 year 3 $400

The amounts would be calculated using one of the methods outlined above. The provision for doubtful debts for each of the 3 years would look like this:

Provision for doubtful debts account

End year 1 Balance c/d	200	Year 1 Income statement	200
	200		200
		Start year 2 Balance b/d	200
End year 2 Balance c/d	700	Year 2 Income statement	500
	700		700
Year 3 Income statement	300	Start year 3 Balance b/d	700
End year 3 Balance c/d	400		
	700		700
Start year 4 Balance b/d			400

Expert tip

Only the increase or decrease in the provision is entered in the income statement. The balance carried down each year is deducted from the total of trade receivables, shown as a current liability.

Now test yourself Tested

7 A trade receivable is unable to pay an outstanding balance of $500. What are the ledger entries to record this event?

8 The opening balance on the provision for doubtful debts account was $820. Trade receivables at the financial year end totalled $25500. A provision of 3% is to be made.

(a) Calculate the closing balance on the provision account.

(b) What is the required double entry to account for the change in provision?

Answers on p.185

Capital and revenue incomes and expenditures

The distinction

Revised

It is important that you can distinguish between capital and revenue incomes and expenditures. The distinction is necessary to ensure the accuracy of different parts of financial statements.

Capital expenditure is money spent on the acquisition of non-current assets or their improvement.

Revenue expenditure is money spent on the everyday running costs of a business.

Capital income is derived from selling non-current assets or from an injection of capital into the business by a provider of funds (e.g. a bank) or by the owner(s).

Revenue income is monies received from the normal activities of the business.

Now test yourself

Tested

9 **(a)** Explain the difference between capital expenditure and revenue expenditure.

(b) Why is important to distinguish between capital expenditure and revenue expenditure?

10 Which of the following transactions is classified as capital income for a general store?

Monies received from:

- the sales of fruit
- a further injection of capital by the trader
- the sale of a delivery vehicle that is no longer needed
- the sale of flour

Answers on p.185

Typical mistake

Students often categorise the costs of maintenance of a non-current asset as being capital expenditure. Maintenance costs are revenue expenditure, as are vehicle servicing costs. These costs do not improve the non-current asset; the servicing or maintenance merely ensures that the asset functions effectively.

Provision for depreciation of non-current assets

Revised

The purchase of a non-current asset is capital expenditure. Its purchase is expected to yield benefits to the business over a number of years. The **accruals concept** states that all expenses used in a particular time period should be matched with the revenues that the expenditure has helped to generate.

A non-current asset will be used to generate profits over a number of years; the cost of that asset must be spread over the time that it is used (**depreciation**).

All non-current assets, with the exception of freehold land, should be depreciated. You should be able to use the three methods of depreciating non-current assets. These are dealt with in more detail in Topic 9, Depreciation (see pp. 65–67). All the methods use the same method of recording in the financial statements of a business; only the amount recorded will change.

The **accruals concept** states that the resources used to generate revenue income are accounted for rather than the money spent to acquire those resources.

Depreciation is the apportioning of the cost of a non-current asset over its useful life.

Typical mistake

Students sometimes state that depreciation is the decrease in the value of an asset. However, some assets may go up in value over time; they must also be depreciated since they are used to generate benefits to the business.

Example

The cost of a non-current asset was $37 500; accumulated depreciation to 31 December 2012 was $14 000; depreciation for the year ended 31 December 2013 has been calculated at $2300. The entries shown in the financial statements would be as follows.

Income statement for the year ended 31 December 2013

	$
Expenses	
Provision for depreciation of non-current assets	2300

Statement of financial position at 31 December 2013

	$	$
Non-current assets at cost	37 500	
Less depreciation	16 300	21 200

Disposal and revaluation of non-current assets are dealt with later in Topic 9, Depreciation (see pp. 67–68).

Now test yourself Tested

11 Which accounting concept is used when providing depreciation of a non-current asset?

12 Identify a non-current asset that is not depreciated.

13 Identify three methods of depreciating non-current assets.

Answers on p.185

The treatment of assets, liabilities and equity

Current assets

Revised

After the preparation of an income statement the only balances remaining in the books of account will be those relating to real accounts (i.e. asset and liability accounts).

Balances in a sales ledger show amounts owed by credit customers. These are totalled and will appear as a current asset — trade receivables.

Any other amounts owed appear under the heading of 'other payables'.

Current liabilities

Revised

Short-term liabilities remaining in the general ledger after an income statement has been prepared appear in a statement of financial position as current liabilities. Examples include trade and other payables.

Non-current liabilities

Revised

Non-current liabilities are amounts owed that only need to be repaid after more than 1 year. They are shown in a statement of financial position under a separate heading of 'non-current liabilities'. Examples could include a mortgage repayable in 2035 or a bank loan to be repaid in 2021.

Equity and reserves

Revised

Equity is the term used to describe the investment that the owners have in a business. It is usually applied to the permanent share capital of a limited company plus all the reserves that the company has.

Equity = ordinary issued share capital + undated issued preference share capital + all reserves.

Typical mistake

Students often refer to reserves as 'cash set aside for future use'. Reserves are not some form of savings that can be drawn on if a business needs them in the future. They are past profits held back in the company.

Now test yourself

Tested

14 Using assets, liabilities and equity, write the accounting equation.

Answer on p.185

2 Accounting principles

Principles, concepts and conventions

Our everyday life is governed by rules. All actions in accounting are also governed by rules. These rules are known as accounting concepts. The application of these basic rules ensures that a set of financial statements prepared in Segamat will be prepared using the same procedures as those used to prepare a set of statements in Shahcheng. Judgements and comparisons between sets of accounting statements can be made, safe in the knowledge that the same rules have been applied in their preparation. You will already have applied some of these principles in your studies so far.

Expert tip

It is important to learn the concepts described below. Learn an example of how each is applied when preparing a set of financial statements.

Going concern

Revised

When financial statements are prepared, there is an assumption that the business will continue to operate in its present form for the foreseeable future. This means that assets shown in a statement of financial position are valued at cost not what they would fetch if they were to be sold. If the business is to continue trading, the assets will be required and will not be sold. Therefore, the sale value is of little interest as far as the preparation of a statement of financial position is concerned.

Matching

Revised

Matching is sometimes referred to as the accruals concept. The value of resources used to run a business is recorded rather than a record of the cash paid to acquire the resources. For example, raw materials used in June cost $4000. The materials are paid for in August. The $4000 will feature in the financial statements for June.

Other payables

Revised

The value of all resources is recorded in the time period when they are used. Goods and services (other than purchases and sales), such as advertising expenditure, insurances and wages, are recorded when the resource is used rather than when payments are made.

Other receivables

Revised

The matching principle also applies to incomes and other benefits. The right to receive the benefit is recorded rather than the receipt of cash. Profit is normally recognised when the **title** passes from the seller to the customer, not when the cash resulting from the transaction is paid.

Title is the legal term to describe ownership.

Certain resources, such as insurance, are paid for before the resource can be used.

Consistency

Revised

When calculating provisions for doubtful debts or depreciation, or when valuing inventories, a variety of methods may be used. Each time a different method is used to calculate depreciation or a value for inventory, a different profit figure is arrived at. This means that it is difficult to make comparisons between different years or different businesses if different methods are used each year. It is also difficult to determine whether profits have increased or decreased because of the level of business activity or because of a change in methods of calculation.

Once a business adopts a way of recording financial transactions, it should continue to use the same methods or policy in future years in order to allow valid comparisons to be made.

Materiality

Revised

Capital expenditure is spending on non-current assets or their improvement. **Revenue expenditure** is spending on the everyday running costs of a business. Non-current assets last for more than 1 financial year. If the accruals concept is applied rigidly, the cost of all non-current assets should be spread over the time that the non-current asset is used to generate profits. However, some items — which technically should be classified as non-current assets — are treated as revenue expenditure. For example, a calculator is purchased for use in an office. The calculator cost $2.99 and it is estimated that it will be used for 5 years. As a non-current asset, the calculator should appear in a statement of financial position; it should be depreciated; the depreciation should be charged each year to an income statement. To do this would not be worth the time or the effort involved. The $2.99 is therefore treated as revenue expenditure and included as office expenses or sundry expenses in an income statement.

A transaction is **material** if its inclusion or exclusion from a financial statement would mislead one of the users of the accounting information.

Aggregation

Revised

Similar assets can be grouped together for presentation in a statement of financial position. Different groups of non-financial assets must be shown separately.

Offsetting

Revised

As a rule, it is not permitted to offset assets against liabilities or vice versa. For example, if premises cost $100 000 and their purchase was partly financed with a long-term bank loan of $44 000, it would not be permissible to show premises at $56 000 in a statement of financial position. Premises should be shown at a cost of $100 000 under the heading 'Non-current assets'. The loan would be classified separately under 'Non-current liabilities'.

Neither would it be acceptable to show a net figure if a business had a bank overdraft as well as a positive figure for cash and cash equivalents.

Comparative information

Revised

Limited companies must show figures from previous financial statements. This enables the users of the statements to make comparisons regarding performance.

The importance of a true and fair view

Revised

A major principle in the production of financial statements is that they should show a true and fair view. The financial statements should reflect the performance of the business; they should show the financial position and any changes to that position. This should be achieved if the qualitative characteristics of understandability, relevance, reliability and comparability are applied.

Prudence

Revised

Revenues and profits should only be included in financial statements when they are realised or when realisation is reasonably certain. This prevents profits from being overstated. If profits are overstated, a trader may make excessive drawings or a limited company may pay excessive dividends, which deprives the business of valuable resources. However, the concept does allow provisions to be made for expenses or losses when they become known.

Substance over form

Revised

This principle ensures that financial statements are prepared using the substance of transactions rather than their legal form. For example, a haulage business acquires five new vehicles using hire purchase. Legally, the vehicles are owned by the finance company; ownership passes to the haulage company only when the final instalment is paid. However, from a commercial point of view the vehicles have been purchased with a loan and this is how the transaction is recorded in the books of account. In a statement of financial position, the vehicles would appear as non-current assets while the outstanding amount due to the finance company would appear as a non-current liability (or a current liability if there was less than 1 year's repayments left to make).

Other features of the recording system

Business entity

Revised

Only transactions involving the affairs of the business are recorded in the business books of account. Private incomes and expenditure do not affect business profits. The private affairs of a trader are not recorded as part of the business activity. Any private incomes included in the business books of account are regarded as capital introduced and any private expenditures are entered as drawings.

Historical cost

Revised

All financial transactions are recorded using actual cost. The advantages of using **historical cost** as a basis for the preparation of financial statements include that it is:

- objective
- easily understood
- easily applied to the double-entry system of book-keeping
- fairly straightforward for auditors to verify transactions through source documents
- recognised by most tax authorities

Duality

Revised

Duality ensures that the assets of a company are recorded, along with the claims against the business. This is manifested in the application of the double-entry book-keeping system and the accounting equation.

Expert tip

Double-entry book-keeping involves entering each financial transaction twice; this recognises that a business both gives and receives value.

Revaluation

Revised

On acquisition, non-current assets should be recorded in the general ledger at **cost**. However, during their lifetime non-current assets should be revalued on a regular basis to ensure that the **carrying amount** is not materially different from the value that the asset would sell for at the date when a statement of financial position is prepared.

Cost includes all expenditure necessary to make the asset ready to be put to use. This includes the actual purchase price plus any delivery charges; it could also include preparation of the site to accommodate the asset including architect's fees; set-up fees, and estimated dismantling and removal costs at the end of the asset's life.

Carrying amount is the cost of a non-current asset shown on the statement of financial position less the aggregate depreciation charged to date.

Revision activity

With a partner, one person should name an accounting concept. The other gives an explanation of the concept and an example of its use. Change places and repeat until all concepts have been covered.

Now test yourself

Tested

1 Explain the term *going concern*.

2 After extracting a trial balance for the year ended 31 December 2013:

   (a) There is a debit balance of $3500 on the telephone account and an unpaid bill covering the quarter to 28 February 2014 of $600. How much should be entered on an income statement for this expense?

   (b) There is a debit balance of $3000 on the insurance account. There is only one payment made during the year and it covers the 15-month period ending on 31 March 2014. How much should be entered in an income statement for this expense?

3 A business depreciates its non-current assets in year 1 using the straight-line method of depreciation. In year 2 it uses the reducing balance method. It then starts to use to the straight-line method in year 3. Which accounting concept is being ignored?

4 A business has trade receivables of $100 000 at its financial year end. There are no irrecoverable debts, but for the past 3 years 2% of its receivables have not been received. The business shows $100 000 as a current asset in its statement of financial position.

   (a) Which accounting concept is being ignored?

   (b) State the correct amount.

5 What do you understand by the business entity concept?

Answers on p.185

3 Control systems

The trial balance

What is a trial balance?

Revised

At the end of an accounting period, ledger accounts are balanced and the balance carried down to start the 'new' accounting period.

The trial balance is a summary of all the debit and credit balances shown in the ledgers on the date that the trial balance has been extracted. It checks the accuracy of all entries in the ledgers.

Even if a trial balance 'balances' and the debit column **casts** to the same amount as the credit column, this is no guarantee that the double-entry system is free of errors. This merely confirms that every debit entry in the ledgers has a corresponding credit entry.

The trial balance has only one function: to test the arithmetic accuracy of the whole double-entry system. It is also a convenient list from which financial statements can be prepared.

Expert tip

A debit balance appears on the debit side of the account at the start of the new time period; a credit balance is shown on the credit side of the account at the start of the new time period.

Casting is an accounting term for 'adding'. **Overcast** means that a total is more than it ought to be; **undercast** indicates that a total is lower than it ought to be.

Expert tip

Most trial balances have more entries in the debit column than in the credit column. Debit balances are either assets or expenses. Credit balances are either liabilities, incomes or benefits.

Revision activity

Make up a mnemonic to remember the components of debit and credit balances.

Now test yourself

Tested

1 The debit side of an account totals $230 and the credit side totals $360. What is the amount shown in the trial balance and is this a debit or a credit entry?
2 What is the main function of preparing a trial balance?
3 On which side of the trial balance would you expect to find the following balances: motor vehicles; returns outwards; carriage inwards; carriage outwards; sales; discounts received.

Answers on p.185

Types of error not revealed by the trial balance

Revised

Six types of error are not revealed by extracting the trial balance:

- **C**ommission — the correct amount is entered on the correct side of an incorrect account of the same class. For example, rent debited to the local taxes account.
- **R**eversal of entries — entries are made on the wrong side of both accounts. For example, cash sales debited to sales account and credited to cash account.
- **O**mission — there is no record of a transaction in the system. For example, goods are purchased and the supplier's invoice is mistakenly destroyed before the transaction has been entered in the purchases book.

Expert tip

Use the mnemonic 'CROPOC' to help you remember the six types of error not revealed by extracting the trial balance.

- **P**rinciple — a transaction is entered in the wrong class of account. For example, vehicle repairs are entered as capital expenditure in a vehicles account.
- **O**riginal entry — an incorrect amount is entered in the book of prime entry. For example, a purchase invoice for $345 is entered in the purchases book as $435.
- **C**ompensating errors cancel each other out. For example, the debit side of one (or more) account(s) is **overcast** by $1000; other totally unrelated accounts have credits that are also **overcast** by $1000.

Typical mistake

Students are often unclear about the difference between an error of commission and an error of principle. An error of commission does not affect profits or the accuracy of information shown in a statement of financial position. An error of principle does have an effect on profits and affects the accuracy of information shown in a statement of financial position.

Now test yourself

4 Explain why a trial balance that 'balances' may not necessarily be free of errors.

5 List the six types of error that are not revealed by the trial balance.

6 Explain the difference between an error of commission and an error of principle.

Answers on p.185

Tested

Suspense accounts

Revised

If a set of financial statements is prepared from a trial balance whose column totals fail to agree, the financial statements cannot possibly be correct as they will not balance. If the trial balance totals do not agree, the difference in the two totals is entered in a temporary account known as a suspense account. It is held in this account until the errors that caused the difference are located and corrected.

If the total of the debit column of a trial balance is smaller than the total of the credit column, an amount is entered in the debit column to make the two totals equal. This amount is described as 'suspense account'. If the credit column is smaller, the amount for 'suspense account' appears in the credit column.

If a suspense account balance is seen in a trial balance, there must be a ledger account to correspond with this item.

- A suspense account is opened in the general ledger.
- A debit 'balance' shown in the trial balance should be entered on the debit side of the suspense account in the ledger.
- A credit 'balance' shown in the trial balance should be entered on the credit side of the suspense account in the ledger.

The inclusion of a suspense account allows a set of financial statements to be prepared. We can be certain that provided we do not make further errors, these statements will balance.

When all the corrected errors are entered in a suspense account, the original error on the trial balance should be eliminated.

Questions involving errors and suspense accounts are sometimes linked with journal entries. Generally, errors that occur in the double-entry system will affect financial statements. Errors that affect the trading section of an income statement will affect gross profit and profit for the year. Errors that affect the profit and loss section of an income statement will only affect the profit for the year. Changes to the profit for the year will also affect net assets shown in a statement of financial position as any change in profits affects capital (net assets).

When errors are discovered:

- corrections should be journalised
- ledger accounts should be corrected
- gross profit should be adjusted
- profit for the year should be adjusted
- changes to items in a statement of financial position should be made

Expert tip

When the errors in the ledger accounts in an examination question are corrected, the trial balance will balance.

Typical mistake

Sometimes a transaction has no effect on the answer to a question. You must inform the examiner of this point. If you don't, the examiner cannot tell whether you have omitted the transaction deliberately because it is the correct treatment or because you do not know what any effect might be.

Now test yourself Tested

7 A trial balance has debit balances totalling $147 000 and credit balances of $149 000. Despite further checks, you are unable to find the error(s). Which account would you open and which posting would you make before proceeding further?

8 Identify the type of error involved in each of the following cases.

(a) Returns outwards have been credited to the purchases account.

(b) Purchase of a stapling machine costing $5.68 has been ignored because it is such a small amount.

(c) A credit sale to Sanji has been debited to the account of S.Anji.

9 The following errors have been discovered after the preparation of a trial balance. Show the journal entries necessary to correct these two errors.

(a) Purchases of $123 from Wong have been debited to his account.

(b) Rent receivable of $500 has been debited to rent payable account as $50.

Answers on p.185

Bank reconciliations

Bank reconciliation statements

Revised

Most businesses have a **current account** with a bank. The owner of a business records transactions using the bank columns in a cash book. The source documents they use include cheque counterfoils and counterfoils from a paying-in book.

The bank also records the same transactions in its ledger. The source documents used by the bank are the actual cheques and paying-in slips used by the trader. A copy of the trader's account as it appears in the bank's ledger is available to the trader either online or as a paper document (a **bank statement**).

When a bank statement is received, the trader compares the entries shown on this copy of the bank's ledger account with the entries shown in the bank columns of their cash book.

A bank reconciliation statement is prepared by the trader on a regular basis to check the accuracy of the entries made in the bank columns of the cash book. It checks that the business's record of transactions using the bank account agrees with the record kept in the bank's ledger.

A **current account** is a bank account for everyday use that allows money to be deposited and withdrawn.

A **bank statement** is a copy of a trader's bank account as it appears in the bank's ledger.

Expert tip

The balance at bank shown in a trader's cash book is the balance used in a trial balance. It is also the balance shown in a statement of financial position.

Typical mistake

A debit balance in the bank columns of a cash book shows money in the bank; a credit balance means that the business is overdrawn. A debit balance shown on a bank statement indicates a bank overdraft; a credit balance means money in the bank.

The balance shown in a trader's cash book may not be the same as that shown on a bank statement because:

- the trader's lack of knowledge regarding **bank charges**; **overdraft interest**; counter credits and **credit transfers**; **dishonoured cheques** etc.
- timing differences — for example, when a trader writes a cheque an entry is made in the cash book immediately, but the bank does not record the transaction until the cheque is presented for payment, which may be a few days later. An entry is made in the cash book when money is paid into a bank account, but the bank may not credit its records until some days later.

Bank charges are made by banks to cover the costs of providing and maintaining the current account.

Overdraft interest is the interest charged by a bank when an account is overdrawn.

Credit transfers are amounts paid into an account directly through the banking system instead of by issuing a cheque.

Dishonoured cheques are cheques that have not gone through the drawer's account. Often this may be due to the drawer having insufficient funds in the account to honour (pay) the cheque.

Bank reconciliation questions

Revised

Answers to bank reconciliation questions usually require two parts:

- recording items appearing in a bank statement that have not been entered in the cash book
- preparing the actual reconciliation statement

Answering a question

- Balance the bank columns of the cash book and carry the balance down.
- Compare the debit entries in the bank columns of the cash book with the credit entries shown on the bank statement. Compare the credit entries in the bank columns of the cash book with the debit entries on the bank statement.
- Update the cash book by entering in the bank columns:
  - on the credit side of the cash book, any payments made by the bank not entered in the cash book
  - on the debit side of the cash book, any amounts received by the bank not entered in the cash book
- Correct any errors in the bank columns of the cash book (the entries in the bank statement are always assumed to be correct).
- Prepare the reconciliation statement using the following format (amounts are used for illustration purposes).

Name of business. Bank reconciliation statement at 31 December 2013

	$	$
Balance at bank as per cash book		678
Add **unpresented cheques**		
Cheque number 218	67	
Cheque number 221	497	
Cheque number 239	181	745
		1423
Less **lodgements** not yet presented		839
Balance at bank as per bank statement		584

Unpresented cheques are cheques that have not yet been cleared by the bank and so do not appear as debit entries on the business's bank statement.

Lodgements are deposits paid into a bank account.

Some questions give a balance at bank according to a bank statement and require you to 'work back' to show a cash book balance. The workings would then be as follows.

	$
Balance at bank as per bank statement	584
Less unpresented cheques	745
	(161)
Add lodgements not yet presented	839
Balance at bank as per cash book	678

Revision activity

Bank statements are sometimes used as a source document. List four items that appear in a bank statement that may not be entered in a trader's cash book. State how each should be entered in the cash book.

Expert tip

Learn the layout of a bank reconciliation statement and always use a heading. If there is more than one unpresented cheque, list them in your statement — if you add them on your calculator and make a mistake, the examiner cannot award any part marks that may be available.

Now test yourself Tested

10 Explain why a trader would prepare a bank reconciliation statement.

11 How often should a trader prepare a bank reconciliation statement?

12 Explain the difference between a standing order and a direct debit.

13 Explain the term *lodgement*.

14 'When preparing a bank reconciliation statement, unpresented cheques must always be entered in the trader's cash book.' Is this statement true or false?

15 A cash book shows an entry for cheque number 2975 as $32.78. The bank statement shows the entry for cheque number 2975 as $23.78. Which amount is deemed to be correct?

16 Explain why the balance in a cash book at the financial year end may be different to that shown on a bank statement at the same date.

17 List the steps that you would take to produce a bank reconciliation statement at a financial year end.

Answers on p.185

Control accounts

What are control accounts?

Revised

Separate ledger accounts are kept for each credit customer and each credit supplier. The accounts show how much is owed by each credit customer and each credit supplier at any one time.

In a business making large numbers of credit transactions, it is possible that errors may occur. Before any financial statements are prepared, control accounts should be prepared to check the accuracy of the personal ledgers. Control accounts contain all the entries that are made in personal ledgers. In large businesses, the number of credit transactions will be high. Large businesses could have many sales and purchases ledgers, so a control account is prepared for each individual ledger.

Control accounts are prepared using totals from books of prime entry. The control accounts can be part of the double-entry system or they may be kept for memorandum purposes only. Sales and purchases ledgers and their control accounts cannot both be part of a double-entry system as this would be a duplication of the same data. Most businesses keep control accounts in the general ledger as part of their double-entry system. These control accounts are said to be 'integrated'.

Expert tip

Control accounts are prepared in the same way whether they are part of the double-entry system or whether they are kept for memorandum purposes.

The sources of information from which they are prepared

Revised

Purchases ledger control account

Source of information			Source of information
Previous month's control account	Balances b/d	Balances b/d	Previous month's control account
Cash book	Cash paid	Purchases	Purchases book
Cash book	Discounts received		
Purchases returns book	Returns outwards		
Journal	Transfers to/from sales ledger		
Schedule of trade payables from purchases ledger	Balances c/d	Balances c/d	Schedule of trade receivables from purchases ledger
	Balances b/d	Balances b/d	

Sales ledger control account

Source of information			Source of information
Previous month's control account	Balances b/d	Balances b/d	Previous month's control account
Sales book	Sales	Cash	Cash book
		Discounts allowed	Cash book
		Returns inward	Sales returns book
		Transfers to/from purchases ledger	Journal
		Bad debts written off	Journal
Schedule of trade receivables from sales ledger	Balances c/d	Balances c/d	Schedule of trade payables from sales ledger
	Balances b/d	Balances b/d	

Each entry in a control account is taken from a book of prime entry.

Provision for doubtful debts and provision for discounts are not included in a sales ledger control account as these accounts are kept in a general ledger.

Transfers between personal accounts that appear in both the sales ledger and the purchases ledger are sometimes referred to as set-offs or contra items.

The balances brought down at the end of a month in a sales ledger control account should equal the totals shown in a schedule of trade receivables extracted from the sales ledger for that month. The balances brought down at the end of a month in a purchases ledger control account should equal the totals shown in a schedule of trade payables extracted from the purchases ledger for that month.

The individual ledger accounts in the purchases ledger are kept as **memorandum accounts** and are used to check the accuracy of the statements received from suppliers.

Individual ledger accounts in the sales ledger are used to send out statements and reminders to credit customers.

Control accounts only check the arithmetic accuracy of the entries in the personal ledgers. So even if the balances shown in a control account exactly agrees with the total of balances extracted from the ledger, it is not a guarantee that the ledger is error-free. There could be five of the six errors mentioned on pp. 18–19. An error of commission would not occur in a control account, so instead of CROPOC we have ROPOC.

Expert tip

Control accounts only record credit transactions with customers and suppliers. You should therefore ignore cash purchases and cash sales when you prepare control accounts.

Expert tip

Practise preparing individual personal accounts as they would appear in the ledgers. Control accounts look similar but use larger amounts.

Memorandum accounts are not part of the double-entry system, but they are kept to give additional information about entries in the system.

Expert tip

Credit balances in a sales ledger are trade payables; they should not be deducted from the total of trade receivables. They are added to other trade payables and are shown as a current liability in a statement of financial position.

Debit balances in a purchases ledger are trade receivables; they should not be deducted from the total of trade payables. They are added to other trade receivables and are a current asset.

Now test yourself

Tested

18 Why might a trader keep control accounts?

19 How many control accounts might a trader maintain?

20 In which control account would you find bad debts written off, returns outwards, provision for doubtful debts, a dishonoured cheque and cash sales?

21 What is a memorandum account?

22 **(a)** What is a contra item?

(b) Give another name for contra items.

23 On which control account's debit side would a contra item be found?

Answers on pp.185–86

Uses of control accounts

Revised

Control accounts:

- test the accuracy of entries in personal ledger accounts, thus alerting the book-keeper of possible errors
- identify the individual ledger in which errors have been made
- indicate that only the general ledger and cash book entries need to be checked when control accounts balance but the trial balance fails to balance
- make the totals of trade receivables and trade payables more easy to obtain for inclusion in a trial balance and/or a statement of financial position
- reduce the possibility of fraud since the ledgers they control are generally prepared by different people

Revision activity

- Enter each of the following in a three-column table: credit sales; purchases on credit; cash sales; discount payable; returns inwards; provision for doubtful debts; transfer from purchases ledger to sales ledger; dishonoured cheque; cash paid to credit suppliers; purchase of delivery vehicle on credit.
- Place a tick in the column to indicate in which control account the item would appear and write on which side of the account it would appear. The first item has been entered for you.

Item	Sales ledger control	Purchases ledger control
Credit sales	✓ Debit	

Now test yourself

24 What does a credit balance brought down in a sales ledger control account represent?

25 Explain how debit balances might occur in a purchases ledger.

26 Identify two advantages that a trader might hope to enjoy by keeping control accounts.

Answers on p.186

Tested

Adjustments to income statements and statements of financial position

After errors are identified during the preparation of the control accounts, adjustments made to correct errors will have some kind of knock-on effect on the double-entry system. Some adjustments will affect profits; some will affect the accuracy of the statement of financial position. Some adjustments require changes to both statements.

Changes made after eliminating a trial balance difference

Revised

The changes to profit and to items shown in a statement of financial position will depend on the type of error that caused the changes to the ledger account.

Table 3.1 Types of error and their effects

Type of error	Effect on profit	Effect on statement of financial position
Commission	None	None
Reversal	May increase or decrease	May change assets or liabilities
Omission	May increase or decrease	May change assets or liabilities
Principle	May increase or decrease	May change assets or liabilities
Original entry	May increase or decrease	May change assets or liabilities
Compensating	May increase or decrease	May change assets or liabilities

Changes made after changing bank entries in a cash book

Revised

There are no adjustments required to financial statements involving unpresented cheques or lodgements not yet credited by the bank. However, any changes to cash book entries because of differing amounts shown on a bank statement will affect either or both statements.

Example

A range of the effects of changes to cash book entries because of differing amounts on a bank statement are given in Table 3.2.

Table 3.2 Examples of the effects of changes to cash book entries

Cash book entry	Bank statement entry	Change in profit	Change in statement of financial position
No entry	Bank charges $45	Reduce by $45	Bank balance reduction of $45
Telephone $176	Telephone $167	Increase by $9	Bank balance increase of $9
Vehicle $7570	Vehicle $7750	No effect*	Bank balance reduction of $180
			Vehicles increase of $180

* The change in the value of non-current assets will change the year's charge for depreciation.

Changes made after correcting control accounts

Revised

If the closing balance shown on a purchases ledger control account does not agree with the schedule of trade payables, or the closing balance on a sales ledger control account does not agree with the schedule of trade receivables, there is an error in that control account:

- Changes to parts of a purchases ledger or a purchases ledger control account may change profit or trade payables in a statement of financial position.
- Changes to purchases, returns outwards or discounts received will have an effect on profit.
- Changes to the cash paid or the schedule of trade payables may change the bank balance and current liabilities.
- Changes to parts of a sales ledger or parts of a sales ledger control account may change profit or current assets in a statement of financial position.
- Changes to sales, returns inwards or discounts allowed will have an effect on profits.
- Changes to cash received, dishonoured cheques or the schedule of trade receivables will change the bank balance.

Now test yourself

Tested

27 The following errors have been discovered in a double-entry system.

(a) An advertising invoice for $239 has been recorded as $392.

(b) The wages account has been added to $139 660 but the total should be $139 560; the office furniture account should total $34 000 but it has been added to a total of $33 900.

(c) Motor expenses include an item for $137 which is an insurance premium.

(d) A purchases invoice for $519 has been eaten by the owner's dog. No entries were made in the books of account.

(e) Repairs to an office computer costing $375 have been included in the computer account.

(f) Goods sold to Iarrko for $194 have been credited to his account and debited to the sales account.

In each case:

- Identify the type of error.
- Calculate the increase or decrease in profit after the error has been corrected.
- Identify any changes to the assets or liabilities after the error has been corrected.

Answers on p.186

4 Preparation of financial statements

Manufacturing statements

Financial statements measuring profit for a business that produces goods for resale start with a manufacturing statement. The statement lists and totals the costs of running and maintaining the factory in which the products are made. It has two main sections: prime cost and overheads.

The prime cost section

Revised

The **prime cost** section shows all the costs of the factors of production that can be directly attributed to products being manufactured. They are costs that can be clearly traced to the product, such as direct raw materials, wages paid to production workers and other **direct costs** like **royalties**.

The raw materials purchased during a financial year are not necessarily exactly the same raw materials used in the manufacturing process that year. We have to make an adjustment to the purchase price of raw materials in order to find the value of those actually used during the year.

Direct costs are expenditure that can be economically identified with a specific saleable cost unit.

Royalties are payments made to the inventor of a product, process or idea. They are often calculated as a percentage of the revenue earned by the user.

Example

Ivania manufactures jeans. She provided the following information: inventory of materials at 1 January 2013 $2356; inventory of materials at 31 December 2013 $2895; purchases of materials during the year $56 788. The value of materials used in the production process during the year ended 31 December 2013 was $56 249:

	$
Inventory at 1 January 2013	2 356
Purchases of raw materials	56 788
	59 144
Inventory at 31 December 2013	2 895
Cost of raw materials used	56 249

The overheads section

Revised

All the costs of running the factory other than prime costs are found under this heading. These expenses cannot easily be attributed to the finished product. **Overheads** might include indirect materials, supervisors' wages, factory rent, local taxes charged on the factory, and depreciation charged on the factory plant and machinery.

Overheads are expenditure that cannot be economically identified with a specific cost unit.

Revision activity

Identify two prime costs and two overheads incurred in the production of your cell phone. Explain how you chose each of the four types of cost.

Example

The factory manager of Klack Manufacturing provides the following information:

	$
Inventory of raw materials at 1 November 2012	4529
Inventory of raw materials at 31 October 2013	3887
Purchases of raw materials	234910
Wages	286900
Manufacturing royalties	22500
Factory rent	340000
Factory insurance	17800
Depreciation of non-current assets	64000

Additional information at 31 October 2013:

- 20% of the wages bill is for supervisory staff; the remainder is direct wages.
- 10% of non-current assets are employed in the office of the business; the remainder are used in the factory.

A manufacturing statement for the year ended 31 October 2013, prepared using the information above, is as follows.

Klack Manufacturing. Manufacturing statement for the year ended 31 October 2013

	$	$
Inventory of raw materials at 1 November 2012		4529
Purchases of raw materials		234910
		239439
Less inventory of raw materials at 31 October 2013		3887
Raw materials used		235552
Direct wages		229520
Royalties		22500
Prime cost		487572
Overheads		
Indirect wages	57380	
Factory rent	340000	
Factory insurance	17800	
Depreciation of factory machinery	57600	
		472780
Cost of manufacturing		960352

Expert tip

Note the 'full' heading: it contains the name of the business, the type of statement and the date. Always identify the key elements in any statement you produce. Notice here that raw materials used, prime cost, overheads and cost of manufacture have been clearly identified.

Inventories in a manufacturing business

Revised

Three types of inventory are held:

- raw materials — these are goods in the condition in which they were bought; they have yet to enter the production process
- work in progress — goods that are part-way through the production process but are, as yet, incomplete
- finished goods — goods that are the complete, finished articles and are simply waiting to be sold to the eventual customer

Each type of inventory appears in a different part of the financial statements, but the treatment follows the same pattern. The opening inventory is added and the closing inventory is deducted. Raw materials are dealt with first. Work in progress goods still have some way to go in the factory and are dealt with at the end of the manufacturing statement. An adjustment for the inventory of finished goods is dealt with in the trading section of an income statement.

All three types of inventory are shown separately as current assets in a statement of financial position.

Revision activity

Identify three types of inventory held by the manufacturer of the clothes you are presently wearing.

The valuation of inventories

Revised

At the end of a financial year, the trader physically counts the items that remain unsold in the business (as inventory). The items are listed and each category is given a value based on the principle of the lower of cost and **net realisable value**. At a later stage we will consider the implications of this basic rule. The use of net realisable value can cause a problem for many students.

Net realisable value is the selling price less any expenses incurred by the business to get the goods into a saleable condition.

Expert tip

Make sure you understand how to calculate net realisable value as it is often required in examination questions.

Example

Chokri sells items of furniture. He was unsure how to value the three items shown in Table 4.1.

Table 4.1 Items of furniture

Article	Cost ($)	Selling price ($)	Notes
Table	210	340	
Chair	34	55	The chair is damaged; before sale it will have to be repaired at a cost of $25
Bed	360	450	The frame is damaged and will have to be repaired at a cost of $30 before it can be sold

Chokri placed an inventory valuation of $210 for the table, $30 for the chair ($55 less $25 is lower than cost) and $360 for the bed (cost is lower than $450 less $30).

Provision for unrealised profit

Revised

Some manufacturing businesses transfer goods from their factory to the warehouse at a price that is greater than the total production cost. The difference between the transfer price and the total production cost is a profit on manufacturing.

This profit loading is designed to recognise the part that the factory has played in generating the overall profits of the business. The loading may be based on:

- the price that would have to be paid if the goods were purchased from an outside supplier
- a percentage of the total production cost

However, we have already said that inventories must be valued at the lower of cost and net realisable value. This does not pose a problem with raw materials or work in progress, but it can cause a problem with finished goods. Finished goods are stored in a warehouse ready for sale or dispatch to a customer. There will, in all probability, be some of these goods left unsold at the end of the financial year. How should these goods be valued? There is no problem if the finished goods are passed to the warehouse at their cost price. However, a problem arises if finished goods are passed from the factory at cost price plus a profit margin. For the purposes of valuing the inventory, we need to find the cost price of the goods.

Expert tip

Examination questions generally require students to add a profit loading based on a percentage of the total production cost.

Example

The transfer prices of finished goods to a trading section are as follows.

Cost plus	Transfer price to trading section ($)
50%	6000
30%	2080
70%	3910

The cost price of the above transfers to the trading sections are as follows.

Calculation	Cost price ($)	Profit loading ($)
6000 ÷ 1.5	4000	2000 *(6000 less 4000)*
2080 ÷ 1.3	1600	480 *(2080 less 1600)*
3910 ÷ 1.7	2300	1610 *(3910 less 2300)*

Expert tip

The cost price can be calculated by dividing the transfer price by 1 plus the percentage mark-up expressed as a decimal. So 60% becomes 1.6; 29% becomes 1.29 etc.

The value of inventory is increased by the profit element, so the gross profit and hence the profit for the year will be increased by the same amount. We should not anticipate profit that has not yet been realised. The profit element should be removed from our financial statements, which is achieved by creating a provision for unrealised profit.

Example

Kai manufactures air conditioning units. They are transferred to an income statement at cost plus 40%. The inventory of finished units at 1 July 2012 was $52 640; at 30 June 2013 it was $58 380. The provision for unrealised profit account for the year ended 30 June 2013 would show:

Dr	*Provision for unrealised profit account*		Cr
		2012	
		1 July Balance b/d ($52 640 × 40% ÷ 1.4)	15 040
2013		2013	
30 June Balance c/d	16 680	30 June Income statement missing figure	1 640
	16 680		16 680
		1 July Balance b/d ($58 380 × 40% ÷ 1.4)	16 680

The balance is shown in the statement of financial position as a deduction from the closing inventory of finished goods, so ensuring that it appears in the statement of financial position at cost price.

The amount shown in the provision account described as 'income statement' $1640 is deducted from the gross profit on manufacturing in the income statement.

Revision activity

Explain to a non-accountant why goods may be transferred from a manufacturing account to the trading section of an income statement at a price greater than cost. Explain your treatment of this fact in financial statements.

Now test yourself Tested

1 When preparing a manufacturing account, what are the components of the prime cost?
2 **(a)** Identify two costs that are always included as part of prime cost.
(b) identify two costs that are always included as factory overheads.
3 What are royalties and in which section of a manufacturing account would you find them?
4 What are the three types of inventory that would normally be held by a manufacturing business?

5 Complete the following sentence:
Inventories are valued at the lower of _____ and _____.

6 A business charges goods to its warehouse at factory cost plus 25%. It had no opening inventory and closing inventory at the end of year 1 was valued at $3000 transfer price. At the end of year 2 inventory was valued at a transfer price of $2400. Prepare a provision for unrealised profit account showing entries for both years.

Answers on p.186

Income statements

The trading section of an income statement

Revised

The trading section shows how much it costs to buy the goods that are sold and how much they were sold for. The goods in question are the goods that the business buys and sells in its everyday activities. The trading section calculates gross profit by deducting sales at cost price from sales revenue derived from the same goods.

Inventories

- Opening inventories of finished goods are added to purchases, which identifies goods available for sale. Closing inventories of finished goods are deducted from the goods available for sale to give the cost of sales.
- If closing inventory is **over**valued, gross profit will be **over**stated.
- If gross profit is **over**stated, the profit for the year is **over**stated.
- If closing inventory is **under**stated, gross profit will be **under**stated.
- If gross profit is **under**stated, the profit for the year is **under**stated.

Returned goods

The total value of **sales returns** is deducted from the total value of sales for the year. **Purchases returns** are deducted from the total value of purchases for the year.

Sales returns are goods that have been returned by customers. They are also known as returns in or returns inwards.

Purchases returns are goods that the business sends back to suppliers. They are also known as returns out or returns outwards.

Expenses incurred in the carriage of goods

Carriage inwards is an expense incurred when a supplier charges for delivery and it is added to purchases in the trading section.

Carriage outwards is also an expense that a business incurs when it bears the cost of delivery of goods to a customer. It is sometimes referred to as **carriage on sales**. It is an expense in the profit and loss section of an income statement.

Expert tip

Carriage **in**wards → Trad**in**g section
Carriage **o**utwards → Pr**o**fit and l**o**ss section

Now test yourself Tested

7 State which of the following you would find in the trading section of an income statement: returns inwards; carriage outwards; opening inventory; purchase of office equipment.

8 How would you calculate goods available for sale?

9 Complete the following formula:
cost of sales + gross profit = ?

Answers on p.186

Departmental income statements

Revised

Departmental income statements allow internal users of accounting information to gauge the efficiency of each department of a business. Some direct costs can be easily identified with the appropriate department and incorporated into a departmental income statement. Other costs may be more difficult to allocate and so are apportioned to the appropriate department.

The main ways of apportioning costs are according to:

- floor space covered by the department
- numbers of employees in the department
- sales revenue generated by the department

Departmental income statements may show that one or more departments are operating unprofitably. However, care should be taken before the 'offending' department is closed.

- There may be interdependency of departments.
- Costs are often apportioned in an arbitrary way, which does not accurately reflect use of resources. For a more accurate method of apportioning costs, managers should ask 'How much would the business save if the department were closed?'
- A greater fixed cost burden may be placed on other departments after the closure of a seemingly unprofitable department.

Now test yourself

10 Why would managers prepare departmental income statements for a business that makes large profits?

11 How should the following expenses be allocated or apportioned in a large store with several departments: rent; sales; staff canteen facilities; electricity; staff wages.

12 Should a department that makes consistent reported losses always be closed?

Answers on p.186

Tested

Income statements

Revised

An income statement details the incomes and expenditure incurred by the business. It is divided into two sections:

- section 1 shows the results of trading and calculates the gross profit
- section 2 shows the profit (or loss) after all business expenses have been taken from the gross profit

Capital expenditure is spending on non-current assets or the improvement of non-current assets. **Revenue expenditure** is spending on everyday expenses.

Capital income is derived from transactions that are not the usual activities of the business. **Revenue** income is income derived from the usual activities of the business.

The profit and loss section of an income statement

The profit and loss section of an income statement shows how much profit is left after expenses have been deducted from the gross profit earned from trading. It is usual for businesses to combine the profit and loss section with the trading section to give one income statement. You must be able to produce an income statement quickly and accurately, so practise the layout.

Revision activity

Explain how vehicle servicing costs should be treated in the financial statements of a supermarket.

Now test yourself

Tested

13 How should carriage inwards and outwards be treated in the profit and loss section of an income statement?

14 Complete the following formulae:

(a) profit for the year + revenue expenses = ?

(b) gross profit – revenue expenses = ?

(c) gross profit – profit for the year = ?

Answers on p.186

The appropriation section of an income statement

After the calculation of profit for the year, an appropriation section is needed to show how profits (or losses) are shared in a partnership.

The profit (or loss) of a sole trader is transferred to the trader's capital account. The profit (or loss) earned by a partnership is shared between the partners according to their partnership agreement (or according to the Partnership Act 1890 if there is no agreement — see pp. 36–37). How profits (or losses) are distributed is shown in detail in the final section of the income statement.

Statements of financial position

Assets and liabilities

Revised

Assets are resources that are owned by an organisation. They are used to help the organisation survive and function. **Liabilities** represent the debts owed by an organisation. A statement of financial position lists the assets owned by an organisation and all the liabilities that are owed.

Capital

Revised

The total of assets held must equal the total of liabilities. **Capital** describes how much a business is worth. It represents how much is invested in the business by the owner(s). It always equals net assets.

A statement of financial position shows:

- what a business is worth
- what assets are used in a business
- who provided the funds to acquire the resources used in a business

The layout of a statement of financial position

Revised

Non-current assets are used for more than 1 year. They may be tangible or intangible.

Tangible non-current assets and **intangible non-current assets** should be shown separately. Examples of tangible non-current assets include premises, factory machinery and delivery vehicles. Examples of intangible non-current assets include goodwill, patents and copyrights.

Current assets are cash or assets that will be changed into cash in the near future. Examples include inventory, trade receivables, bank balances and cash in the till. Assets are classified in a statement of financial position according to:

- how long they are likely to be used, and
- how **liquid** they are

The most liquid of the assets is shown last while the least liquid appears first. This is known as the **'reverse order of liquidity'**.

Liabilities are classified according to the time allowed to settle the debt. **Non-current liabilities** fall due for repayment after more than 1 year. A 25-year loan would fall under this heading (except in its final year). **Current liabilities** are due to be repaid within 1 year. Examples include trade payables and money

Revision activity

Identify two tangible assets and two intangible assets owned by your favourite fast-food restaurant.

Liquid is the term used to describe how easily an asset can be turned into cash.

owed for overdue rent. In reality, many current liabilities need to be paid more quickly than 1 year, e.g. suppliers are unlikely to allow 365 days before settlement.

Now test yourself Tested

15 Which of the following are non-current assets for a garage that sells cars, repairs vehicles and sells spare parts: a breakdown recovery vehicle; spare parts for Honda cars; a lifting jack; a desk for a sales representative; petrol.

16 Arrange the following non-current assets in the order that they would appear in a statement of financial position: vehicles; premises; office equipment; machinery.

17 Arrange the following current assets in the order that they would appear in a statement of financial position: bank balance; inventory; trade receivables; cash in hand.

Answers on p.186

The accounting equation

Revised

A statement of financial position is the formal way of showing the **accounting equation**. If we know four of the parts that make up the accounting equation, we should be able to find out the 'missing' part that completes the equation.

The **accounting equation** recognises that the assets owned by a business are always equal to the claims against the business:

non-current assets + current assets = non-current liabilities + current liabilities + capital

Cash flows

What are cash flows?

Revised

An income statement calculates profits or losses during 1 year — profits determine the long-term survival of a business. A statement of financial position prepared at the start of a financial year shows the state of affairs of a business on the first day. A statement of financial position prepared 1 year later shows the position on the last day of the financial year. An income statement shows what might have caused changes from one perspective: profits.

A statement of cash flows concentrates on cash, bridging the gap from the perspective of liquidity. It reveals information that may not be obvious from studying an income statement or statement of financial position. Liquidity is important, as the inability to generate cash is the biggest single reason for many businesses going into liquidation.

The three statements together show summaries of much of the financial information required by the users of accounting information. A statement of cash flows gives a picture of monies flowing into and out of a business during a financial year. The statement concentrates on liquidity and may explain why, for example, a business may need a bank overdraft in a year when profits are high. Even though small companies, sole traders and partnerships do not have to produce a statement of cash flows, they may find that it is in their best interests to prepare one.

Cash flows and profits

Revised

Cash is money in notes and coins and deposits that are repayable on demand. Cash equivalents are short-term, highly liquid investments that are convertible into cash without notice. They have less than 3 months to run when acquired. Overdrafts repayable in less than 3 months are deducted from cash equivalents.

Changes in cash and cash equivalents held by a business over the period of a year are not the same as the profits generated by the business over the year. A business could have a positive bank balance at the start of the year and make a profit over the year, yet end the year with a bank overdraft. A business could improve its bank balance over the course of a year yet have incurred a loss.

It is important that you understand the clear distinction between cash flows and profits as this is often the basis of examination questions.

Revision activity

Identify three transactions that would reduce:

- profits but would not affect bank balance
- bank balance but would not affect profits

Now test yourself

18 Explain why cash inflows are important to a business.

19 Explain the terms *cash* and *cash equivalents*.

Answers on p.186

Tested

The calculations

Revised

Information will generally be given in the form of two statements of financial position: one prepared at the beginning of a financial year and one prepared at the end of the same financial year.

Cash flows are found by comparing the two sets of information. This is known as the **indirect method** of preparing a statement of cash flows. Any changes that have taken place over the year will, with a couple of exceptions, have involved a movement of cash.

Example

The statements of financial position for Jsu are as follows.

	at 31 March 2014		at 31 March 2013	
	$	$	$	$
Non-current assets	19620		17230	
Less depreciation	4110	15510	3720	13510
Current assets				
Inventory	2800		1750	
Trade receivables	2400		2500	
Cash and cash equivalents	1120	6320	1140	5390
Current liabilities				
Trade payables		(2920)		(2880)
Net assets		18910		16020
Capital		16020		14009
Profit for the year		19300		16631
		35320		30640
Less drawings		16410		14620
		18910		16020

There were no disposals of non-current assets during the year. Each amount from the statement of financial position at the start of the year and the figures from the statement at the end of the year should be compared. Any difference between the two figures is because of a movement of cash.

A statement identifying cash inflows and outflows during the year ended 31 March 2014 would show the following.

Non-current assets on the first day of the financial year had cost $17 230; on the last day of the financial year the figure had risen to $19 620. Jsu has purchased additional non-current assets, spending $2390.	Cash outflow: $2390
Depreciation of non-current assets at the start of the year was $3720; at the end of the year $4110. The charge for the year was $390. The charge to the income statement $390 has reduced profit but it has not reduced cash. Depreciation is a non-cash expense. Although this is not really a cash inflow, it is treated as though it were.	Cash inflow: $390
Over the year, **inventory** has increased by $1050; cash must have been spent to acquire these goods.	Cash outflow: $1050
Trade receivables at the start of the financial year were $2500; at the end of the year the amount owed was $2400. Therefore, trade receivables have fallen by $100. This is because of a net cash inflow.	Cash inflow: $100

The next item, **cash and cash equivalents**, is overlooked at the moment because we are trying to collect information to explain why there has been a change over the year.

Trade payables at the start of the year were owed $2880. One year later, they were owed $2920. They have increased by $40. This increase in trade payables can be used to finance Jsu's businesss and is therefore treated as an inflow of cash.	Cash inflow: $40
The summary of the year's changes to Jsu's capital is contained in the statement of financial position for the year ended 31 March 2014.	Cash inflow (profit): $19 300 Cash outflow: (drawings) $16 410

A summary of all the differences would look like this:

Cash inflows	$	Cash outflows	$
Depreciation	390	Purchase of non-current assets	2 390
Decrease in trade receivables	100	Increase in inventory	1 050
Increase in trade payables	40	Drawings	16 410
Profit	19 300		
	19 830		19 850

The calculations show outflows of cash exceeded inflows by $20 during the year. This shows in the reduction of cash and cash equivalents during the year.

	$
Decrease in cash and cash equivalents	(20)
Cash and cash equivalents at beginning of the year	1140
Cash and cash equivalents at the end of the year	1120

Now test yourself Tested

20 Explain why cash inflows and profits are not necessarily the same.

21 Identify the cash flows resulting from the following transactions:

(a) Sale of goods $78 on credit to Jose.

(b) Purchases of goods $39 on credit from Rajan.

(c) Rent paid $450 with cheque.

(d) Purchased delivery van $15 800 from Jablonsky. Paid deposit $5000, balance to be paid next month.

(e) Sold machine with a carrying amount of $900 to Saif for $300 cash.

(f) Sold office equipment with a carrying amount of $150 to Mpofu for $120. He will pay next month.

22 Explain how a fall in the value of trade receivables over a year will affect the cash resources of a business.

Answers on pp.186–87

5 Partnerships

Features of partnerships

Sole traders v. partnerships

Revised

Sole traders are the most common form of business organisation. One person is responsible for conducting the business and is legally responsible for the stewardship of the business.

Table 5.1 The advantages and disadvantages of being a sole trader

Advantages	Disadvantages
Complete control	Unlimited liability
Minimum of legal formalities to set up	May involve long hours of work
Financial results do not need to be divulged to others	Absence may affect the business
	No one with whom to share problems or ideas
	Raising additional finance may be difficult, involving others

A sole trader wishing to raise additional finance is often faced with the choice of converting the business into either a partnership or a limited company.

Forming a partnership overcomes some of the disadvantages of being a sole trader. The Partnership Act 1890 defines a partnership as 'the relationship which subsists between persons carrying on business with a view of profit'.

Table 5.2 The advantages and disadvantages of partnerships

Advantages	Disadvantages
Access to more capital	Partners have less independence. Decisions have to be agreed by all partners
Sharing workload	The number of partners is limited to 20
Pooling of ideas and problems	Partners have unlimited liability

Revision activity

Prepare a table headed 'Sole trader' and 'Partnership'. Under each heading, list four advantages of being a sole trade and four of being in a partnership. Then list four disadvantages of each type of business.

Partnership agreements

Revised

It is usual to have a written partnership agreement that usually covers:

- the duties of the partners
- the amount of capital to be subscribed
- how any profits are shared
- any arrangements to be made if there are structural changes to the partnership

Where no agreement exists, the Partnership Act 1890 lays down the following rules. Partners:

Expert tip

If no details of the way profits are to be shared are given in the question, you must assume that no partnership agreement exists and so the Partnership Act 1890 applies to the question.

- contribute equal amounts of capital
- are not entitled to interest on capital
- are not entitled to a salary
- are not to be charged interest on drawings
- share residual profits or losses equally
- lending the partnership money are entitled to interest at the rate of 5% per annum

Now test yourself Tested

1 'A partnership must have a written partnership agreement.' Is this statement true or false?
2 Explain the advantages of having a partnership agreement.
3 What rules are laid down in the Partnership Act 1890?

Answers on p.187

The preparation of partnership accounts

Partnership appropriation accounts

Revised

Partnership income statements

The internal financial statements for all businesses are prepared in much the same way. It is only after the calculation of profit for the year that changes are encountered. The appropriation section of the income statement shows in detail how profits (or losses) are shared between partners. The profit (or loss) earned by a partnership has to be shared in accordance with any agreement (or according to the Partnership Act 1890 if there is no agreement).

Partners usually agree to share profits in ways that reflect the:

- workload of each partner
- amount of capital invested in the business by each partner
- risk-taking element of being in business

The division of profit (or loss) is shown in the appropriation section under these headings:

- salaries
- interest on capital account balances
- share of **residual profits**

Residual profits (or losses) are the profits (or losses) that remain once all appropriations of profits for the year have been allocated to partners.

Partners' salaries

If a partner is entitled to a partnership salary, this is taken from the profit for the year before the residual profit shares are calculated.

Interest on partners' capital account balances

Generally, partners will maintain fixed capital accounts if interest is allowed on capital account balances.

Interest on partners' drawings

Some partnership agreements provide that partners will be charged interest on any drawings made during the financial year. This is supposed to deter partners from drawing cash from the business.

The interest on drawings is added to the profit for the year in the appropriation section and is debited to the individual partners' current accounts. The debit entry in the partners' current accounts has the effect of increasing the amount withdrawn during the year. It is, therefore, an additional amount of drawings.

Expert tip

The amount of interest on drawings will generally be given in the question, so you will not be required to calculate the amounts to be charged to each partner.

Example

An example of the appropriation section of an income statement is as follows.

Shabir and Hanif. Extract from the income statement for the year ended 31 August 2013

		$	$
Profit for the year			74 341
Add interest on drawings —	Shabir	160	
	Hanif	290	450
			74 791
Less salary —	Shabir		(8 000)
			66 791
Less interest on capital —	Shabir	(4 200)	
	Hanif	(3 000)	(7 200)
			59 591
Share of profit —	Shabir (3/5)	(35 755)	
	Hanif (2/5)	(23 836)	(59 591)

Expert tip

If the share of residual profit does not divide exactly, check quickly that you have not overlooked an entry somewhere. However, don't spend too long doing this. If nothing has been missed, 'round' your figures.

Now test yourself Tested

4 Explain the function of an appropriation section of an income statement.

5 Explain why a salary paid to a partner is not included in the profit and loss section of an income statement along with all the other salaries paid to staff employed by the business.

6 'A partner cannot have both interest charged on drawings and interest paid on capital account balances.' Is this statement true or false?

Answers on p.187

Partners' current and capital accounts

Revised

In the financial statements for a partnership there must be more than one capital account showing the financial commitment of each partner to the business. The capital employed in the business is usually divided into **partners' current accounts** and **partners' capital accounts**.

Capital accounts may change each year if current accounts are not maintained. They resemble the capital accounts of sole traders that you have already prepared in your studies. However, some questions state that only capital accounts are maintained.

Partners' current accounts record entries relating to each partner's share of the profits of the business in the current year. The current account would also be used to adjust for any errors made in the profit share in previous years.

Partners' capital accounts show deliberate injections of capital into the business, as well as any goodwill adjustments and any profits (or losses) arising from a revaluation of assets (generally on the admission or the retirement of a partner).

Example

The appropriation section of an income statement for the year ended 30 June 2014 of Lim and Lee is shown below.

		$	$
Profit for the year			75 600
Less salary —	Lim		10 000
			65 600
Less interest on capital —	Lim	(4 200)	
	Lee	(5 400)	(9 600)
			56 000
Share of profit —	Lim	(22 400)	
	Lee	(33 600)	(56 000)

The capital account balances at 1 July 2013 were $70 000 and $90 000 respectively. Drawings for the year were Lim $28 300 and Lee $36 750. The capital accounts of Lim and Lee at 30 June 2014 would look like this:

	Lim	Lee		Lim	Lee
	$	$		$	$
Drawings	28 300	36 750	Balance b/d	70 000	90 000
Balance c/d	78 300	92 250	Salary	10 000	
			Interest on capital	4 200	5 400
			Share of profit	22 400	33 600
	106 600	129 000		106 600	129 000
			Balances b/d	78 300	92 250

The columnar layout saves time and space. The capital accounts would be shown on the statement of financial position as follows:

Extract from a statement of financial position at 30 June 2014

	Lim	Lee	
	$	$	$
	70 000	90 000	
Add salary	10 000		
Interest on capital	4 200	5 400	
Share of profit	22 400	33 600	
	106 600	129 000	
Less drawings	28 300	36 750	
	78 300	92 250	170 550

Both the accounts and the vertical layout used give the same result.

Preparation of ledger accounts will save space in an answer, so in many ways it is preferable to draw up ledger accounts and use the capital account totals in the statement of financial position:

Extract from a statement of financial position at 30 June 2014

Capital accounts	$	$
Lim	78 300	
Lee	92 250	170 550

It is more usual for a partnership to maintain fixed capital accounts and show all entries relating to profits earned and profits withdrawn in current accounts.

Expert tip

If you are asked to prepare capital accounts, you must produce the information in account form as shown. If you don't produce an 'account', you may forfeit some marks. If a question asks for a calculation or does not ask for 'accounts', then either approach is acceptable.

Example

The following information relates to the year ended 31 August 2013.

	Chantal $		Gisele $	
Capital account balances 1 September 2012	60000		75000	
Current account balances 1 September 2012	6718	Cr	543	Cr
Drawings for the year	18319		29034	
Interest charged on drawings	346		652	

Information from the income statement shows:

		$
Salary —	Gisele	6500
Interest on capital —	Chantal	2400
	Gisele	3000
Share of residual profits —	Chantal	21000
	Gisele	14000

Capital and current accounts at 31 August 2013 would show:

Capital accounts

Chantal $	Gisele $		Chantal $	Gisele $
		Balances b/d	60000	75000

Current accounts

	Chantal $	Gisele $		Chantal $	Gisele $
Drawings	18319	29034	Balances b/d	6718	543
Interest on drawings	346	652	Salary		6500
Balance c/d	11453		Interest on capital	2400	3000
			Share of profits	21000	14000
			Balance c/d		5643
	30118	29686		30118	29686
Balance b/d		5643	Balance b/d		11453

The capital accounts have remained 'fixed' and the profits earned and profits withdrawn from the business (drawings) and interest on drawings are recorded in the current accounts.

It is, of course, possible that a partner like Gisele may withdraw more profits from the business than they have earned. In this case, the partner's current account would show a debit balance.

Revision activity

Explain to a non-accountant the items you would include in a partners' capital account and a partners' current account.

Now test yourself Tested

7 Explain how a business partner could have a debit balance on their current account.
8 Identify one example of a debit entry in the capital account of a partner.
9 Identify two examples of debit entries that might be found in the current account of a partner.
10 Identify two examples of credit entries that might be found in the current account of a partner.

Answers on p.187

Changes in partnership

Factors that affect partnership changes

Revised

During the lifetime of a partnership, there could be changes in ownership. Partners may decide to:

- terminate the partnership
- admit another partner
- alter the profit-sharing ratios

When there is a change in the structure of a partnership, one business ceases to exist at the date of the change and, immediately after the date of the change, a new business comes into existence.

Expert tip

When there is a structural change to a partnership, treat the information relating to the business before the change separately from the information relating to the business after the change.

Incoming partners

Revised

Example

Adil and Gurvinder share profits and losses equally. Their financial year end is 31 December. They admit Camille as a partner on 1 July 2013. They agree that Adil, Gurvinder and Camille will share profits 3:2:1 respectively. The profit for the year ended 31 December 2013 was $70 000 and accrued evenly throughout the year.

There are two businesses involved:

- up to 30 June 2013, the owners were Adil and Gurvinder
- from 1 July 2013, the owners were Adil, Gurvinder and Camille

Extract from the income statement for the 6 months ended 31 May 2013

		$	$
Profit for 6 months			35 000
Profit share —	Adele	(17 500)	
	Gaynor	(17 500)	(35 000)

Extract from the income statement for the 6 months ended 31 December 2013

		$	$
Profit for 6 months			35 000
Profit share —	Adele	(17 500)*	
	Gaynor	(11 667)*	
	Camille	(5 833)*	(35 000)

* Note that the profit share has been rounded.

The business assets have to be revalued if there is a structural change. Any change in asset values 'belong' to the original partners. The asset accounts are adjusted and changes are entered in a revaluation account using double-entry principles. The revaluation account is balanced with a profit (or loss) on revaluation. The profit (or loss) is transferred to the existing partners' capital accounts *before* the new partner is admitted.

Revaluation account		*Asset accounts*	
Debit	**Credit**	**Debit**	**Credit**
Decreases in asset values	Increases in asset values	Increases in asset values	Decreases in asset value
		Capital accounts	
Share of 'profit'	Share of 'loss'	Share of 'loss'	Share of 'profit'

Changes to the capital structure of the business are entered in the partners' capital accounts. Current accounts are not used. Current accounts only change when trading profits or losses are shared between partners or as partners make drawings.

When you get used to making adjustments to the partnership statement of financial position because of a structural change, you may find that you do not have to open an account for each asset and liability. However, it is safer for you to always open a revaluation account to 'collect' the changes that have been implemented.

Outgoing partners

Revised

The business should be valued when a partner leaves a partnership. The business assets (and liabilities) need to be examined in order to determine whether they reflect the true worth of the business.

The capital accounts of the 'old' partners are credited with the increase in the value of the net assets, including a share of goodwill, in order that the partner who is leaving can receive what is owed. After the departure, the remaining partners are debited with writing-off the asset of goodwill in the 'new' profit-sharing ratios.

Methods of paying a partner on leaving a partnership

If a large sum has to be paid when a partner retires, the business could be deprived of a great deal of liquid resources. There are several approaches for dealing with this:

- The retiring partner's capital account balance could be transferred to a loan account and an agreed amount repaid each year.
- A new partner could join the business and the payment made by the new partner could be used to pay off the retiring partner.
- The cash to pay off the retiring partner could be borrowed from a bank or other financial institution.
- The remaining partners could inject sufficient further capital into the business, allowing the payment to be made.
- An investment could be made which on maturity would pay for the retirement.

Changes in the profit-sharing ratio

Revised

A change to the profit-sharing ratio is dealt with in much the same way as other structural changes. View the change as that involving two separate businesses. The 'first' business must be valued so that the 'original' owners' capital accounts can be adjusted with any change in the value of the business. If a goodwill account is not to be maintained in the books of account of the 'new' business, it must be deleted and the 'new' partners debited in their profit-sharing ratios.

Intangible assets (goodwill)

Revised

Goodwill is an intangible asset. When a successful business is sold, the vendor usually sets a price that is greater than the total value of the net assets being sold.

Goodwill is the cost of acquiring a business less the total value of the assets and liabilities that have been purchased.

The valuation of goodwill

When a new partner is admitted to a partnership, the assets should be revalued and a value placed on goodwill. This value has to be acceptable to the partners in the 'old' partnership and acceptable to the 'new' partners. Goodwill is generally valued at a multiple of the:

- average profits generated over the past few years
- average weekly sales generated over the past financial year
- average of gross fees earned over a number of years
- super profits earned by the business

Expert tip

Goodwill is not sold; it is only purchased. The vendor makes a profit and the purchaser buys all the net assets including goodwill.

Factors that contribute to the establishment of goodwill

The factors that determine the value of goodwill include:

- the quality of a product
- good service
- helpfulness of staff
- after-sales service
- prominent physical position of premises
- popularity among customers

A payment for the purchase of goodwill is made to gain access to future profits.

Goodwill adjustments in partners' capital accounts

With the introduction of a goodwill account in the firm's books

When a new partner enters the business, a goodwill account is debited with the value placed on the goodwill. The 'old' partners are credited in their profit-sharing ratios. It then appears as a non-current asset in a statement of financial position. Inherent goodwill has been generated internally; it is not entered in the books of account, so it is never shown in a statement of financial position.

Well-established businesses like Royal Dutch Shell or McDonald's enjoy much inherent goodwill, but this will not be shown on their statements of financial position as both these businesses are going concerns. The concept of going concern tells us that assets should be shown at cost price, not at what they would fetch if sold. Neither of these two businesses is due to be sold in the next few days, so as a going concern they would not show inherent goodwill on their statement of financial position.

When no goodwill account is to be introduced

Generally in questions you will be required to write off goodwill so that it does not appear in a statement of financial position. When a structural change takes place, the business should be valued. The 'original' partners have their capital accounts adjusted to take into account any increase or decrease in the value of the businesses assets over the years and to take into account any goodwill that has been created.

Table 5.3 Writing off goodwill

Debit	Credit
Accounts of assets with increases in value over the years	Revaluation account
Revaluation account	Accounts of assets with decreases in value over the years
Goodwill account with the agreed value of goodwill	Revaluation account

Balance the revaluation account with amounts in the profit-sharing ratios of the original partners:

Balance revaluation account	Partners' capital accounts

or:

Partners' capital accounts	Balance revaluation account

The goodwill account must be written out of the books:

'New' partners in their profit-sharing ratios	Goodwill account

The goodwill account has now disappeared.

Now test yourself

Tested

11 Give two examples of changes that result in a partnership being restructured.

12 Explain why it is necessary to revalue the assets of a partnership when a structural change takes place.

13 Explain the circumstances that could cause the dissolution of a partnership.

14 Explain the term *goodwill*.

15 Explain one method of valuing goodwill.

16 'Goodwill is the value placed on the customers of the business being taken over.' Is this statement true or false?

17 Non-current assets $56 000; net current assets $12 000; purchase price paid to acquire the business $100 000. Calculate the value of goodwill.

18 Explain the term *inherent goodwill* and describe how it should be shown in a statement of financial position.

Answers on p.187

6 Non-profit making (not for profit) organisations

Clubs and societies

Both clubs and societies are referred to as 'clubs' in this topic. Clubs do not generally keep a full set of double-entry accounting records.

Changes in terminology

Revised

Some headings and descriptions are different from those used for commercial organisations:

- 'income statement' becomes 'income and expenditure statement'
- 'profit' becomes 'excess of income over expenditure' or 'surplus'
- 'loss' becomes 'excess of expenditure over income' or 'deficit'
- 'capital account' becomes 'accumulated fund'
- a 'summarised cash book' may be called a 'receipts and payments account'

Receipts and payments account

Revised

Clubs exist to provide:

- facilities for members
- opportunities for people to meet and further a common interest

A receipts and payments account does not show the members:

- the financial position of the club
- accrued expenses or prepayments
- the assets held by the club or how much the assets have depreciated during the year
- any liabilities that are outstanding at the year end

A more complete picture of the club's financial activities and position is obtained by the preparation of an income and expenditure statement and a statement of financial position.

Income and expenditure statement

Revised

The accruals concept is used in the preparation of an income and expenditure statement. It shows:

- all incomes and expenditures for the period under review
- all expenditures accrued and as yet unpaid for the period
- all incomes due that have not yet been received
- non-cash expenses such as depreciation
- any surplus or deficit for the period
- whether the club is generating sufficient income to pay for members' activities

Statement of financial position

Revised

The statement of financial position is similar to that of a business. Non-current assets and non-current liabilities are identified, together with current assets and liabilities. However, the capital account of a club is known as the **accumulated fund**.

Calculation of financial results for clubs and societies

Revised

To calculate the surplus or deficit for a club, a comparison of net assets at the start of the period with the net assets at the end is required:

Stage 1 — Calculate the opening accumulated fund (net assets).

Stage 2 — Calculate the closing accumulated fund.

Stage 3 — Deduct the opening accumulated fund from the closing accumulated fund. This indicates the surplus or deficit for the period.

Stage 4 — If the club received a donation or a legacy, that has to be treated as a capital receipt. The amount of the donation is not an increase in net assets 'earned' by the activities of the club, so it must be disregarded in the calculation. Deduct any 'extra' funds introduced.

Table 6.1 Calculating a club's financial results

	Closing accumulated fund
Deduct	Opening accumulated fund
	xxxxxxxxxxxxx
Deduct	Funds introduced
Surplus (deficit) for the year	xxxxxxxxxxxxxx

This type of question always asks you to *calculate* the surplus or deficit.

Preparation of financial statements for clubs and societies

Revised

Read the 'required' instruction for the question carefully. A question that requires the *preparation* of a set of financial statements means that we need to go through the following stages carefully:

Stage 1 — Prepare an opening **statement of affairs**.

A **statement of affairs** is the same as a statement of financial position.

Stage 2 — Prepare a summarised receipts and payments account and a summarised bank account. These are often given in the question.

Stage 3 — Construct adjustment accounts.

Stage 4 — Prepare the financial statements.

Stage 3 takes up much time and is the area that seems to cause most problems.

Ancillary activities

Revised

Many clubs organise activities that are not their core activity.

- The activities raise additional funds, meaning that subscriptions may be lower than if ancillary activities were not undertaken.
- They keep members interested at times when major club activities are quiet, e.g. a cricket club may organise out-of-season activities such as discos during the winter months.

The treasurer should calculate whether the activity is profitable or not and include the profit (or loss) in the income and expenditure statement.

These extra revenue accounts make it easy for members to see the profit (or loss) relating to the activity. Members can then decide whether or not the activities should continue. If an activity is profitable, the membership is likely to agree to its continuation. An unprofitable activity is likely to be discontinued.

Expert tip

Subscriptions accounts are often asked for as a short question.

Café (snack bar) trading statement

Many clubs have cafés in order to raise additional funds for the club and to act as a focal point for members. A trading statement should be prepared. The profit (or loss) generated is transferred to the income and expenditure statement. The trading statement is similar to the trading section of an income statement for a business. You may have to do an adjustment account in order to determine the amount of the purchases to use in the trading statement.

Example

The treasurer of Backhand Tennis Club provided the following information for the club café:

- 1 July 2012 amount owed to supplier of fruit juices and snacks $187.
- 30 June 2013 amount owed to supplier of fruit juices and snacks $219.
- Snack bar takings for the year $23 561.
- Amounts paid to the supplier of fruit juices and snacks during the year $12 449.

	at 30 June 2013	at 1 July 2012
Inventory of fruit juices and snacks	$101	$82

A café trading statement for the year ended 30 June 2013 is as follows.

	$	$
Takings		23 561
Less cost of sales		
Inventory 1 July 2012	82	
Purchases	12 481	
	12 563	
Less inventory 30 June 2013	101	12 462
Café profit *(to income and expenditure statement)*		11 099

Workings

Creditors' adjustment account

30 June 2013 Cash	12 449	1 July 2012 Balance b/d	187
30 June 2013 Balance c/d	219	30 July 2013 *Café trading statement (missing figure)*	12 481
	12 668		12 668
		1 July 2013 Balance b/d	219

Dinner dances, treasure hunts, family games' nights etc.

These activities are used as fund raisers. A trading statement should be prepared for each activity and the profit (or loss) should be transferred to the income and expenditure statement.

An **honorarium** is a payment made to a club official to cover expenses and time spent on club activities.

Adjustment accounts

Revised

You may have to prepare adjustment accounts to calculate figures for the income and expenditure account. These are similar to the one prepared earlier to determine the purchases of fruit juices and snacks for the Backhand Tennis Club.

Example

At 1 March 2012 the Hurdles Athletic Club owed $67 to a local newspaper for advertising club activities; at 28 February 2013 they owed $59. During the year $540 was paid to the newspaper. The amount to be shown on the income and expenditure account for the year ended 28 February 2013 for advertising is $532.

Workings

Advertising

28 February 2013 Cash	540	1 March 2012 Balance b/d	67
28 February 2013 Balance c/d	59	28 February 2013 Income and expenditure account	532
	599		599
		1 March 2013 Balance b/d	59

The adjustment account for subscriptions seems to cause most problems:

- People or organisations that owe the money are receivables (debit balances).
- Members who owe the club money are receivables (debit balances).
- Subscriptions owing at the end of the year are receivables (debit balances).
- Subscriptions in arrears are receivables (debit balances).

There may be members who have paid their subscriptions for the following year. If they ceased their membership, the club would owe them money. Until the club makes the repayment, the member is a creditor of the club.

- People or organisations who are owed money are payables (credit balances).
- Members who are owed money are payables (credit balances).
- Subscriptions paid in advance at the end of the year are payables (credit balances).
- Subscriptions in advance are payables (credit balances).

Monies received during the year from members are debits in the receipts and payments account (the cash book summary). The double entry is completed by *crediting* the subscriptions account.

Spend time on these entries — it is worth the effort as there can be several marks for the correct entry for subscriptions in an income and expenditure account.

Expert tip

You will probably make fewer errors if you use the technique of entering the closing balances below the account and then bringing them back into the account.

Example

The following information relates to subscriptions to Shuttles Badminton Club:

- At 31 October 2012 subscriptions remaining unpaid were $360; subscriptions paid in advance amounted to $420.
- At 31 October 2013 unpaid subscriptions were $60; subscriptions for the year ended 31 October 2014 were $300.
- $11 400 was received for subscriptions for the year ended 31 October 2014.
- The amount shown in an income and expenditure account for subscriptions would be $11 220.

The subscriptions account would look like this:

Subscriptions account

1 November 2012 Balance b/d (subs owing)	360	1 November 2012 Balance b/d (subs in advance)	420
Income and expenditure account (missing figure)	*11 220*	Cash	11 400
31 October 2013 Balance c/d	300	31 October 2013 Balance c/d	60
	11 880		11 880
1 November 2013 Balance b/d (subs owing)	60	1 November 2013 Balance b/d (subs in advance)	300

Many clubs write off any subscriptions not paid by the end of the club's financial year.

Example

During the year ended 31 August 2013 cash received for subscriptions to the Dropkick Rugby Club amounted to $2970. At 1 September 2012 subscriptions paid in advance amounted to $240; at 31 August 2013 subscriptions paid in advance were $100. At 31 August 2013 subscriptions totalling $80 remained unpaid. It is club policy to write off any subscriptions that remain unpaid at a financial year end. The subscriptions account for the year ended 30 June 2012 is as follows.

Subscriptions

Income and expenditure statement	3190	Balance b/d	240	*($3190 is shown as income on income and expenditure statement)*
Balance c/d	100	Cash	2970	
		Income and expenditure statement (subs w/o)	80	*($80 is shown as an expense on income and expenditure statement)*
	3290		3290	
		Balance b/d	100	

Expert tip

Show your adjustment accounts neatly — an examiner may have to refer to them in order to reward you with part marks.

Expert tip

Label workings so that the examiner can see which figure you have been calculating.

Income from other sources

Revised

Life membership subscriptions

A life subscription is a lump sum paid by members that entitles them to use the club's facilities for the rest of their life without further payment. The members' life subscriptions are debited to the receipts and payments account and credited to a life membership fund. An amount agreed by the membership, based on a percentage of the balance shown in the life membership fund at the end of a financial year, is entered as income in the income and expenditure statement. The balance on the life membership fund is shown on the statement of financial position as a non-current liability.

Example

The Cue Snooker Club operates a life membership scheme, which costs $500. The balance standing on the life membership fund at 30 September 2012 was $2750. During the year ended 30 September 2013, five members paid $2500 for life membership. 10% of the balance standing in the life membership fund at the end of each financial is transferred to the income and expenditure statement. The life membership fund for the year ended 30 September 2013 is as follows.

Life membership fund

30 September 2013 Income and expenditure statement	525	1 October 2012 Balance b/d	2750
30 September 2013 Balance c/d	4725	Year 2012/13 Bank	2500
	5250		5250
		1 October 2013 Balance b/d	4725

$525 is shown as an income on the income and expenditure statement. $4725 is shown as a non-current liability in the statement of financial position.

Expert tip

A life membership payment is a one-off payment and is received by the club when the payment is made. The annual transfers to the club income and expenditure account are merely transfers in the club's books of account. The amount transferred does not increase the cash inflow that year.

Entrance fees paid by new members

Some clubs charge new members an entrance fee in addition to the normal annual subscription. Generally, these entry fees are regarded as revenue income in the income and expenditure statement. However, some clubs treat this income as a capital income. In these cases, it is added to the accumulated fund.

Donations

In practice, small donations should be treated as revenue income. Large donations are treated as capital income. You will be advised as to whether donations are to be treated as capital or revenue income.

Sometimes a club receives a large donation or legacy that has been given for a particular purpose. The amount is credited to a special trust fund account and the money should be deposited in a bank account solely for this purpose. This avoids the money being used for general club expenditure. The trust fund should be debited each year with the amount of the annual expenditure on the special purpose and the debit entry is in the income and expenditure statement. The entries are similar to those used in a life membership fund account.

Revision activity

Imagine you are the treasurer of a hockey club. Identify three ancillary activities that you would consider using. Explain the reasons for your choices.

Now test yourself Tested

1 What is the name given to a club's capital account?

2 **(a)** Explain the term *ancillary activity*.

(b) Identify two ancillary activities that might be undertaken by a swimming club.

3 Identify one advantage and one disadvantage that a club would hope to gain when operating a life membership scheme.

4 'Subscriptions in arrears and subscriptions in advance are both treated as current liabilities.' Is this statement true or false?

5 To which account is an excess of income over expenditure transferred?

6 Prepare a subscriptions account from the following information:

Cash received in the year for subscriptions	$10 500
Subscriptions unpaid at start of year	$500
Subscriptions paid in advance at start of year	$400
Subscriptions unpaid at end of year	$250
Subscriptions paid in advance at end of year	$85

Answers on p.187

7 Financial statements prepared from incomplete records

Deficient or incorrect financial records

Cash-based businesses

Revised

The main record-keeping book in this type of businesses is a cash book in which all transactions using cash or cheques are recorded. The information contained in the cash book is supplemented by bank statements, till rolls, invoices and receipts.

The two types of question ask students to:

- calculate the profit (or loss)
- prepare an income statement

It is important that you are able to recognise each type of question.

Calculation of profit (or loss)

Revised

This type of question always asks you to *calculate* the profit (or loss) for the business. There are several stages:

Stage 1 — Calculate the opening capital (net assets).

Stage 2 — Calculate the closing capital (net assets).

Stage 3 — Deduct the opening capital from the closing capital. This gives the retained profit (or loss).

Stage 4 — Some profits may have been taken out of the business in the form of cash and/or goods (or services) as drawings. These drawings need to be added to the retained profits.

Stage 5 — Sometimes the proprietor of a business may inject new capital into the business. Extra capital increases the assets at the end of the year. The amount of capital introduced is not an increase in the net assets *earned* by the business, so it must be disregarded in your calculation. Therefore, deduct capital introduced.

Table 7.1 Calculating profit (or loss)

	Closing capital
Deduct	Opening capital
Retained profit	xxxxxxxxxxxxx
Add	Drawings
	xxxxxxxxxxxxx
Deduct	Capital introduced
Profit for the year	xxxxxxxxxxxxx

Expert tip

Always show your workings as they may gain you marks if part of your answer is incorrect.

Now test yourself

1 You are given a cash book, bank statements and a list of assets and liabilities at the beginning of a year. How would you calculate opening capital?

2 Opening capital $45 000; closing capital $37 000; further capital invested during the year $10 000. Calculate business profit (or loss) for the year.

Answers on p.187

Tested

Preparation of financial statements of a cash-based business

Revised

Most traders keep:

- a record of all cash and bank transactions
- source documents that record monies received and paid out

The source documents include purchase invoices, copies of sales invoices, bank statements, cheque book counterfoils, paying-in counterfoils, till rolls and invoices from utilities (gas, electricity, water). These documents will:

- help to build up a picture of the financial transactions that have taken place throughout the financial year
- verify receipts and payments made

Five stages are involved in the preparation of the financial statements from a set of records that are incomplete:

Stage 1 — Prepare an opening statement of affairs. You may have to calculate the capital figure if it is not given in the question.

Stage 2 — Compile a summary of bank transactions.

Stage 3 — Compile a summary of cash transactions

Stage 4 — Construct adjustment accounts (control accounts).

Stage 5 — Prepare the financial statements using all the information gained from the previous stages.

Stage 4 seems to cause most problems, but it is necessary because most of the records kept by traders are incomplete — they are merely records of cash spent and received. The **accruals concept** has to be applied to the figures. Rely on your knowledge of double entry and on using 'T' accounts.

Expert tip

It is important to learn these five stages.

Revision activity

Devise a mnemonic to help you to remember the five stages used in the preparation of financial statements for a trader whose financial records are incomplete.

Example

Saleem Zain does not keep full accounting records, but he was able to provide the following information for the year ended 28 February 2014.

Summarised bank account

	$		$
Balance 1 March 2013	883	Payments to credit suppliers	34 710
Receipts from credit customers	91 763	General expenses	18 903
		Purchase of non-current asset	38 000
		Balance 28 February 2014	1 033
	92 646		92 646

Saleem provided the following additional information:

	at 28 February 2014 $	at 1 March 2013 $
Trade receivables	1004	457
Trade payables	891	998
Inventory	3191	2339

Preparation of adjustment accounts was necessary to determine the amount of purchases and sales for the year. (Missing figures are italicised.)

Trade receivables

Balance b/d	457	Cash received	91 763
Sales	*92 310*	Balance c/d	1 004
	92 767		92 767
Balance b/d	1 004		

Trade payables

Cash paid	34 710	Balance b/d	998
Balance c/d	891	*Purchases*	*34 603*
	35 601		35 601
		Balance b/d	891

Saleem Zain. Extract from the income statement for the year ended 28 February 2014

	$	$
Sales		92 310
Less cost of sales		
Inventory 1 March 2013	2 339	
Purchases	34 603	
	36 942	
Inventory 28 February 2013	3 191	33 751
Gross profit		58 559

Example

Harry does not keep a full set of accounting records, but he was able to provide the following information for the year ended 31 July 2013.

	$
Amounts paid for staff wages	86 772
Amounts paid for insurances	4 908

Additional information:

	at 31 July 2013	at 1 August 2012
	$	$
Amount owed for staff wages	1439	1016
Amount paid in advance for insurances	996	1646

The amounts included in the income statement for the year ended 31 July 2013 were as follows.

	$
Wages	87 195
Insurances	5 558

Workings

Use the same procedure that was used to determine sales and purchases earlier.

Wages account

Cash	86 772	Balance b/d 1 August 2012	1 016
Balance c/d 31 July 2013	1 439	*Income statement*	*87 195*
	88 211		88 211
		Balance b/d 1 August 2013	1 439

Insurance account

Balance b/d 1 August 2012	1 646	*Income statement*	*5 558*
Cash	4 908	Balance c/d 31 July 2013	996
	6 554		6 554
Balance b/d 1 August 2012	996		

The balances have been brought down and are used in a statement of financial position.

Example

Guillaume does not maintain proper books of account. He provides the following information for the year ended 30 April 2014.

Summarised bank account

	$		$
Balance 1 May 2013	2 659	Payments to creditors	31 452
Takings banked	90 562	Rent	3 600
		Local taxes	3 870
		Purchase of vehicle	22 000
		Other expenses	18 831
		Drawings	9 500
		Balance 30 April 2014	3 968
	93 221		93 221

All takings were paid into the bank account, with the exception of the following:

	$
Wages	18980
Drawings	10000

Guillaume provided the following additional information:

Assets and liabilities	at 30 April 2014	at 1 May 2013
	$	$
Inventory	453	273
Trade receivables	80	46
Trade payables	412	509
Cash in hand	391	165
Local taxes paid in advance	1450	1280
Rent owed	180	92
Fixtures at valuation	750	800
Delivery vehicles at valuation	22700	8200

Preparation of financial statements requires that we must go methodically through the five stages outlined above. If we had merely wanted to calculate the profit (or loss), we would have used the net asset (capital) method. Both methods give the same profit figure, but a full set of financial statements will give the details of how the profit was earned.

Stage 1 Prepare an opening statement of affairs

You should be able to do this almost as quickly as you can write the items down. Do not be concerned with categorising assets and liabilities. This is part of your workings; write down the figures neatly and quickly.

Statement of affairs 1 May 2013

		$	$	
Assets	Bank balance		2659	
	Inventory		273	
	Trade receivables		46	
	Cash		165	
	Local taxes paid in advance		1280	
	Fixtures		800	
	Vehicles		8200	
			13423	
Liabilities	Trade payables	509		
	Rent owed	92	601	
Net assets			12822	*(This is also Guillaume's capital)*

Note that the assets have been written down in the order that they appeared in the question and no attempt has been made to categorise them.

Stage 2 and 3 Compile summarised cash and bank transactions

A bank summary has been given in the question. A cash summary is shown below.

Cash account

Balance 1 May 2013 (from list of assets)	165	Takings banked (from bank summary)	90562
Total takings for year (missing figure)	*119768*	Wages paid	18980
		Drawings	10000
		Balance 30 April 2013 (from list of closing balances)	391
	119933		119933

Stage 4 Construct adjustment accounts

An account is opened for every item listed on the statement of affairs (not cash — it has been adjusted in stage 2). Inventory will be adjusted in the trading section of the income statement.

Do each adjustment in turn. Open a 'T' account for each:

1. Enter the opening balance (debit for an asset; credit for a liability).
2. Enter the closing balance under your 'T' account.
3. Take the closing balance up diagonally into the body of the account.
4. From the bank or cash account, debit cash paid and credit cash received.
5. Total the account.
6. Calculate the *missing figure* to be posted to the income statement.

Numbers are given in the first two accounts as a guide to the order in which the entries were made.

Trade receivables

1 Balance 1 May 2013	46	**4** Cash	119 768
6 *Sales (missing figure)*	**6** *119 802*	**3** Balance 30 April 2014	80
	119 848		**5** 119 848
2 Balance 1 May 2014	80		

Local taxes

1 Balance 1 May 2013	1 280	**6** *Inc stat (missing figure)*	**6** *3 700*
4 Bank	3 870	**3** Balance 30 April 2014	1 450
	5 5 150		5 150
2 Balance 1 May 2014	1 450		

Fixtures

Balance 1 May 2012	800	*Inc stat (missing figure) (depreciation)*	*50*
		Balance 30 April 2014	750
	800		800
Balance 1 May 2014	750		

Vehicles

Balance 1 May 2013	8 200	*Inc stat (missing figure) (depreciation)*	*7 500*
Bank	22 000	Balance 30 April 2014	22 700
	30 200		30 200
Balance 1 May 2014	22 700		

Trade payables

Bank	31 452	Balance 1 May 2013	509
Balance 30 April 2014	412	*Purchases (missing figure)*	*31 355*
	22 825		22 825
		Balance 1 May 2014	412

Rent

Bank	3600	Balance 1 May 2013	92
Balance 30 April 2014	180	*Inc stat (missing figure)*	*3688*
	3780		3780
		Balance 1 May 2014	180

All the workings are brought together to prepare the financial statements.

Stage 5 Prepare the financial statements

Roger Guillaume. Income statement for the year ended 30 April 2014

	$	$
Sales		119802
Less cost of sales		
Inventory at 1 May 2013	273	
Purchases	31355	
	31628	
Inventory at 30 April 2014	453	31175
Gross profit		88627
Less expenses		
Local taxes	3700	
Rent	3688	
Wages	18980	
Other expenses	18831	
Depreciation		
Fixtures	50	
Vehicles	7500	52749
Profit for the year		35878

Statement of financial position at 30 April 2014

	$	$	$
Non-current assets			
Fixtures at valuation			750
Vehicles at valuation			22700
			23450
Current assets			
Inventory		453	
Trade receivables		80	
Other receivables (local taxes)		1450	
Bank balance		3968	
Cash		391	
		6342	
Current liabilities			
Trade payables	(412)		
Other payables (rent)	(180)	(592)	5750
			29200
Capital			12822
Add profit for the year			35878
			48700
Less drawings			19500
			29200

Expert tip

Don't just key the assets and liabilities into your calculator. If you do make an error, you cannot be rewarded for the parts that are correct. Write down the items as part of your answer before you use your calculator.

Expert tip

Show all your workings, no matter how trivial they may seem. If you have made an error in compiling your financial statements or in your workings, you may be rewarded for the parts that are correct. Every mark counts towards your final grade.

Now test yourself

Tested

3 'Cash paid to trade payables during a year is credited to a trade payables adjustment account to find sales for the year.' Is this statement true or false?

4 'Cash received from trade receivables during a year is credited to a trade receivables adjustment account to find sales for the year.' Is this statement true or false?

5 The opening balance on a machinery account is debit $48 000. The closing balance is debit $40 000. There were no purchases or sales of machinery during the year. What is the cause of the difference in the two balances?

Answers on p.187

Calculation of missing cash

Revised

This procedure involves working out what the cash position would have been had the mishap not occurred and comparing that position with the actual position.

Example

Antoine owns a general store. At 1 January 2013 her cash in hand was $327; at the end of the year it was $127. Her till rolls showed takings were $79 187. During the year she banked $32 542 after paying wages of $34 607 and taking $12 000 cash for private use. Antoine believes that some cash was stolen in a burglary in the final week of December. She can calculate the amount of cash stolen by the following process.

Cash summary

Cash in hand 1 January 2013	327	Cash banked	32 542
Takings	79 187	Drawings	12 000
		Wages	34 607
		Cash stolen (missing figure)	*238*
		Cash in hand 31 December 2013	127
	79 514		79 514

Expert tip

There are a variety of ways of arriving at the answer — each is acceptable. However, show all workings to support your answer.

Revision activity

Make a list of the essential items of information that you would find necessary in order to prepare a set of financial statement for a trader who does not keep a full set of double-entry records.

Calculation of missing inventory

Revised

A trading section that uses *actual figures* is compared to the figures that ought to have applied.

Example

Guy owns a general store. Several boxes of candies have been stolen and he is unsure of their value. He provides the following information for the year ended 30 April 2014.

Inventory at 1 May 2013 $350; inventory 30 April 2014 $100; purchases during the year ended 30 April 2014 $21 100; sales during the year $28 000. All goods sold carry a uniform mark-up of 33.3%.

Guy can find the value of missing goods by comparing actual and 'should be' amounts as follows.

	Actual figures are		They should be	
	$	$	$	$
Sales		28000		28000
Less cost of sales				
Inventory at 1 May 2013	350		350	
Purchases	21100		21100	
	21450		21450	
Inventory 30 April 2014	100		450	
Stolen goods (missing figure)	*350*	21000		21000
Gross profit		7000		7000

The mark-up percentage was used to calculate the gross profit. The closing inventory of $100 is a current asset on the statement of financial position. The stolen inventory of $350 must appear as an expense on the income statement.

Now test yourself Tested

6 A fire has destroyed some inventory during a year. You are uncertain of its value, but the following data are available. There is a uniform mark-up on all goods sold of 20%. Calculate the value of lost inventory.

	$
Sales	36000
Opening inventory	750
Closing inventory	400
Purchases	32500

Answer on p.187

8 Valuation of inventory

Principles and application

Applying the lower of cost and net realisable value

Revised

The principle is that inventories should be valued at the lower of **cost** and **net realisable value**. International Accounting Standard IAS 2 Inventories states that cost should include:

- costs of purchase
- conversion costs
- any other costs incurred in bringing the inventories to their present location and condition

Net realisable value is the estimated selling price in the ordinary course of business less estimated costs of completion and all estimated costs to be incurred in marketing, selling and distributing the items.

Most businesses are unable to identify the actual items remaining as inventory at the end of a financial year. Even if they could, it would be a huge task to go through purchase invoices to determine the price paid for each item. The valuation of inventories is therefore a matter of convenience rather than a strictly accurate measure. We do not trace the actual units that have been sold; we identify certain items that are deemed to have been sold and therefore certain items that are deemed to remain.

IAS 2

Revised

IAS 2 states that:

- inventories should be valued at the total of the lower of cost and net realisable value of the separate items of inventory. (It allows grouping of similar items.)
- FIFO and AVCO (see below) are acceptable bases for valuing inventory, but LIFO and replacement cost are not
- inventories should include finished goods and work in progress

Typical mistake

Many students believe that FIFO and LIFO are methods of issuing goods and state that sellers of fish or other fresh food stuffs must use FIFO otherwise their goods will not be fresh.

Now test yourself

Tested

1. Which methods of valuing inventories are acceptable for limited companies?
2. Identify three components that make up cost.
3. How is net realisable value calculated?
4. Complete the following sentence:
   Inventories should be valued at the lower of _____ and _____.
5. Which International Accounting Standard deals with inventories?

Answers on p.187

Methods of valuing inventory

Different methods

Revised

First in first out (FIFO)

This method assumes that the first goods received by the business will be the first ones to be delivered to the final customer or the department requisitioning the goods. It assumes that goods have been used in the order in which they were purchased. Any remaining inventory is valued as if it were the latest goods purchased. Remember that this is only an *assumption*: a method of valuing inventory. It is not necessarily the way that goods are actually issued. Goods are used to suit each particular business regardless of when they were received.

Table 8.1 The advantages and disadvantages of using FIFO

Advantages	Disadvantages
Most people feel that it is intuitively the right method to use as it seems to follow the natural way that goods are generally issued, i.e. in the order in which they are received	Because it feels right intuitively, many people feel that this is actually the way goods are issued
Inventory values are easily calculated	Issues from stores are not at the most recent prices and this may have an adverse effect on pricing policy
Issue prices are based on prices actually paid for purchases of goods	In times of rising prices, FIFO values inventory at higher prices than other methods. This lowers the value of cost of sales and thus increases reported profits. This is advantageous if the business is to be sold. However, this can be regarded as being contrary to the concept of prudence
Closing inventory is based on prices most recently paid	
It is a method that is acceptable to the Companies Act 1985 and IAS 2	

Last in first out (LIFO)

The assumption is that the last goods to be purchased are the first ones to be issued from stores. This means that the valuation of inventory will use the value of the earliest goods purchased. Remember that questions requiring 'detailed calculations' using the LIFO method will not be set.

Table 8.2 The advantages and disadvantages of using LIFO

Advantages	Disadvantages
Value of closing inventory is based on prices actually paid for the goods	It is less realistic than FIFO as it assumes that the most recently acquired goods will be issued before older goods
Valuation of closing inventory is easy to calculate	The most recent prices are not used for inventory valuation purposes
Issues from stores are valued at most recent prices	It is a method that is not acceptable to IAS 2
In times of rising prices, LIFO values inventory at lower prices than other methods, which reduces reported profits	

Expert tip

You need to understand the method, but questions requiring detailed calculations using LIFO will not be set.

AVCO (weighted cost average)

The average cost of goods held is recalculated each time a new delivery of goods is received. Issues are then priced out at this weighted average cost.

Table 8.3 The advantages and disadvantages of using AVCO

Advantages	Disadvantages
Issues of goods are made at a weighted average price. This recognises that all issues from stores have equal value and equal importance to the business	It requires a new calculation each time a purchase of goods is made, which makes it more difficult to calculate than FIFO and LIFO
Variations in issue prices are minimised	The prices charged for issues of inventory will not generally agree with the prices paid to purchase the goods
It allows the comparison of reported profits to be made on a more realistic basis as any marked changes in the price of inventory issues are ironed out	
Because the average price used for issues is weighted towards the most recent purchases, the value of closing inventory will be fairly close to the latest prices paid for purchases	
It is a method that is acceptable to the Companies Act 1985 and IAS 2	

Perpetual and periodic methods

Some businesses keep detailed records of every transaction affecting the purchases and sales of goods. The value of the inventory held is then recalculated after each transaction. The records look rather like a bank statement. This is known as the **perpetual method**.

Other businesses value their inventory once at the financial year end. All items remaining unsold on the last day of the financial year are valued and the total value is used in financial statements. This is known as the **periodic method**.

Using the FIFO method gives the same result whether you use the perpetual or the periodic method. There is no shorter version of calculating closing inventory when using AVCO.

Should you use the periodic method or the perpetual method when answering a question? Always use the method you are most comfortable with. As the periodic method is generally thought to be less complicated, use it every time for FIFO *unless* the question specifically requires the perpetual method to be shown in detail.

Typical mistake

All methods of valuing inventories are just methods of valuation not necessarily methods of issue.

The effect on profit

Revised

Each method of valuation gives a different inventory figure, so different gross profits will be revealed by using different methods. The level of reported profits depends on the way inventories have been valued.

Expert tip

If the value of closing inventory is altered, reported profits will also change:

- **Increase** the value of closing inventory and you **increase** reported profit.
- **Decrease** the value of closing inventory and you **decrease** reported profit.

Where purchase prices are rising over the period, FIFO reveals highest profits, LIFO reveals lowest profits and AVCO gives a profit figure between the two.

The effect on the statement of financial position

Revised

The value of closing inventory affects the net assets of a business. A high valuation gives higher net assets and therefore a higher capital figure. A low valuation gives a lower net asset value and therefore a lower capital figure.

Now test yourself Tested

6 Which method of valuing inventories uses the most recent price paid to purchase the goods?
7 In times of rising prices, which method of valuing inventories reveals profits later than other methods?
8 Choose the correct phrase in the following sentence:
Closing inventories shown in a statement of financial position are always based on a physical count/computer-based printout.
9 Explain the difference between a periodic and a perpetual method of valuing closing inventory.
10 Identify two advantages and two disadvantages of using the FIFO method of valuation.
11 'A store selling fish must always use the FIFO method to value closing inventories.' Is this statement true or false?

Answers on pp.187–88

Accounting concepts applied to inventory valuation

Which concepts should be adhered to?

Revised

The **cost concept** is adhered to. The principle of **consistency** is important as results obtained from the financial statements must be able to be used for comparative purposes. The concept of **prudence** should be adhered to so that profits are not overstated. This means that the lower of cost and net realisable value should be applied when valuing inventories. The **accruals concept** is used when considering repair costs or delivery charges etc. to be deducted from selling price to determine net realisable value.

Inventory reconciliations

Inventory checks

Revised

The value of inventory appearing as a current asset on an organisation's statement of financial position is the result of a physical count and valuation. Sometimes it is not possible to make an inventory check immediately after the close of business on the final day of the financial year, e.g. staff may be absent on the day or it may be too big a job to complete in one day. No doubt you can think of other reasons why the physical check cannot be made at the right time.

Expert tip

Goods sent on sale or return remain the property of the sender until the customer indicates that a sale has taken place.

Example

Giles was unable to conduct his inventory check on 31 May 2014, his financial year end. He did, however, complete it on 6 June 2014. The goods held were valued at $9678 on that date. He provided the following information of transactions that took place between 1 June and 6 June 2014:

- goods purchased $630
- sales made $960
- goods returned to suppliers $38
- faulty goods returned by customers $120

A gross profit margin of 50% is earned by Giles on all sales. The value of inventory held at 31 May 2014 was $9646.

Workings

	$	
Inventory at 6 June 2014	9678	
Less net purchases	(592)	*($630 less $38)*
Add net sales	560	*($960 less $120 = $840 x ⅔)*
Inventory at 31 May 2014	9646	

The purchases and sales figures are net of returns. Purchases are deducted as they were not with Giles at 31 May. Sales have been added as Giles had the goods at the year end. The net sales must be valued at cost price so the profit loading is taken out of the sales price.

Now test yourself Tested

12 A company's inventory valuation was made on 8 May, 8 days after the financial year end. How should the following goods be treated?

(a) those sold on 4 May

(b) those purchased on 6 May

(c) those returned to a supplier on 7 May

13 Complete the following sentences:

(a) Inventory that has been overvalued will _____ profit.

(b) Inventory that has been undervalued will _____ profit.

Answers on p.188

9 Depreciation

Principles and application

Capital expenditure

Revised

A business purchases resources to help generate profits. The purchase of non-current assets is an example of **capital expenditure** that is used to generate profits. Non-current assets are used for more than 1 financial year and yield benefits over a prolonged period of time. Expenditure on the following items are examples of capital expenditure:

- business premises
- a delivery van
- machinery

The benefits derived from capital expenditure continue to be earned over a number of years, so the cost of the non-current assets should be spread over those years. The total cost of the non-current asset is never charged to the income statement for the year in which it was purchased. The cost is spread over the years that it is used in order to reflect in the income statement the cost of using the asset during that particular financial year.

The Companies Act 1985 says that all assets with a **finite life** should be depreciated, so freehold land is the only non-current asset that should not be depreciated because it has an infinite life. Machines will eventually cease to operate and produce goods and a vehicle will eventually cease to be useful for the delivery of goods. Non-current assets are recorded in **real accounts** in the general ledger.

Finite life is a limited life span.

When a non-current asset is purchased and later sold, the amount that is not recovered is called depreciation. Actual depreciation can only be accurately calculated when the non-current asset is no longer being used. The annual depreciation charge is therefore an estimate based on experience. If we know the cost and can make an estimate of how long the non-current asset will be useful and how much it might be worth at the end of its life, we can estimate the amount of depreciation that will take place over the non-current asset's lifetime. This lifetime cost needs to be apportioned into each of the years of use.

Revenue expenditure

Revised

The benefits derived from **revenue expenditure** are earned in the year of the expenditure and entered in the income statement for the year. Each of the following items is an example of revenue expenditure:

- goods purchased for resale
- petrol purchased for a delivery vehicle
- wages paid for work provided by staff

Revenues and expenses are recorded in nominal accounts.

The causes of depreciation

Revised

There are several causes of depreciation, including:

- deterioration based on expected wear and tear — this depends on the type of use and how well the asset is maintained
- economic factors such as the necessary output and the potential capacity of the asset
- the introduction of new technology, making the asset obsolete
- obsolescence caused by a change in demand for the product made
- a change in demand making the asset incapable of producing the quantity (or quality) of product required
- the age of the asset
- legal or other limits placed on the asset, e.g. when an asset is acquired under a leasing agreement, the **lessor** may place restrictions on the use of the asset

There are many methods of dividing the lifetime depreciation charge. When a method has been decided upon, it should be used consistently so that the results shown in the financial statements of different years can be compared.

A **lessor** is the owner of the non-current asset.

Revision activity

List as many causes of depreciation as you can.

The calculation of depreciation

Using the straight-line method

Revised

The same amount is charged annually to the income statement over the lifetime of the non-current asset. The formula is:

$$\frac{\text{cost of non-current asset} - \text{any residual (scrap) value}}{\text{estimate of number of years' use}}$$

The cost of an asset includes the purchase price, including any taxes, together with any other costs directly attributable to bring the asset to the location and condition ready for use such as:

- delivery and handling charges
- professional fees charged by solicitors, architects, site engineers etc.
- making ready the site where the asset is to be used
- any costs involved in assembling and testing the asset

Residual (scrap) value is the amount that a non-current asset can be sold for at the end of its useful life.

Example

A machine costs $62 000. Its disposal value in 5 years' time is expected to be $2000. The annual charge is $12 000 ($62 000 – $2000 ÷ 5). To record depreciation:

- enter equal instalments in each year's income statement
- credit **provision** for depreciation account

In a statement of financial position:

- non-current assets are entered at cost
- the accumulated (total) depreciation is deducted from the asset
- the 'net' total shown at the end of each year for the asset is the **carrying amount**

A **provision** is an amount set aside out of profits for a known expense, the amount of which cannot be calculated with reasonable accuracy.

Carrying amount is the cost of a non-current asset shown in the general ledger (and therefore the statement of financial position) less the aggregate depreciation charged to date.

Ledger accounts and journal entries

We have just seen how to calculate depreciation using the straight-line method. How is the charge entered in the double-entry system?

Example

Jacqui started in business on 1 January 2012. On that day she purchased a machine costing $48 000 from Machmachines plc. Machmachines required payment in February 2013. Jacqui will use the machine for 4 years and hopes that she will then sell it for $8000. She will depreciate the machine using the straight-line method. The journal entries to record the purchase of the machine on credit from Machmachines are shown below.

	Dr	Cr
	$	$
1 January 2012 Dr Machinery account	48 000	
Machmachines plc		48 000

The ledger accounts are:

Dr	*Machinery account (in general ledger)*		Cr
1 January 2012			
Machmachines plc	48 000		

Dr	*Machmachines plc (in purchases ledger)*		Cr
		1 January 2013	
		Machinery account	48 000

Jacqui provides depreciation using the straight-line method. The entries in her general ledger recording this are as follows.

Dr	*Provision for depreciation account (in general ledger)*		Cr
		31 December 2012	
		Income statement	10 000
		31 December 2013	
		Income statement	10 000

Only the annual charge entered in the income statement will change depending on the method of calculation used. The provision for depreciation account will look similar no matter which method is used.

The entries at the year ended 31 December 2012 using the journal entries show:

	$	$
31 December 2012 Dr Income statement	10 000	
Provision for depreciation of machinery		10 000

Provision for depreciation of machinery using the straight-line method.
Entries in a statement of financial position at 31 December 2013 show:

Non-current assets

	$	$
Machinery at cost	48 000	
Less depreciation to date	20 000	
		28 000

The reducing balance method

Revised

There are a number of variations to the reducing balance method. The most common deducts a given percentage from the carrying amount of the non-current asset each year. A fixed percentage is applied to the cost of the non-current asset in the first year of ownership. The same percentage is applied in subsequent years to the carrying amount of the asset.

Example

An asset costs $70 000. The rate of depreciation to be charged is 40%. The calculations for the provision for the first 4 years of ownership reveal:

	Depreciation charge	
Year 1	$28 000	*($70 000 × 40%)*
Year 2	$16 800	*($70 000 less $28 000 × 40%)*
Year 3	$10 080	*($70 000 less $28 000 less $16 800 × 40%)*
Year 4	$6 048	*($70 000 less $28 000 less $16 800 less $10 080 × 40%)*

Expert tip

The provision for depreciation account looks very similar no matter which method is used; only the annual charge to be entered in the income statement changes.

The revaluation method

Revised

The revaluation method is generally used where many small items make up the asset. One example is the small tools that are used on a regular basis in a large auto repair business or in an engineering works. It would be inappropriate to use either of the two methods of providing for depreciation previously described on a pair of wire cutters costing $4.75.

Loose tools are small items of equipment that have a life expectancy greater than 1 year. Individually, they are probably owned for a much shorter period because they are broken, misplaced or stolen. Each individual item has a much lower value than other non-current assets. These items are small and may seem to be insignificant, but they are non-current assets because they are to be used for more than 1 financial year. The following calculation is necessary to determine the amount of annual depreciation:

depreciation for the year = value placed on the items at the start of the financial year + any purchases of more items during the year − the value placed on the items at the end of the year

The depreciation is shown in an income statement for the auto engineer or in a manufacturing statement for a factory.

Expert tip

Only the straight-line method of depreciation deducts the estimated disposal value from the cost of a non-current asset before calculating the annual charge for depreciation.

Now test yourself

Tested

1. Explain the term *depreciation*.
2. Identify an asset that does not depreciate.
3. Identify two methods of providing for depreciation.
4. Calculate the difference in aggregate (total) depreciation charged on a non-current asset costing $40 000 at the end of 2 years when depreciation is calculated at 25% per annum using the straight-line method and the reducing balance method.
5. What are the book-keeping entries necessary to record an annual charge for depreciation?
6. Explain the term *carrying amount*.

Answers on p.188

Disposal of non-current assets

The calculation of profit (or loss)

Revised

When a non-current asset is sold, it is highly unlikely that the sum received from the buyer will be the same as the carrying amount recorded in the business books of account. It is likely that it will be sold at a profit (or loss) based on its carrying amount.

Example

A machine that cost $80 000 5 years ago was sold for $8000. The total depreciation to date on the vehicle was $50 000. The loss on disposal of the machine would be $22 000.

	$
Machine at cost	80 000
Depreciation to date	50 000
Carrying amount	30 000
Proceeds of sale	8000
Loss on disposal	22 000

Expert tip

If a question asks you to calculate the profit (or loss) on the disposal of a non-current asset, you may use the method described here. However, if a question asks for a disposal account, the calculation must be in account format.

Ledger accounts used to record a disposal

Revised

Open a disposal account in the general ledger:

Debit entries		Credit entries
Disposal account with the cost of the asset		Asset account
Provision for depreciation account		Disposal account
Cash account with cash received for sale		Disposal account
Disposal account with profit on disposal	or	Disposal account with loss

The treatment of a 'trade-in'

Sometimes when a non-current asset is replaced, the 'old' asset is traded in and an allowance is made by the supplier of the 'new' asset. The procedure is similar to that used when a non-current asset is purchased for cash only, but the difference is that the new non-current asset account is debited with any allowance made by the supplier plus any cash payment made. The disposal account is credited with the allowance.

Revaluation of non-current assets

Non-current assets may be revalued upwards when:

- there is a structural change in the ownership of a partnership business
- the directors of a limited company believe that the carrying amount of a non-current asset does not represent its **recoverable amount**.

Revaluations should be carried out regularly. After revaluing a non-current asset, depreciation should be charged using the appropriate method outlined above. The calculation uses the 'new' valuation as a basis for the amount of the provision.

The **recoverable amount** is where the fair value of a non-current asset less any costs that might be incurred in its sale is greater than its present value in use. The present value in use is calculated by estimating future cash flows and discounting them to give the value at today's prices.

Typical mistake

Many students think that depreciation provides a pot of cash that can be used to purchase a replacement non-current asset. However, the annual charge for depreciation involves making ledger entries only; it is a non-cash expense that is shown on an income statement.

The connection between cash and providing for depreciation

Written questions often focus on the connection between a provision for depreciation and cash outflows. Cash flows out of a business when a non-current asset is purchased; the annual depreciation charge is the cost spread over the lifetime of the asset. There is no direct connection between providing depreciation on non-current assets in the income statement and providing cash to replace the asset when it is no longer of use. However, there may be an indirect influence that depreciation has on cash flows. Annual depreciation is entered in an income statement. This non-cash expense reduces profits for each year of ownership. The reduction in profit may influence the owner of the business to withdraw less money from the business for personal use, thus conserving more cash within the business.

Revision activity

'Depreciation is measured by the fall in the value of a non-current asset over 1 year of ownership.' Explain whether or not you agree with this view on the measurement of depreciation.

Now test yourself Tested

7 A vehicle is purchased for $50 000. It has an estimated life of 8 years, at which time it is thought that it will have a trade-in value of $2000. Calculate the annual depreciation charge using the straight-line method.

8 A machine is purchased for $80 000. It is expected that it will have a trade-in value of $8000 at the end of its useful life. Depreciation will be provided at 40% per annum using the reducing balance method. Calculate the annual depreciation charge for the first 2 years of ownership.

9 An asset was shown in the ledger at a cost of $18 000. Aggregate depreciation on the asset amounted to $14 500. The asset was sold for $3200. Calculate the profit (or loss) on disposal.

10 A piece of equipment was purchased on 1 June 2009 for $62 000. It was thought that it could be used for 5 years and then sold for scrap valuing $2000. The equipment was sold for $40 000 on 31 May 2013 after only 4 years' use. Calculate the profit (or loss) on disposal of the item.

Answers on p.188

10 Capital (equity)

Raising capital

The need for finance

Revised

Businesses require finance to survive and grow. The need for finance can be divided into time spans:

- short term — in order to fulfil the need for finance to resolve a business problem that will disappear in the not too distant future; generally for 1 year or less
- long term — in order to satisfy the more permanent needs of a company; finance that allows the company to grow and prosper

Short-term financing

Internal sources

Revised

The efficient management of current assets means that the business needs to borrow less to finance its daily operations. If a company is inefficient in this area, it may have to borrow short term to finance inventory, trade receivables and cash needs.

Cash management

All businesses must have sufficient cash to carry on their daily activities. Cash budgets should be prepared to predict the cash requirements necessary for the business to function effectively. If cash requirements are insufficient to allow effective functioning, the business will have to borrow.

Credit control

It is important to ensure that receivables pay on time and in full. Managers must ensure that any increase in credit sales does not result in too great an increase in extra administrative costs and a lengthening of the collection period, and that prospective credit customers have a sound credit rating.

Inventory management

Demand for the finished product should always be met on time, so sufficient inventory should be held. Holding inventory acts as a buffer against possible shortages of raw materials or components and unforeseen price increases. Management of inventories can be achieved by applying an economic order quantity (EOQ) model and employing just-in-time (JIT) techniques. Profit and cash is tied up in excessive holdings of inventory. EOQ finds the optimal order level to minimise costs of holding inventory. JIT means that goods are delivered just before they are needed. Both systems mean that holding large amounts of inventory is unnecessary and inventory holding costs are kept to a minimum.

External sources

Revised

Bank overdrafts

A business that is not generating sufficient cash through its day-to-day activities may have to borrow short term through a bank overdraft. The bank may wish to see a cash budget to see that the overdraft can be covered in the future.

A bank overdraft facility overcomes irregular cash flows experienced by many businesses. Managers of a business should agree an overdraft limit in advance if they anticipate that they may need to use this source of finance. Interest rates charged on unauthorised overdrafts are usually much higher than if an agreement had been reached before the overdraft is required. The rate of interest charged on overdrafts tends to be higher than that charged on longer-term borrowings. This is why businesses are only likely to use overdrafts in the short term, although many businesses have a permanent overdraft facility.

Providers of overdrafts do not require collateral on the loan and therefore the level of risk for the provider is greater than that incurred with a loan. This is why the rate of interest charged is greater than that charged on a loan.

Short-term bank loans

Collateral is required for a short-term bank loan and the loan will be for a finite length of time. Loans are often secured on a specific asset and repayments are usually for an agreed amount at specified intervals during the loan period. Loans tend to have a longer repayment date than overdrafts, but it is possible for businesses to acquire funds by using a bank loan that will run for a year or two. Loans do not give the lender any rights in the everyday running of the business.

Collateral is used to guarantee the repayment of a loan, such as the title deeds to land or business premises. If the borrower fails to repay the loan, the lender may sell the assets used as collateral to recoup their capital.

Debt factoring and invoice discounting

Trade receivable debts may be used to raise finance. Debt factoring and invoice discounting are two methods of collecting money owed as quickly as possible.

Debt factoring — the sales ledger is administered by a debt factor. The debt-factoring company buys the debts, at a discount, paying the creditor an advance based on the total amount to be collected. The debt-factoring company then collects the debts as they fall due, charging a fee based on the volume of credit sales together with interest on any advance payments made. Debt factoring is often seen negatively by suppliers and customers as control of the customer database is lost.

Invoice discounting — trade receivables are used as security on an advance. The credit control function is not contracted out, so the database of credit customers remains with the creditor.

Sale of unused non-current assets

Cash can be raised by selling off any non-current assets that will not be used in the foreseeable future.

Hire purchase

The cost of the asset is spread over several time periods. Ownership of the asset rests with the hire purchase company until the final payment is made. However, the purchaser shows the asset on its statement of financial position (this is an application of substance over form). The amount still outstanding on the agreement is shown as either a non-current liability or a current liability depending on how much of the agreement is left to run.

Trade credit

This is when goods are obtained but not paid for immediately. It is a form of financing that must be used with caution. The length of time taken to pay individual creditors must be monitored carefully. If suppliers feel that their credit

terms are being abused, they may withdraw any beneficial credit facilities or revert to supplying goods and services on a purely cash basis.

Revision activity

Identify the short-term external sources of finance available to the owner of a general store.

Long-term financing

Internal sources

Revised

Retained earnings

Retained earnings are probably the most important source of financing for any business. It means the business is self-financing and not relying on external sources. If a business is constantly relying on injections of external finance, the sources could eventually dry up. Retained earnings are a revenue reserve.

External sources

Revised

Share capital

This is one of the main ways of raising large sums of new long-term finance available to a public limited company. There are three main methods:

- by a rights issue of shares to existing shareholders in some proportion to their existing holding
- by a public issue requiring new shareholders to purchase shares
- by a 'placing', which involves underwriters placing shares with financial institutions of their choosing — this method is often used by companies coming to the market for the first time

These share issues provide finance that can be used in whatever way the directors feel is appropriate to the needs of the company.

There are two main types of share capital: ordinary and preference shares. If they are part of the permanent capital of a company, they are shown in a statement of financial position as part of **equity capital**.

Ordinary shares

All limited companies must have ordinary share capital. A holder of such shares has the right to:

- vote at general meetings of the company
- a share in any dividends that are declared based on the level of their share holding
- share in any surplus funds that remain after creditors and preference shareholders have been paid their dues in the event of liquidation

Ordinary shares do not usually entitle members to a given level of dividend. Despite this, they are attractive to investors because of the possibility of potentially large dividends when profits are high and capital gains if the value of the shares increases.

Preference shares

Preference shares give the holder prior rights over ordinary shareholders with regard to the payment of dividends and capital repayment. They are less risky as an investment than ordinary shares as they usually have a fixed rate of dividend expressed as a percentage of the nominal value of the shares. However, there is less chance of a capital gain on the investment.

Cumulative preference shares — if a company cannot pay preference dividends when they fall due, the amount is carried forward until the company

is more profitable and is able to fulfil its obligation. Preference shares are cumulative unless they are stated to be non-cumulative.

Non-cumulative preference shares — if a company is unable to pay a preference dividend in any one year, the dividend is forfeited and will not be paid at a later date.

Participating preference shares — shareholders are entitled to an extra dividend above that shown on the share certificate in years in which profits exceed a set amount.

Redeemable preference shares — these do not form part of the equity capital and should be classified as non-current liabilities (except in the year of redemption). The Companies Act 1985 allows a company to issue redeemable shares provided it has issued shares that are not redeemable. The Act also permits companies to purchase their own (non-redeemable) shares. Details of the redemption process are dealt with in Topic 14, Capital (equity) on pp. 108–11.

Loan capital (debentures)

This is another way of raising a large amount of new long-term finance for a limited company. Debentures are bonds recording a long-term loan to a company. The document is evidence of the loan and entitles the holder to a fixed rate of interest each year. Some debentures are repayable at a future date specified on the bond, e.g. 8% debentures (2045) means that the holder is entitled to receive annual interest of 8% until 2045 when the loan will be repaid. Other debentures have no redemption date and the holder is repaid only in the event of the company going into liquidation. The interest has to be paid whether or not the company is profitable. It is a charge against the profits of the company, unlike share dividends which are an appropriation of profits.

Expert tip

Debentures are not shown in a statement of financial position as part of equity. They are a non-current liability.

Mortgage debentures have their loan secured against all or some of the non-current assets of the company. If the company cannot repay the loan when due, the debenture holders can sell the secured asset(s) and use the sale proceeds to settle the amount they are owed.

Convertible loan stock

The holders of convertible loan stock have made a loan to the company in much the same way as debenture holders. However, unlike debenture holders, the holders of convertible loan stock have the opportunity to exchange their stock for ordinary shares at a predetermined price at a date specified in the future.

Long-term bank loans

As well as borrowing by issuing debentures, a company can borrow from banks or other financial institutions. The loan is taken out for an agreed period and repayments are generally for an agreed amount on specified dates during the period of the loan. The lender will charge a fixed rate of interest and require some form of collateral. The lender has no powers to interfere with the everyday running of the business.

Leasing

Rather than purchasing non-current assets, which often requires the spending of large capital sums, many businesses lease their premises, plant, machinery or vehicles. The cash that is not tied up in owning the non-current asset is then available to the **lessee** for other, more profitable, investment opportunities. The 'rental' costs paid by the lessee are a charge against profits.

A **lessee** is the business that pays the owner (lessor) for the use of the asset.

Sale and lease back

Finance can be raised by selling non-current assets to a leasing company and then leasing them back from the lessor. The leasing charges are charged against profits.

Revision activities

- Explain how the holder of convertible loan stock would decide whether or not to exercise their option to convert the stock into shares on the due date.
- Explain the factors that directors of a limited company should consider when choosing a method of raising long-term capital.
- Draft a memo to a line manager listing the advantages and disadvantages that a business might hope to gain from selling non-current assets and leasing them back.

Now test yourself

Tested

1 What are the two principal types of shares issued by a limited company?
2 In which section of the statement of financial position would you expect to find issued debentures?
3 Explain the difference between debentures and convertible loan stock.
4 What is the difference between a lessor and a lessee?
5 What is a hire purchase agreement?

Answers on p.188

11 Interpretation and analysis

Users of financial statements

Different user groups

Revised

People use financial statements for many reasons and the statements are prepared to convey information. You should be able to identify various user groups and comment on the aspects of business activity they will be most interested in.

The users within the business include owners (shareholders in the case of limited companies), managers, employees and trade unions. Published financial statements of limited companies must satisfy the requirements of the Companies Acts, International Accounting Standards and Stock Exchange requirements. Owners (not shareholders) and managers will have access to all the business books of account on which to base their decisions; other users (including shareholders) will have to be satisfied with any published statements that might be available. Users outside the business include bank managers, customers and suppliers, potential investors, competitors, the government and the tax authorities. Users of financial information outside a company look at published financial statements.

Requirements of user groups

Revised

Each group has a slightly different reason for examining financial statements, although most have the survival of the business as their prime interest. Exceptions include competitors and environmentalists if the business is selling or producing products that have a negative impact on the environment in which the business operates.

- In the long term, survival depends on the ability of a business to generate profits, but profits provide only one aspect of business activity.
- Cash is important for the day-to-day survival of a business. In the short-term, a business must be able to generate positive cash flows — if there are insufficient cash inflows, it might be unable to:
  - pay the providers of utilities (water, gas, electricity etc.)
  - settle its payables
  - pay wages, which might result in workers withdrawing their labour

Revision activity

In pairs, one person should name a user of accounting information and the other should identify the information that the user is probably most interested in. Change places and repeat until one person runs out of suggestions.

Analysis and interpretation of accounting information

Data as an aid to decision-making

Revised

It is desirable to compare performance over a number of years. The greater the number of years' results that are available, the easier it is to identify and confirm trends:

- If the time period reviewed is too short, it would be difficult to identify any trends.
- If the time period is too long, much of the earlier information will be out of date.

The published data are abridged to protect a company from users that may wish to gain information that is commercially useful and potentially damaging to the business. The edited information might not be useful in its published format.

Figures cannot be used in isolation because they can sometimes be misleading. To be useful, results may need to be arranged into a structure that is more understandable and comparable with other businesses. The data may be arranged to allow:

- horizontal analysis
- trend analysis
- vertical analysis
- ratio analysis

Annual raw data are converted into **ratios** because:

- amounts expressed in isolation are meaningless; there needs to be context
- it helps in the analysis of the current year's performance
- it allows identification of trends by comparing results over a number of years
- it means that trends may be extrapolated to make decisions that will influence future performance
- it allows comparisons to be made with other similar businesses

Ratios is the term applied to the results of calculations used to compare the results of businesses. It is a generic term applied to results expressed in true ratios (e.g. a current ratio might be 4 : 1), percentages (e.g. a gross profit ratio might be 58%) and time (e.g. a trade receivables collection period might be 32 days).

Performance evaluation

Revised

Users of accounting information decide whether the profitability and/or the liquidity of a business is acceptable by asking:

- 'Is the business performing better (or worse) than last year?' They compare previous results with the current year's results.
- 'Is the business performing better (or worse) than similar businesses?' They compare results with businesses in the same business sector.
- 'Is the business performing better (or worse) than the figures available for national quoted companies in the same business sector?'
- 'Is the business performing better (or worse) than the data produced in budgets or forecasts?'

Calculation of ratios

Ratios to aid the appraisal of profitability

Revised

It is important that the same method of calculation is used each year for consistency, so that the results may be compared with previous years. It is also important to use the same method when comparisons are made with other businesses.

Expert tip

Ratios should be used to make comparisons. In isolation, data are almost meaningless; they need to be included in some kind of context.

Gross profit ratio (margin) (gross profit percentage)

Margins vary from sector to sector. Businesses with a rapid turnover of goods will generally have a lower margin than a business with a slower turnover. This ratio shows the amount of gross profit earned on each $100 of sales.

$$\text{gross profit margin} = \frac{\text{gross profit}}{\text{net sales (revenue)}} \times 100$$

Mark-up

The mark-up indicates the amount of gross profit added to the cost of sales to achieve selling price.

$$\text{mark-up} = \frac{\text{gross profit}}{\text{cost of sales}} \times 100$$

To improve gross profit margin and mark-up, goods could be purchased more cheaply while maintaining selling price. Alternatively, a business could purchase at the current price and increase selling price provided that customers will accept any price rise without reducing quantity required. Gross profit margin and mark-up are rarely used together in analysis because both are different perspectives of the same data.

Expert tip

An increase in the volume of sales will not affect mark-up or margin; the ratios will remain constant.

Profit ratio (net profit ratio)

The profit ratio shows the proportion of operating profit that is earned after overhead expenses have been paid. Operating profit is used as this allows comparisons to be made between businesses with different levels of borrowing.

$$\text{net profit ratio} = \frac{\text{profit before interest and tax (operating profit)}}{\text{net sales (revenue)}} \times 100$$

Return on capital employed

Also known as the **primary ratio**. It is a measure of how effectively the managers of a business are using the capital employed at their disposal. Capital employed can be calculated by using:

- total assets less current liabilities
- shareholders' funds plus non-current liabilities
- issued equity capital and reserves plus non-current liability capital

The capital employed used may be:

- opening capital employed
- closing capital employed
- an average of opening and closing capital employed

It is important that you use the same method each time a comparison is made. Choose the method you feel most comfortable with.

Expert tip

Generally, return on capital employed, inventory turnover, trade receivables collection and trade payables payment periods use average figures. However, on occasions it is impossible to calculate an average figure so closing figures may be used, but always show the formulae.

$$\text{return on capital employed} = \frac{\text{profit before interest and tax (operating profit)}}{\text{capital employed}} \times 100$$

The ratio provides information as to whether the total capital of a business could be used elsewhere to earn a greater return. The result can be compared to the return earned in similar businesses.

Expenses to sales ratio (operating expenses to revenue ratio)

This ratio tells us the proportion of sales revenue that a business is spending on overheads. The ratio could improve if total expenditure on overheads was to fall in proportion to sales revenue.

Expert tip

The expenses to sales ratio can also be determined by gross profit ratio less profit ratio.

$$\text{operating expenses to revenue ratio} = \frac{\text{operating expenses}}{\text{net sales (revenue)}} \times 100$$

Non-current asset turnover

This measures the efficient use of non-current assets. Non-current assets are the wealth generators of a business; they are acquired to generate sales revenue and hence profits. High levels of non-current assets should generate high sales revenue, which should in turn lead to greater profitability. It indicates how much each $1 investment in non-current assets is able to generate in terms of

sales revenue. The higher the non-current asset turnover ratio, the greater is the recovery of the investment in those non-current assets.

$$\text{non-current asset turnover} = \frac{\text{net sales (revenue)}}{\text{total carrying amount of non-current assets}}$$

An increase in the ratio year on year indicates a more efficient use of non-current assets. A fall in the ratio might indicate:

- less efficient use of the assets
- purchase of more non-current assets
- revaluation of the assets

Expert tip

Learn the formulae for ratios and produce these before calculating the results. Always state the formula you are using. Some ratios have a number of variations; it is important that the examiner knows which version you are working with.

Ratios to aid the appraisal of liquidity and efficiency

Revised

Financial ratios assess the ability of a business to pay its current liabilities as they fall due. Liquidity is important as a business not only has to pay its suppliers; it also has to pay employees and other providers of resources.

Although liabilities are grouped in a statement of financial position under headings that indicate the need for payment within 12 months and payments due after 12 months, in reality many payables require settlement in a much shorter time. Long-term investors are mainly interested in the **solvency** of the business — they require that the business will survive into the foreseeable future (or at least until their debt can be settled).

Solvency is the ability of a business to settle its debts when they require payment.

Although solvency means an excess of assets over liabilities, many assets are difficult to dispose of and so users of accounts are often more interested in the **liquidity** position of the business. They wish to examine and analyse the components of working capital in detail.

Current ratio (working capital ratio)

This ratio shows how many times the current assets cover the current liabilities. The right-hand term should be expressed as unity, so the ratio should be expressed as 'something' : 1. Generally, the ratio should be greater than 1 : 1 although many businesses prosper with a ratio less than this.

$$\text{current ratio} = \frac{\text{current assets}}{\text{current liabilities}} : 1$$

We should look for trends when we consider the current ratio. If a series of results shows that the current ratio is declining, this could mean that the business might have some difficulties in meeting its short-term obligations in the future. If the current ratio is increasing over time, this could indicate that the business is tying up an increasing proportion of its resources in inventory, receivables and cash and cash equivalent balances, i.e. non-productive assets, instead of the resources being invested in non-current assets that could earn profits.

Expert tip

There is no ideal current ratio. Many analysts consider that a reasonable current ratio should fall between 1.5 : 1 and 2 : 1, although it is dangerous to be too dogmatic about this. The ratio depends on the type of business and the direction of any trend.

Liquid (acid test) ratio (quick ratio)

Again, look for trends. Inventory is the least liquid of current assets. The liquid ratio tests the ability of the business to cover current liabilities with current assets other than inventories. It is impossible to say what is an acceptable level of liquid ratio. Some supermarkets, for example, perform satisfactorily with a liquid ratio of less than 0.5 : 1.

$$\text{liquid ratio} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}} : 1$$

Trade receivables turnover (days)

Also known as debtors' turnover and average collection period, this ratio calculates how long, on average, it takes a business to collect debts from its credit customers. Generally, the longer a debt is outstanding, the more likely it is that the debt will prove to be irrecoverable. It is also advisable to have a shorter debt collection period than the trade payables payment period. It might not be possible to identify cash and credit sales, so in these cases it is acceptable to use total sales. If the result of the calculation gives a fractional answer, this must be rounded up (e.g. 34.5 days becomes 35 days). This ratio gives an average collection time. It uses all trade receivables, which may mask the fact that one significant debtor is a poor payer whereas the other trade receivables pay promptly. Many businesses use 30 days as their credit limit.

$$\text{trade receivables turnover} = \frac{\text{trade receivables}}{\text{credit sales}} \times 365$$

Trade payables turnover (days)

Also known as creditors' turnover and average payment period, this ratio measures the average time a business takes to pay its trade payables.
A comparison of the receivable collection days and the payables payment days should be made. It is important that the average collection period is less than the average payment period. If this is not the case, further investigation should be undertaken. This might reveal an important credit customer who is a slow payer or that a significant supplier insists on rapid settlement.

$$\text{trade payables turnover} = \frac{\text{trade payables}}{\text{credit purchases}} \times 365$$

Inventory turnover

Also known as rate of inventory turn, every 'bundle' of inventory held contains an element of profit and cash. It is essential that this cash is released and that profits are earned as quickly as possible. So, the more often that goods held as inventory can be 'turned over' (sold), the better it is for the business. The higher the rate of inventory turnover, the better. This means that goods are kept for a shorter length of time before being sold. Some industries have reduced the need to hold large inventories with the introduction of just-in-time (JIT) ordering of goods.

$$\text{inventory turnover} = \frac{\text{average inventory}}{\text{cost of goods sold}} \times 365$$

or

$$\text{rate of inventory turnover (times)} = \frac{\text{cost of goods sold}}{\text{average inventory}}$$

Expert tip

Remember that ratios are only useful if comparisons are made either with other businesses in the same sector or with previous years' results, i.e. trend analysis.

Revision activity

List all the ratios (but not the formulae) considered in this topic on separate pieces of paper. Place the pieces in a box. With your eyes closed, select a ratio and give the formula used in its calculation.

Now test yourself Tested

1 Identify four user groups of financial information.
2 Explain why ratios rather than actual results are used to evaluate the performance of a business.
3 'A profit for the year of $102 000 is an excellent result.' Comment on this statement.
4 Give the formulae for the following ratios:
   (a) Gross profit margin
   (b) Return on capital employed
   (c) Current ratio
   (d) Liquid (acid test) ratio
   (e) Trade receivables turnover (days)
   (f) Trade payables turnover (days)
   (g) Inventory turnover (days)

Answers on p.188

The limitations of accounting information

What limitations does accounting information have?

Revised

- Data used are extracted from historical cost statements. Historical cost is objective, but comparisons based on historic data may give misleading results. For example, someone may earn 100 times more than their great grandfather earned, but their standard of living is not 100 times better than that of their great grandfather.
- Past results are not perfect as a predictor of future events. For example, just because a sports team won the league last year, this does not necessarily mean it will top the league for the next 5 years.
- Published financial statements are prepared for a whole business. The results may not reveal the actual results for each department or section of the business.
- Financial statements show only monetary aspects of a business. There is no indication of staff welfare.
- Statements of financial position are prepared to show the position at one particular date. Changes may have taken place over the preceding year or may take place over the next few months.
- Financial statements show only the results of business activity. They do not show the causes of good or bad results.

It is important that we compare like with like when comparisons are being made, but this is virtually impossible. When comparing two or more businesses, they have different locations, managers, staff and suppliers/customers. The difficulties encountered when comparing annual results for one business to determine trends include staff changes, economic changes (both internal and external) and changes to accounting policies. The use of ratio analysis is probably the best way that is available to us of comparing results.

Expert tip

When comparing like with like, there may be a need to make adjustments to the figures given. Notional rents and management salaries may need to be included in one set of comparative figures. Table 11.1 gives two examples.

Table 11.1 Examples of adjustments to be made when comparing like with like

Business renting premises vs business owning premises	Include notional rent of premises
Business employing management team vs business run by owner	Include notional manager's salary

Avoid making assumptions about a change in annual ratios when there is no evidence. Only consider the available information — don't speculate on what *might* have happened. If you do make any assumptions, state them clearly.

Now test yourself

Tested

5 Identify two weaknesses of using ratios as the only means of assessing the performance of a business.

Answer on p.188

12 Costing principles and systems

Cost accounting for materials, labour and overheads

Cost classification

Revised

The Chartered Institute of Management Accountants (CIMA) defines **direct costs** as 'expenditure which can be economically identified with a specific saleable cost unit'. They can be directly attributed to a unit of production so direct costs are always **variable costs**. **Indirect costs** are items of expenditure that cannot easily be identified with a specific saleable cost unit. **Fixed costs** do not change with levels of business activity.

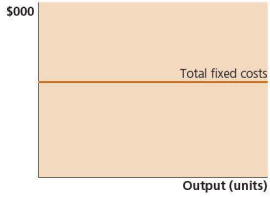


Figure 12.1 Total fixed costs

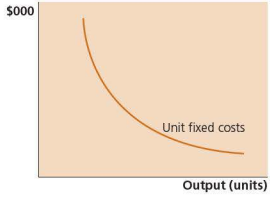


Figure 12.2 Unit fixed costs

Variable costs vary in direct proportion to levels of activity. Short-term decision-making is mainly concerned with accounting for variable costs.

Direct material costs can be specifically identified with the finished product or service. **Direct labour costs** can be specifically identified with the finished product or service. **Direct expenses** are any other costs that can be specifically identified with the finished product. **Prime cost** is the total of all the direct costs:

prime cost = direct material costs + direct labour costs + direct expenses

Expert tip

Practise defining terms on a regular basis. Remember that a definition is an explanation; you could use an example to show that you fully understand the term.

Typical mistake

Saying 'fixed costs never change' is a common error. In the long run, any cost may change. Rent payable is a fixed cost but the owner of a property may raise the rent to be paid over the long term.

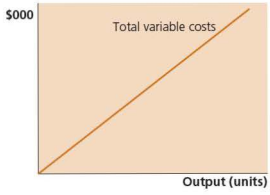


Figure 12.3 Total variable costs

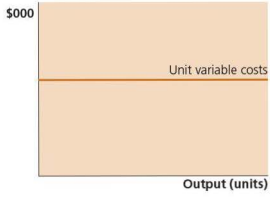


Figure 12.4 Unit variable costs

Semi-variable costs contain an element of both fixed and variable costs. An example of a semi-variable cost is the charge for telephone use. The line rental is a fixed cost as it is charged at a fixed rate that is not dependent on the number of calls made. The variable cost part is based on the number of calls.

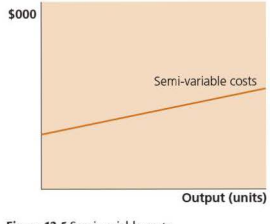


Figure 12.5 Semi-variable costs

Stepped costs remain fixed until a certain level of business activity is reached. When production exceeds this level, additional fixed costs may be incurred. The cost then rises to a higher fixed level. They remain at this level until the next level of activity requiring a change is reached.

An example of a stepped cost is the wages of quality controllers. One quality controller may be able to inspect 500 units of production per week. If output is 500 units or less, one quality controller is employed. If output rises to 501 units per week, two quality controllers must be employed. If output rises to 1001 units per week, three quality controllers must be employed.

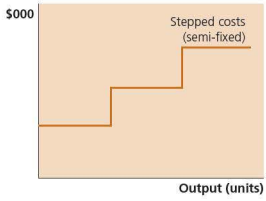


Figure 12.6 Stepped costs

When a decision has to be made about a future business opportunity, managers need to estimate the likely future costs of the project and the revenue that is likely to be generated. Some costs of the project may already have been incurred, such as the cost of a machine purchased a number of years ago. Historical costs cannot influence a decision that is about to be taken. A business is committed to paying fixed costs whatever the level of activity. Fixed costs are sometimes referred to as **sunk costs**. Decisions made now or in the future cannot affect these costs, so they should be disregarded when preparing a budget on which a decision will be based.

Total cost of production is made up of all the costs incurred in making each product. **Unit costs** are those that can be identified easily and so allocated to a specific unit, such as material costs, labour costs and other direct costs. The cost of each individual unit of production can be calculated by dividing the total costs attributed to it by the number of units produced. Work in progress is converted into the equivalent number of completed units.

Sunk costs are unrecoverable expenditures already incurred before a project is undertaken.

Revision activity

Identify an example of each of the following costs that might be incurred by a manufacturer of bread: direct cost; indirect cost; fixed cost; semi-variable cost; sunk cost; unit cost.

Now test yourself Tested

1 Distinguish between direct costs and indirect costs.
2 Sketch diagrams to illustrate the curves (lines) of:
   (a) fixed costs per unit
   (b) semi-variable costs per unit
3 Explain briefly the meaning of the following costs:
   (a) semi-variable
   (b) stepped
   (c) sunk
4 List the components of prime cost.

Answers on pp.188–89

Marginal (variable) costing

Business decisions using marginal costing

Revised

Marginal costing makes a clear distinction between fixed and variable costs. No attempt is made to allocate or apportion any fixed costs incurred by cost centres or cost units. When used in a marginal cost statement or calculation, **variable cost** is total variable cost of sales:

total variable cost of sales = variable production cost + variable selling and distribution cost + variable administrative cost

Marginal costing is a decision-making technique. It is defined by the Chartered Institute of Management Accountants as 'the cost of one unit of a product or service which would be avoided if that unit were not produced or provided'.

The identification of **contribution** is essential to marginal costing. Fixed costs or period costs are not affected by changes in the number of units produced. **Marginal costs** usually comprise extra materials, extra direct wages, extra direct expenditure, other extra variable costs in selling and distributing the product and any extra administration costs that arise when there is an increase in the level of production. **Marginal revenues** are the revenues earned by the sale of one extra unit of production. For the preparation of marginal costing statements see Topic 19, Costing principles and systems (see p. 155).

Contribution is the difference between selling price and total variable costs. It should be termed 'contribution towards fixed costs and profit'. Once fixed costs are covered, contribution becomes profit.

Marginal costs are the costs that are incurred when one extra unit is produced above the planned level.

Now test yourself Tested

5 Define *variable costs* and give two examples.

6 Define *semi-variable costs* and give one example.

7 A business produces 6000 units of a product. Variable costs total $18 000; fixed costs total $5000. Calculate the total cost of producing 7500 units.

8 Explain the term *contribution*.

9 Calculate contribution from the following information: selling price per unit $65; variable costs per unit $38; fixed costs per unit $12.

Answers on p.189

Uses of marginal costing

Revised

Costing 'special' or 'one off' opportunities

A special contract may be accepted at a price lower than the 'usual' price charged to regular customers (the price based on 'full cost') provided the selling price covers marginal costs. There is no need to include fixed costs as these are absorbed in the price charged to regular customers. When accepting an order based on marginal costing principles:

- there must be spare production capacity
- the order must not displace other business (if it does, revenue lost becomes a marginal cost)
- regular customers must be separated from customers receiving the order priced using marginal cost
- customers receiving the goods should not be in a position to sell the goods to others at a price lower than the regular price
- customers receiving goods priced at marginal cost must be aware that the price quoted is for that one order only
- care must be taken to ensure that competitors do not start a price war by matching the price to their regular customers

A manufacturing business must cover all costs incurred in running the business. A business cannot survive by costing all its production at marginal cost. If it did, none of the fixed costs would be covered (absorbed). Generally, any special order that results in a positive contribution should be accepted.

A special order that yields a negative contribution may be accepted:

- to retain a highly skilled workforce
- to maintain machinery in good condition
- to stimulate further orders (at the normal price in the future)
- because it is a worthwhile thing to do, e.g. it provides a product at less than full cost for disabled children

Make or buy decisions

A business may have the opportunity to purchase the product that it currently manufactures. Only the extra costs and revenues should be taken into account when deciding whether or not to continue production. Extra revenues could include rent received if the empty factory space could be sub-let. Extra costs might include security costs for the vacated premises.

Making a choice between competing courses of action

Managers may have to consider a choice between two or more competing strategies that incur the same level of fixed costs. Only the marginal costs need to be considered. The strategy that provides the greatest contribution should be the one adopted.

Choosing the most profitable production pattern when only a limited amount of a factor of production is available

A **factor of production** that is in short supply is known as a **key factor** or **limiting factor**. It is essential that the managers of a business utilise the scarce resources available to yield the maximum return for the business. Any shortage of a particular resource will limit the business's ability to maximise profits. Contribution per unit of scarce resource must be calculated and put into rank order to decide on the most profitable production pattern.

Factors of production are resources that are needed in the process of manufacturing or providing a service, such as land, labour, finance and capital equipment.

Penetration (or destroyer) pricing

Managers of a business employ this strategy when they wish to gain a foothold in a market that is already well established. They cost their product using only marginal costs. They can do this because their existing customers will already be covering (absorbing) the fixed costs incurred by the business.

Revision activity

Draft a memo to a junior clerk explaining why it would not be wise to cost all production processes using marginal costing techniques.

Cost-volume-profit (or break-even) analysis

Revised

There are three methods for determining the **break-even point**: unit contribution, contribution to sales ratio and break-even graphs.

The **break-even point** is the level of sales revenue or units sold at which a business neither makes a profit nor a loss — contribution equals total fixed costs.

Unit contribution

This is probably the easiest method to use. It should be used unless a question states that another method should be employed.

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution per unit}}$$

This method gives the break-even point in terms of number of units to be sold.

Typical mistake

If the answer that you arrive at is small or highly unlikely, you may have used fixed cost per unit rather than total fixed cost.

Contribution to sales ratio (profit/volume method)

This method is used when:

- there are a number of products being manufactured and sold
- a marginal costing statement is given
- the variable cost per unit and the selling price per unit are not available or would be extremely difficult to calculate

The first stage is to calculate the contribution to sales (c/s) ratio:

$$\text{contribution to sales ratio} = \frac{\text{total contribution}}{\text{total sales revenue}} \times 100$$

The result is then divided into total fixed costs to give a break-even point:

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution to sales ratio}}$$

This method gives the break-even point in terms of sales revenue.

Break-even graphs

Practise drawing break-even graphs. You will probably not be asked to draw a full graph as they are too time-consuming to prepare, but you could be asked to:

- draw in a missing curve (line) or two
- interpret a given graph

One problem with break-even graphs is that they do not show clearly the actual amount of profit (or loss) at each level of sales. A profit/volume graph solves this problem by showing how profits change as the volume of sales changes.

Now test yourself Tested

10 Identify two uses of marginal costing.
11 Explain the term *key factor*.
12 What is meant by the break-even point and how may it be calculated?
13 State the formula used to calculate the break-even point using the unit contribution method.
14 How is the contribution to sales ratio calculated? Explain how it is used to find the break-even point.
15 Which formula used to calculate the break-even point gives an answer in:
(a) units
(b) sales revenue

Answers on p.189

The advantages of cost-volume-profit analysis

Revised

Cost-profit-volume analysis:

- is a useful tool in short-term decision-making
- examines the relationship that exists between sales volume, sales revenue, costs and profits
- shows how costs behave at varying levels of output
- can be used in 'what if' analysis
- can help to provide answers to the question of the likely outcome when a particular course of action is followed by management, e.g. the effect on profit if more goods were sold at a reduced price

Graphs show:

- cost-volume-profit in a form that helps most people understand the information shown quickly and more effectively. However, for decision-making purposes, the use of calculations is more accurate
- clearly the break-even point and **margin of safety**
- visually and clearly the impact that changes in sales volume has on profits

All forecasts are predictions of future outcomes. Forecasts of profitability are based on the accuracy of the predictions of future costs and future revenues.

Margin of safety is the difference between actual sales achieved or forecast as achievable and the break-even level of sales. The margin indicates to management how far sales can fall before the business will move out of profit and into a loss-making situation.

Valuation of inventory using marginal costing principles

Revised

Inventories should not be valued using marginal costing. IAS 2 states that inventories should be valued at the lower of cost and net realisable value and that costs should include the cost of purchase, the cost of conversion and any other costs incurred in bringing the inventories to their present location and condition. Costs of conversion include fixed and variable overheads. As marginal costing principles ignore fixed costs, it cannot be used as a basis for inventory valuation.

Absorption (total) costing

Business decisions using absorption costing

Revised

Absorption costing is used for:

- calculating the total cost of production, so it is sometimes called total costing. All expenditures incurred in production are absorbed into the cost of production. The total cost of producing goods is necessary for long-term planning as total revenue must cover all the costs of running the business.
- calculating profit when selling price is fixed. For example, the selling price of a product is fixed at $50 per unit. Total production costs are $21 per unit. The profit on the sale of each unit is $29.
- calculating selling price when a predetermined level of profit is required. Using the example above:
  - if the business wishes to achieve a profit of $9 on the sale of each unit, the selling price has to be $30 per unit
  - if the business requires a net profit margin of 25%, this margin is the same as 33.3% on cost of sales. Cost of sales is $21, so the profit is $7 (33.3% of $21) and selling price is $28

A business must cover all costs in order to be profitable and absorb them into the selling price.

Cost centres are usually determined by the type of organisation. A cost centre in your school or college might be a department. **Cost units** in a school or college might be students.

A **cost centre** may be a department, machine or person to whom costs can be associated.

A **cost unit** is a unit of production that absorbs the cost centre's overhead costs.

The allocation and apportionment of overhead expenditure

Revised

Some costs are not easily **allocated** to a cost centre; they usually apply to the business as a whole. However, each cost centre may have benefited from the service. For example, the cost of rent or local taxes may apply to the business as a whole, but each cost centre should bear some part of the total cost of providing the services. **Apportionment** of overheads is based on a manager's perception of the benefits that each individual cost centre receives from provision of the service.

Table 12.1 The bases of apportioning indirect costs

Overhead	Basis of apportionment to cost centres
Rent	Floor area of cost centre
Local taxes	Floor area of cost centre
Insurance	Value of items being insured
Heating and lighting	Volume of cost centre (if this is not available, floor area may be used)
Depreciation	Cost or carrying amount of the asset in each cost centre
Canteen	Numbers of personnel in each cost centre
Personnel	Numbers of personnel in each cost centre

Allocation of costs is the charging of whole items of expenditure to a cost centre or cost unit. The costs are easily identified as deriving from the cost centre.

Apportionment of overheads is the process by which some overhead costs are charged to cost centres because they cannot be directly attributed to a particular cost centre.

When all overhead costs have been apportioned to a cost centre, the total has to be charged to specific units of production. This process is known as **absorption**.

Apportionment of service departments' overhead expenditure between production departments

Revised

Service departments cannot recover their costs from external customers; their costs must be recovered by the business. They charge other cost centres for the services they provide. The estimated costs incurred by service departments must be apportioned to each production department. Each production department recovers its own overheads and some of the service departments' overheads.

Reciprocal services

For example, a canteen provides refreshments for all staff including those in the maintenance department. The maintenance engineers keep the canteen equipment in good working order as well as servicing equipment in all other departments. The canteen and maintenance department provide **reciprocal services** for each other.

Reciprocal services is the term used when one department provides a service for another department and also receives a service from that department.

Calculation of overhead absorption rates

Revised

After the overheads have been apportioned, the amount of overheads to be included into the cost of each unit passing through the cost centre must be calculated as the **overhead absorption rate** (OAR):

- If a department is labour-intensive, OAR may be calculated using the **direct labour hours** that a worker would take to produce one unit of output.
- If production methods are capital-intensive, the OAR takes into account the number of **machine hours** required to produce each unit of output.

Other possible methods of calculating the OAR include:

- **direct labour cost rate** — estimated overheads are expressed as a proportion of the estimated cost of direct wages
- **direct material cost rate** — the total cost of materials is used as the denominator in the calculation
- **prime cost rate** — this method uses prime cost as the denominator
- **unit produced rate** (cost unit rate) — total overheads allocated and apportioned to production are divided by the estimated number of units produced, so the overheads are spread over the goods produced. This method can only realistically be used if the business manufactures only one type of product

Under-absorption of overheads

Revised

Overhead recovery rates are based on predictions of future levels of activity and predicted (budgeted) levels of overhead expenditure. There will be an **under-absorption of overheads** if:

- actual level of activity is less than budgeted and actual spending on overheads is equal to the predicted level, or
- actual level of activity is equal to budgeted and actual spending on overheads is greater than budgeted

Under-absorption of overheads is charged to the costing income statement.

Over-absorption of overheads

Revised

Over-absorption of overheads takes place if:

- actual level of activity is higher than budgeted and actual spending on overheads is equal to budgeted, or

- actual level of activity is the same as budgeted and actual spending is less than budgeted

An over-absorption of overheads is credited to the costing income statement.

Now test yourself Tested

16 Give another name for absorption costing.
17 Identify one use of absorption costing.
18 Identify a cost centre and a cost unit for a manufacturer of furniture.
19 How should the following budgeted overhead expenses be apportioned to production departments: rent; local taxes; supervisory wages; insurance of premises.
20 Which of the following overhead expenses would be apportioned and which would be allocated to a cost centre: direct materials; electrical power; cost of running a maintenance department; direct wages.
21 What does OAR mean?
22 Explain the term *reciprocal service departments*.
23 Budgeted overheads are $70 000. Actual overheads are $66 000. Actual budgeted activity is equal to actual activity. Does this result in an over-absorption or an under-absorption of overheads?
24 Distinguish between absorption costing and marginal costing.

Answers on p.189

Limitations of using absorption costing

Revised

- Management decision-making relies on the provision of accurate information; overhead absorption rates must be updated on a regular basis as they are derived from budgeted information that can change.
- Apportion methods cannot be 100% accurate.
- Differences in cost patterns for fixed, variable or semi-variable costs are not taken into account.

Valuation of inventory using absorption costing principles

Revised

IAS 2 requires that the value of inventories includes the costs of converting raw materials into finished goods. All normal production costs will be included in the total cost of the product. Other overheads may be included if management deems it prudent to do so.

Revision activity

Explain the difference between allocation, apportionment and absorption.

Costing systems

Job, unit and batch costing

Revised

The two main types of collecting financial information to be used when costing products or services are job costing and process costing. Managers adapt these two types to suit the individual requirements of their business. The system employed depends on the type of production and the type of goods or service being provided. The adaptations have a number of names including batch costing and contract costing.

Absorption costing can be used in any business. The principles of cost allocation and apportionment are still applied. The costing system being used depends on the type of business. Business activity generally falls into a process that is a **continuous operation** and operations that deal with **specific orders**.

Expert tip

Only job, unit and batch costing are part of the AS syllabus.

Job costing

Job costing is used where each product or service is different from other products. It is used by businesses that produce specialised or made-to-order outputs or where jobs are tailored to an individual customer's specifications as a result of a special order. The system is employed where goods or services are provided on a one-off basis as opposed to being mass-produced.

Each order's costs must be separately calculated in businesses that produce a variety of products or jobs or where each order is unique. Each job requires differing amounts of labour, materials and overheads. Separate costing records are kept for each job, detailing all the costs incurred in completing the job and identifying the profit (or loss) for the job. The job is a cost centre to which all the costs are charged. The costing details may also be used as an estimate that may be used to cost similar future jobs and to form the basis of preparing future **quotations** for jobs being considered.

A **quotation** is an estimate of how much a supplier thinks a job will cost and includes a mark-up to provide profit. It is often shortened to 'quote'.

It is therefore an appropriate costing system for businesses whose work consists of separate jobs, such as installers of air-conditioning units, specialist building contractors, specialist home decorators, architects, bespoke tailors etc. If the actual costs incurred in completing a job differ from those itemised in the quotation, the supplier may calculate any variations that have occurred.

Unit costing

Continuous operation costing is used in manufacturing organisations that use a sequence of continuous or repetitive operations or processes. **Unit costing** is used to find the cost of a single unit of production or a single unit of providing a service. **Process costing** is also a form of continuous operation costing.

Batch costing

It is not always possible to classify a system that relies on all the individual elements of cost being added together clearly into job costing and process costing systems. **Batch costing** is used where large quantities of identical items are manufactured as a batch and the items are manufactured and treated as one individual job for costing purposes. This could be because a customer orders a quantity of identical items.

Costing a batch is similar to costing a job and the same procedures are followed. However, the whole batch is treated as one separate identifiable job. Costs are recorded against each batch and the final total production cost for the whole batch is divided by the number of individual units produced to get the production cost per article. It is ideally suited to the costing requirements of mass production industries where identical items are manufactured. Such items keep their individual identity as separate units, even though there may be several common, distinct stages in arriving at the end result. Examples of industries employing batch costing techniques include a business producing components for a car manufacturer or a business making micro-chips for an electrical goods manufacturer.

Where manufactured goods have some common characteristics as well as some individual characteristics, the **cost accumulation system** may be a combination of job costing and process costing. For example, the production of furniture, footwear and clothing involves the production of batches that are variations of a single design and therefore require a sequence of standardised operations. A business making women's dresses may use the same basic design that requires the same operation. However, some dresses may be long and others shorter; some may require better quality materials. The cost of each dress will therefore consist of the basic pattern plus additional trimmings such as beads and varied stitching. The product cost consists of the average cost of the

common operation to achieve the 'basic' dress plus any specific costs of the unique changes. The final product cost consists of a combination of process costing techniques and job costing techniques. This system is referred to as **operation costing** or batch costing.

Revision activity

List two examples of industries that would use job costing and two that would use batch costing. Explain your choices.

Calculation of the value of inventory

Revised

When using unit, job or batch costing principles, closing inventory is valued by taking the lower of cost and net realisable value. This is fairly straightforward when raw materials or finished goods are valued. However, it would be rather unusual if there were no partly completed goods remaining as inventory at the end of a period. The costs incurred during the period are for all the goods passing through the factory: those that are complete and those that have yet to be completed. The units that are partly completed have to be converted into the equivalent number of completed units.

Example

Total production costs for February amount to $92 820. At the end of February 21 000 units had been completed and 4000 were partly finished. These partly finished goods are 70% complete. 2000 completed units were held as inventory at the 28 February. The value of closing inventory of finished goods is $18 720.

$$\frac{\$92\,820}{21\,000 \text{ complete} + 2800 \text{ (70\% of 4000 partly complete)}}$$

= cost per unit of $3.90

Closing inventory = $18 720

$7800 (2000 complete units at $3.90 each) and $10 920 (70% of 4000 units at $3.90 each).

AS questions and answers

This section contains exam-style questions for selected AS topics followed by example answers. The answers are interspersed by expert comments (shown by the icon) that indicate where credit is due and areas for improvement. Where the candidate has used their own figure, this is indicated by 'of' after the mark awarded.

Topic 3 Control systems

Question 1

Amit runs a small business and provides you with the following annual information:

	30 September 2014	30 September 2013
	$	$
Trade payables	27 250	25 500
Trade receivables	34 600	32 150
Inventory	58 750	62 500

Transactions for the year ended 30 September 2014 were as follows:

	$
Cash paid to suppliers	85 000
Cash banked	98 500
Bad debts	3 500

The cash banked included $550 takings from 30 September 2013, and $700 takings for 30 September 2014 were not banked until 1 October 2014.

REQUIRED

Calculate the sales and purchases for the year ended 30 September 2014. [13]

Candidate A answer

Sales ledger control account

Balance b/d	32 150	(1)	Cash	98 500	(1)
Last year's banking	550	(1)	This year's banking	700	(1)
Sales	104 600	(2)	Bad debts	3 500	(1)
			Balance c/d	34 600	(1)
	137 300			137 300	
Balance b/d	34 600				

Purchase ledger control account

Bank	98 500		Balance b/d	25 500	(1)
Balance c/d	27 250	(1)	Purchases	100 250	(1)of
	125 750			125 750	
			Balance b/d	27 250	

Sales for the year = $104 600.

Purchases for the year = $100 250.

This candidate has produced a fully correct sales ledger control account and scores full marks here. However, they make an error in the purchase ledger control account as the cash banked has been used instead of cash paid, resulting in 2 marks lost. Overall, 11 of the available 13 marks are awarded and this candidate receives an A grade.

Candidate B answer

Sales ledger control account

Cash	98 500	Balance b/d	32 150
This year's banking	700	Last year's banking	550
Bad debts	3 500	Sales	104 600
Balance c/d	34 600		
	137 300		137 300
		Balance b/d	34 600

Purchase ledger control account

Balance b/d	25 500		Bank	85 000
Purchases	86 750	(1) of	Balance c/d	27 250 (1) of
	112 250			112 250
Balance b/d	27 250			

Sales for the year = $104 600.

Purchases for the year = $86 750.

This candidate has correctly calculated the sales and purchases for the year. The question does not specifically ask for the preparation of the control accounts but you should be prepared to do this for the exam. However, the entries have been completely reversed resulting in the loss of many marks. You must have a good understanding of the double entry system for these types of questions.

Question 2

Reuben has provided you with the following balances for the year ended 31 December 2013.

	$
Land and buildings — cost	300000
Accumulated depreciation at 1 January 2013	20000
Office equipment — cost	80000
Accumulated depreciation at 1 January 2013	22200
Revenue	375000
Purchases	246500
Returns inwards	4500
Returns outwards	2375
Carriage inwards	1850
Carriage outwards	2650
Discounts allowed	2450
Discounts received	875
Inventory at 1 January 2013	24500
Rent and local taxes	5500
Heat and light	2250
Sundry expenses	360
Trade receivables	14650
Bad debts	650
Allowance for bad debts	600
Trade payables	9950
Bank overdraft	2480
Long-term bank loan	35000
Drawings	33270

Additional information at 31 December 2013

1. **Inventory was valued at cost at 31 December 2013 at $26900. This included a batch of damaged items costing $3750 that required repair costs of $350 in order to be able to sell them for $2000.**
2. **The monthly rent for December of $500 had not been paid.**
3. **Heat and light costs of $250 are to be accrued.**
4. **Sundry expenses relate to a payment covering the period from 1 July 2013 to 30 June 2014.**
5. **The allowance for bad debts is to be adjusted to 4% of trade receivables at the year end.**
6. **The cost of the building is half of the cost of the land. Land is not depreciated but the buildings are depreciated at 10% straight line.**
7. **Office equipment is depreciated at 15% using the reducing balance method.**
8. **The interest of 8% per annum due on the long-term loan, which was taken on 1 October 2013, has not been paid.**

REQUIRED

Prepare:

(a) an income statement for the year ended 31 December 2013. [14]

(b) a statement of financial position at 31 December 2013. [12]

Candidate A answer

(a)

Income statement for the year ended 31 December 2013

	$	$	$	
Revenue			375000	
Less returns			(4500)	
			370500	(1)
Less cost of sales				
Opening inventory		24500		
Purchases	246500			
Less returns	(2375)			
	244125			
Carriage inwards	1850	245975		(1)
		270475		
Less closing inventory		(24800)	(245675)	
Gross profit			124825	(1)
Discount received			875	(1)
Adjustment to allowance for bad debts			40	(1)
			125740	
Carriage outwards		2650		(1)
Discount allowed		2450		(1)
Rent and local taxes		6000		(1)
Heat and light		2500		(1)
Sundry expenses		180		(1)
Bad debts		650		
Depreciation — buildings		10000		(1)
— office equipment		8670		(1)
Interest		700	(33800)	(1)
Profit for the year			91940	(1)

(b)

Statement of financial position at 31 December 2013

	$	$		$	
Non-current assets					
Land and buildings	300000				
Accumulated depreciation	(30000)	270000	(1)		
Office equipment	80000				
Accumulated depreciation	(30870)	49130	(1)	319130	
Current assets					
Inventory		24800			
Trade receivables	14000				
Allowance	(560)	13440	(1)		
Prepayment		180	(1)		
		38420			

Current liabilities				
Trade payables	9 950			
Bank overdraft	2 480	(1)		
Accruals (500 + 250)	750	(1)		
Interest	700	(1)	(13 880)	
Net current assets				24 540
				343 670
Non-current liabilities				
Long-term loan				(35 000) (1)
				308 670
Capital				250 000 (2)
Net profit				91 940 (1)
				341 940
Drawings				33 270 (1)
				308 670

This candidate has produced a fully correct income statement and statement of financial position and accordingly has scored full marks. Note that the capital balance in the statement of financial position is a balancing figure.

Candidate B answer

(a)

Income statement for the year ended 31 December 2013

	$	$	$
Revenue			375 000
Less cost of sales			
Opening inventory	24 500		
Purchases	246 500		
	271 000		
Carriage inwards	1 850		
		272 850	
Less closing inventory		(24 800)	(248 050)
Gross profit			126 950
Discount received			875 (1)
			127 825
Carriage outwards		2 650 (1)	
Discount allowed		2 450 (1)	
Rent and local taxes		5 000	
Heat and light		2 000	
Sundry expenses		540	
Bad debts		650	
Adjustment to allowance for bad debts		40	
Depreciation — buildings		10 000 (1)	
— office equipment		8 670 (1)	
Interest		700	(32 700) (1)
Profit for the year			95 125

(b)

Statement of financial position at 31 December 2013

	$	$	$
Non-current assets			
Land and buildings	300 000		
Accumulated depreciation	(30 000)	270 000 (1)	
Office equipment	80 000		
Accumulated depreciation	(30 870)	49 130 (1)	319 130
Current assets			
Inventory		24 800	
Trade receivables	14 000		
Allowance	(560)	13 440 (1)	
Prepayments (500 + 250)		750	
		38 990	
Current liabilities			
Trade payables	9 950		
Bank overdraft	2 480 (1)		
Accrual	180		
Interest	700	(13 310) (1)	
Net current assets			25 680
			344 810
Non-current liabilities			
Long-term loan			(35 000) (1)
			309 810
Capital			247 955
Net profit			95 125
			343 080
Drawings			33 270 (1)
			309 810

This candidate has made a number of errors. First, both the sales returns and purchase returns have been omitted from the income statement. The accruals and prepayments have been dealt with incorrectly – the rent and heat and light accruals have been subtracted from the given balances (they should be added), and the sundry expenses prepayment has been added (it should be subtracted). The adjustment to the allowance for bad debts has been correctly calculated but instead of adding it to the gross profit it has been deducted. These common errors result in the lowering of the candidate's grade.

Question 3

Tsrule Ltd is a manufacturing company that has extracted the following balances from their books of account at 30 September 2014.

	$000
Revenues	5800
Purchases of raw materials	1030
Carriage inwards	115
Carriage outwards	45
Direct labour	1105
Factory overheads	1465
Office overheads	1150
Inventories at 1 October 2013	
Raw materials	135
Work in progress	105
Finished goods	450

Additional information

1. **Factory overheads of $50 000 are to be accrued at 30 September 2014.**
2. **Office overheads of $25 000 have been prepaid at 30 September 2014.**
3. **Depreciation for the year on the non-current assets totalled $100 000 and this is to be split equally between the factory and office.**
4. **Completed production is transferred at a mark-up on cost of production of 15%.**
5. **Inventories are valued on 30 September 2014 as follows:**

	$000
Raw materials	185
Work in progress	230
Finished goods	565

REQUIRED

(a) Prepare a manufacturing and income statement for the year ended 30 September 2014. [26]

(b) Prepare a statement of financial position extract showing the entries for inventories. [6]

Candidate A answer

(a)

	$000		$000	
Raw materials at 1 October 2013	135	*		
Purchases of raw materials	1030	(1)		
Carriage inwards	115	(1)		
	1280			
Raw materials at 30 September 2014	(185)	(1)*	1095	
Direct labour			1105	(1)
Factory overheads			1515	(2)
Factory depreciation			50	(1)
			3765	
Work in progress at 1 October 2013	105			
Work in progress at 30 September 2014	(230)		(125)	(1)
Factory cost of goods produced			3640	(1)
Factory profit @ 15%			546	(1)
Transferred to trading account			4186	(1)
Revenues			5800	(1)
Deduct cost of sales				
Finished goods at 1 October 2013	450	**		
Manufacturing account	4168			
	4618			
Finished goods at 30 September 2014	(565)	(1)**	(4053)	
Gross profit			1747	(1)
Office overheads	1125	(2)		
Carriage outwards	45	(1)		
Office depreciation	50	(1)	(1220)	
Profit on trading			527	
Factory profit	546	(1)of		
Less increase in provision	(15)	(3)	531	
Overall net profit			1058	(1)of

Workings

Factory overheads 1465 (1) + 50 (1) = 1515

Office overheads 1150 (1) – 25 (1) = 1125

Increase in provision for unrealised profit $115\ (1) \times \frac{15}{115\ (1)} = 15\ (1)\text{of}$

* 1 mark is awarded for both inventories.

** 1 mark is awarded for both inventories.

(b)

Tsrule Ltd. Extract of statement of financial position at 30 September 2014

Raw materials		185	(1)
Work in progress		230	(1)
Finished goods	565 (1)		
Less provision	(74) (2)	491	
		906	(1)of

This candidate loses the mark available for failing to label the prime cost, but otherwise has produced a perfect manufacturing statement. The transfer to the trading section of 4186 has a transposition error and 4168 has been transferred, resulting in the loss of another mark. The entries for inventories are correct and the candidate obtains full marks for this part of the question. Only 2 marks have therefore been lost, with the candidate scoring 30 marks out of the 32 available and therefore receiving an A grade. It is pleasing to see clear workings used by this candidate.

Candidate B answer

(a)

	$000	$000
Raw materials at 1 October 2013	135*	
Purchases of raw materials	1030 (1)	
Carriage inwards	115 (1)	
	1280	
Raw materials at 30 September 2014	(185) (1)*	1095
Direct labour		1105 (1)
Prime cost (1)		2200 (1)
Factory overheads		1415
Factory depreciation		100
		685
Work in progress at 1 October 2013	105	
Work in progress at 30 September 2014	(230)	(125) (1)
Factory cost of goods produced		560
Factory profit @ 15%		84
Transferred to trading account		644
Revenues		5800 (1)
Deduct cost of sales		
Finished goods at 1 October 2013	450**	
Manufacturing account	644	
	1094	
Finished goods at 30 September 2014	(565) (1)**	(529)
Gross profit		5271
Office overheads	1175	
Carriage outwards	45 (1)	
Office depreciation	100	(1320)
Net profit on trading		3951
Factory profit	84 (1)of	
Less increase in provision	(17)	67
Overall net profit		4018 (1)of

(b)

Tsrule Ltd. Extract of statement of financial position at 30 September 2014

Raw materials		185 (1)
Work in progress		230 (1)
Finished goods	565 (1)	
Less provision	(76)	489
		904 (1)of

This candidate has made many errors. Some may be due to a lack of knowledge and understanding but some may arise as a result of carelessness. First, the accrual and prepayment have been dealt with incorrectly – you must ensure that you add the accrual to the balance and subtract the prepayment. The depreciation has not been split as required and consequently too much has been charged to the manufacturing account and the income statement. The candidate has made the common error of adding the indirect factory costs to the prime cost – you must ensure that these costs are added as you are building up the total cost of production. The provision for unrealised profit has been incorrectly calculated as the candidate has taken 15% of the increase in finished goods – 115 × 15/100 = 17.25 instead of 115 × 15/115 = 15. The accumulation of these avoidable errors result in the candidate achieving a C grade.

Topic 9 Depreciation

Question 4

Brandreth acquired new machinery and expects it to last for 4 years, at which time he intends to sell it for its residual value of $6000. Details are as follows.

	$
Cost price	40 000
Delivery and installation costs	2 000
Maintenance costs	2 500 pa

REQUIRED

(a) Calculate the annual depreciation charge using the straight-line method. [5]

(b) Brandreth disposes of the machinery at the end of the third year for $12 500. Prepare the disposal account. [6]

Candidate's answer

(a) Total cost price = $40 000 (1)

Total to be depreciated = $40 000 – $6000 = $34 000 (2)

Annual depreciation charge = $34 000 ÷ 4 = $8500 pa (1)

This candidate fails to recognise that delivery and installation costs are part of the cost price, but correctly did not capitalise the maintenance costs. In spite of miscalculating the cost of the machine, the candidate then proceeds to use their own figure and the method of calculation is correct. The candidate scores 4 marks out of a possible 5, sufficient to obtain an A grade.

(b)

Disposal account

Machinery	40 000	(1)	Depreciation	25 500	(1)of
			Disposal proceeds	12 500	(1)
			Income statement (1)	2 000	(1)of
	40 000			40 000	

This candidate prepares the disposal account correctly using their own figures. The only error is the incorrect labelling of the proceeds and consequently this candidate scores 5 out of the available 6 marks, sufficient to obtain an A grade.

13 Preparation of financial statements

Cash flow statements

The preparation of statements of cash flows in accordance with IAS 7

Revised

Generation of cash is of vital importance for the short-term survival of all businesses, while profits ensure survival in the longer term.

An income statement concentrates on the determination of profits or losses over a period of time. A statement of financial position shows the assets and liabilities of a business at one particular moment in time. A statement of cash flows details cash inflows and cash outflows that have occurred during a period. The three statements used together summarise most of the information required by the users of financial statements.

Only larger limited companies are required, under International Accounting Standards, to prepare a statement of cash flows as part of their end of year financial statements. They must prepare financial statements in accordance with Companies Acts 1985 and 1989 and with International Accounting Standards (IAS).

IAS 7 Statement of cash flows lays down the way that the statement must be set out. This allows comparisons to be made with the statements of other companies.

Expert tip

Don't confuse a statement of cash flows with a cash flow forecast (cash budget), which is designed to show how cash is likely to be raised and used in the future.

Now test yourself

Tested

1. 'Only larger limited companies are required to prepare a statement of cash flows as part of their financial statements.' Is this statement true or false?
2. 'A statement of cash flows is used to calculate profit.' Is this statement true or false?
3. 'A statement of cash flows will indicate whether or not the business requires a bank overdraft in a few months' time.' Is this statement true or false?

Answers on p.189

Uses of statements of cash flows

Revised

Statements of cash flows:

- allow identification of the significant components of cash flows
- provide information that allows users of the statement to assess how cash has been raised and used
- explain why profits and losses are different from changes in **cash** and **cash equivalents**
- show sources of internal financing and the extent to which the business has relied on external financing
- show information that is not shown in an income statement and a statement of financial position

Cash is money.

Cash equivalents are short-term investments that are convertible into cash without notice. They have less than 3 months to run when acquired. Overdrafts repayable in less than 3 months should be deducted.

- provide information that helps to assess liquidity, viability and financial adaptability of the business
- allow comparisons to be made year on year or inter-firm, if IAS 7 is adhered to
- can help to provide information that the projection of future cash flows can be based on (i.e. they may be useful when preparing a cash budget)

Statements of cash flows don't try to determine future cash flows. However, detailed knowledge of specific sources of cash receipts and the uses of cash outflows made may have some use in predicting future inflows and outflows of cash.

Typical mistake

Some students confuse a statement of cash flows with a cash flow forecast. A statement of cash flows is a historical document that is prepared after the financial year end. A cash flow forecast should be more properly referred to as a cash budget and it is a prediction or estimation of probable future cash flows.

Now test yourself Tested

4 Which International Accounting Standard deals with statements of cash flows?

5 Identify two uses for preparing a statement of cash flows.

Answers on p.189

The calculations

Revised

IAS 7 makes a statement of cash flows a mandatory requirement for most limited companies. Sole traders and partnerships are not required to prepare statements of cash flows. However, a statement may be prepared by owners or managers who may find it useful as an aid in assessing the performance of their business.

IAS 7 is intended to ensure that limited companies report their cash generation and cash absorption in a way that makes the statements comparable with other companies.

Table 13.1 Examples of transactions that result in cash inflows and cash outflows

Cash inflows	Cash outflows
Profits	Losses
Interest received	Interest paid
Dividends received	Dividends paid
Tax refund	Taxation paid
Sale of non-current assets	Purchase of non-current assets
Decrease in inventory	Increase in inventory
Decrease in trade receivables	Increase in trade receivables
Increase in trade payables	Decrease in trade payables
Increase in share capital	Redemption of share capital
Increase in debentures	Redemption of debentures
Increase in long-term loans	Repayment of long-term loans

Revision activity

With a partner, make a list of business activities that result in a cash inflow and compare lists. Each activity that is not recognised by the other person scores a point.

Calculation of profit from operations

Profit from operations is the profit for the year calculated before tax and interest. In many questions, an income statement extract is not given and it has to be reconstructed.

Example

The following extracts are taken from the statements of financial position of Oxxert plc at 31 December.

	2013 $000	2012 $000
Current liabilities		
Tax liability	(120)	(168)
Equity		
Ordinary shares	2500	2500
General reserve	400	350
Retained earnings	1662	1346

During the year ended 31 December 2013, debenture interest paid amounted to $78 000. Dividends amounting to $150 000 were paid. The profit from operations for the year ended 31 December 2013 (working 'backwards') are as follows.

	$000	$000	
Profit (change in retained earnings)		516	*($1662 less $1346)*
Add provision for taxation	120		
debenture interest paid	78	198	
Profit from operations		714	

Extracts from the financial statements would have shown:

Income statement extract for the year ended 31 December 2013

	$000
Profit from operations	714
Less debenture interest	(78)
	636
Taxation	(120)
Profit for the year	516

Statement of changes in equity

	$000
Retained earnings	
Balance at 1 January 2013	1346
Profit for the year	516
	1862
Dividends paid	(150)
Transfer to general reserve	(50)
Balance at 31 December 2013	1662
General reserve	
Balance at 1 January 2013	350
Transfer for the year	50
Balance at 31 December 2013	400

Calculation of cash flows created by depreciation of non-current assets

In some cases, the calculation of cash flows created by the provision of depreciation of non-current assets is straightforward. It involves comparing the aggregate depreciation at the start of a financial year with the aggregate depreciation at the end of the year. The resulting amount should then be added to the profit from operations.

Example

The following extracts have been taken from the statements of financial position of Betabigga plc.

	at 31 July 2014		at 31 July 2013	
	$000	$000	$000	$000
Non-current assets				
Premises	2500		2500	
Less depreciation	(1850)	650	(1800)	700
Machinery	2830		2830	
Less depreciation	(1981)	849	(2098)	732

The amounts to be added to the profit from operations would be $167 000:

	$
Provision for depreciation — premises	50 000
— machinery	117 000

Calculation of cash flows resulting from the disposal of non-current assets (derecognition)

Sometimes the calculations are a little more difficult.

Example

The following is an extract from the statements of financial position of Nepps plc at 30 April.

	2014	2013
	$000	$000
Non-current assets at cost	2573	2332
Less depreciation	(1238)	(1021)
	1335	1311

During the year ended 30 April 2014, non-current assets which had cost $720 000 were sold for $274 000. The assets sold had been depreciated by $433 000. You must be able to identify all the cash flows resulting from the sale of the non-current assets.

Using 'T' accounts, you can gain a complete picture of the transactions involved. Journal entries are given to help you with the timing of each entry.

Non-current assets account

	$000		$000
1 May 2011 Balance b/d	2332	Disposal	720
Missing figure	*961*	30 April 2012 Balance c/d	2573
	3293		3293
1 May 2012 Balance b/d	2573		

Depreciation of non-current assets account

	$000		$000
Disposal	433	1 May 2011 Balance b/d	1021
30 April Balance c/d	1238	*Missing figure*	*650*
	1671		1671
		1 May 2012 Balance b/d	1238

Disposal of non-current assets account

	$000		$000
Non-current assets	720	Depreciation of non-current assets	433
		Bank	274
		Income statement	13
	720		720

Journal entries show the timing of each entry:

	Debit	Credit
	$	$
Dr Disposal of non-current assets account	720 000	
Non-current assets account		720 000

Non-current assets are removed from the non-current assets account and entered in a disposal account:

	Debit	Credit
	$	$
Dr Depreciation of non-current assets account	433 000	
Disposal of non-current assets account		433 000

Depreciation 'belonging' to the asset is taken from the depreciation account and entered in the disposal account:

	Debit	Credit
	$	$
Dr Bank account (not shown)	274 000	
Disposal of non-current assets account		274 000

The cash inflow is entered in the disposal account. At this point we need a 'missing' figure $13 000:

	Debit	Credit
	$	$
Dr Income statement	13 000	
Disposal of non-current assets account		13 000

The 'loss' on disposal is entered in the income statement. It is *not* cash, but it has been entered in the income statement as an extra expense — it reduces profit by $13 000 but there has been no movement of cash.

Enter the closing balances given in the question.

The non-current assets account and the depreciation account will not balance unless you put in the two missing figures. The missing figure in the non-current assets account must either be a revaluation or the purchase of more non-current assets. A revaluation has not been mentioned, so the missing figure must be non-current assets purchased during the year: a cash outflow of $961 000.

This year's charge to the income statement must be inserted to make the depreciation account balance. $650 000 is the amount to be entered in the account and in the income statement. The profit is reduced by $650 000 but *no* cash has moved into or out of the business. Both the loss on disposal of $13 000 and the depreciation for the year of $650 000 have reduced profit, but there has been no movement of cash. Both have to be added to the profit from operations to arrive at the actual cash flow generated by the company.

Revaluations of non-current assets

Revised

A revaluation of non-current assets changes a statement of financial position. The non-current assets will increase in value, as will the equity of the company. However, as such a revaluation merely involves ledger entries, there will be no movement in cash. Therefore, there will be no entry in a statement of cash flows.

Bonus issue of shares

Revised

Such transactions impact on the statement of financial position of a limited company, but do not cause any movements in cash resources. The issue of bonus shares is not shown in a statement of cash flows.

Typical mistake

Both revaluations of non-current assets and bonus issues of shares give many students problems. Don't be one of those who gets it wrong and includes them when answering statements of cash flows questions.

Headings used in statements of cash flows

Revised

Companies must prepare statements of cash flows in the format described in IAS 7. A statement of cash flows should be published with the other financial statements. Cash flows should be analysed as:

- operating activities
- investing activities
- financing activities

Expert tip

Some students learn these headings by remembering the first letters of the words as 'OIF' or by using a mnemonic such as 'Ostriches Invade France'.

Operating activities

Cash flows from **operating activities** are the cash inflows and outflows resulting from normal business activities. They are the main revenue producing activities of the company. Using the indirect method of preparing a statement of cash flows means that we have to adjust the **profit from operations** (or loss) for the year as this figure has been calculated using the accruals concept of preparation.

Operating activities are the cash effects of transactions that are not investing or financing activities.

Profit from operations is profit for the year less tax and interest.

Amortisation is the writing-off of part (or all) of the cost of an intangible asset, such as goodwill, over its useful life. It is similar to the depreciation charged on a tangible non-current asset.

The operating activities section of the statement contains the following adjustments:

- add depreciation for the year (and any **amortisation** of intangible assets)
- add losses on sales of non-current assets (or deduct profits on sales of non-current assets)
- add decrease in inventory (or deduct increase in inventory)
- add decrease in trade receivables (or deduct increase in trade receivables)
- add increase in trade payables (or deduct decrease in trade payables)

These adjustments to the profit from operations gives the cash used in/from operations. Two further adjustments are necessary:

- deduct interest paid during the year
- deduct tax paid during the year

The result is the net cash used in/from operating activities.

Typical mistake

Many students deduct depreciation and losses on disposals of non-current assets from operating profit as they are used to doing this when they prepare an income statement. They are also tempted to add a profit on disposal.

Investing activities

Investing activities are cash inflows and outflows resulting from the acquisition and disposal of non-current assets and investments:

- cash inflows include receipts from the disposal of all types of non-current assets
- cash outflows include payments to acquire all types of non-current assets

Typical mistake

'Non-cash' transactions are book entries and do not involve movements in cash so they are not entered in a statement of cash flows.

Expert tip

Only cash flows arising from purchases and sales of non-current assets appear under 'Investing activities'. Changes in other assets appear as adjustments to the profit from operations.

Financing activities

Financing activities are activities that change the equity capital or long-term borrowing structure of a company. They are the result of receipts from and to external providers of finance:

- cash inflows include receipts from share issues or issues of debentures, as well as receipts from other long-term borrowings (but not overdrafts)
- cash outflows include dividends paid and payments to redeem shares and the repayment of long-term loans

Typical mistake

Only dividends actually paid during the year are included as financing activity outflows in the statement. Outflows will, generally, be interim dividends paid during the year plus the final dividend agreed at the AGM based on the previous year's profits. Don't include the current year's proposed final dividend.

Revision activity

List three items that you would expect to find under each of the three headings of 'Operating activities', 'Investing activities' and 'Financing activities'.

Areas that can pose problems

Revised

The following areas can be problematic when preparing statements of cash flows:

- Profit from operations is the profit for the year before tax and interest.
- Depreciation for the year should be added to the profit from operations.
- Profits made on the disposal (derecognition) of non-current assets should be deducted from profit from operations, whereas losses on disposals should be added.
- Revaluations of non-current assets should be disregarded as the increase in asset valuation involves only ledger entries.
- Bonus issues of shares do not involve any movement in cash.
- The total of movements in cash for the year is added to the cash and cash equivalents at the start of the year. The result should be the cash and cash equivalents at the financial year end.
- A reconciliation of net cash to movement in **net debt** shows how increases or decreases in debt have affected the movement in cash over the year.

Net debt is the borrowings of a company less cash and other liquid resources.

Now test yourself

Tested

6 Identify the three sections required by IAS 7 that must be shown in a statement of cash flows.

7 Explain why depreciation is added to the profit from operations when calculating cash flows.

8 How would you treat a loss on the disposal of a non-current asset?

9 Premises have been revalued from $400 000 to $500 000. Calculate the amount to be shown in a statement of cash flows and state under which heading this event would be shown.

10 During 2013 last year's final dividend of $32 000 and this year's interim dividend of $14 000 was paid. This year's final dividend of $40 000 has been proposed. Under which heading in a statement of cash flows should these dividends be shown and what is the amount to be included?

Answers on p.189

Reconciliation of net cash to movement in net debt

Revised

This part of a statement of cash flows shows how increases or decreases in the components of a company's debt have influenced the increase or decrease in cash generated during the year.

Example

A reconciliation of net cash flow to a movement in net debt for the year ended 31 July 2014 based on the following data is as follows.

	at 31 July 2014 $000	at 31 July 2013 $000
Cash and cash equivalents	212	67
6% debentures	(300)	(400)

Reconciliation of net cash flow to movement in net debt for the year ended 31 July 2014

	$000	
Increase in cash in the period	145	*($212 less $67)*
Cash used to re-purchase debentures	100	
Change in net debt	245	
Net debt at 1 August 2013	(333)	*($400 less $67)*
Net debt at 31 July 2014	(88)	*($300 less $212)*

An increase in cash resources of $145 000 coupled with a reduction of $100 000 in debenture debt accounts for the reduction of $245 000 in the net debt.

Typical mistake

Students often state that a statement of cash flows indicates if a business requires an overdraft at some time in the future. A statement of cash flows is a historical document dealing with past events; it is not a predictor of future events.

Expert tip

You have seen how the constituent parts of cash flows are calculated. Generally, examination questions ask for a statement of cash flows prepared in accordance with IAS 7.

Why a business might prepare a statement of cash flows

Revised

There are a number of reasons why an organisation might prepare a statement of cash flows:

- It may be a statutory requirement.
- Together with the income statement and the statement of financial position, it helps to give a fuller picture of the financial activities of the business.
- It is one of the statements that bridges the gap between two statements of financial position.
- Cash flows are an objective measure.

Revision activity

Explain to a non-accountant the difference between a cash flow forecast, a cash budget and a statement of cash flows.

The internal financial statements of limited companies

Revised

Limited companies prepare a full set of financial statements similar in content to those you have prepared for sole traders and partnerships. These statements are used by the directors and senior managers as a management tool. They provide detailed information that allows strategic decisions to be made. The published statements that are sent to shareholders and others entitled to receive them are incorporated into an annual report. The report uses:

- standardised formats that conform to the Companies Acts 1985 and 1989, to allow comparisons with other public companies
- an abridged version of the financial details

Published financial statements are dealt with in Topic 16, Published Company Accounts (see p. 129).

Now test yourself

11 Explain how net debt is calculated.

12 'A company that has made an operating loss for a year does not need to prepare a statement of cash flows. However, it must resume preparing a statement when it moves back into profitability.' Is this statement true or false?

Answers on p.189

Tested

Partnership changes

Dissolution of partnership

Revised

A partnership may be dissolved under the following circumstances:

- on the death of a partner
- on the retirement of a partner
- when a partner is declared bankrupt
- by mutual agreement of the partners

The effects of asset and liability revaluation

Revised

When a partnership is dissolved, the assets of the business are disposed of and any liabilities are then settled. The order of settling debts (liabilities) is:

1. trade payables
2. partners' loan accounts
3. partners' capital accounts

The assets can be disposed of in a variety of ways, such as being sold for cash, taken over by one or more of the partners or sold to a limited company.

When a partnership is dissolved, a realisation account is opened. The actual cash received from receivables is debited to the partnership bank account and the cash paid to payables is credited to the bank account.

Realisation account

The carrying amount of the assets	Proceeds from the sales of the assets disposed of
Costs of the dissolution	Other incomes or benefits
Discounts allowed	Discounts received
Profit on dissolution	Loss on dissolution

Unless the question states differently, assume that the partnership will collect any outstanding monies owed by receivables and pay off outstanding payables.

A **profit** on the realisation account is posted to the credit of the partners' capital accounts in profit-sharing ratios. A **loss** on the realisation account is posted to the debit side of the partners' capital accounts in profit-sharing ratios. The agreed value of assets taken over by partners is debited to the appropriate capital account(s) and credited to the realisation account.

Typical mistake

A common mistake made by many students is to enter the amount raised by the sale of the assets on the debit side of the realisation account. Make sure that it is the carrying amount of the assets that you enter on the debit side.

Typical mistake

Don't attempt to share any balance left in the bank account in any pre-determined ratio. The bank account is used to clear any outstanding balances left on the partners' capital accounts.

Expert tip

At the end of this type of question, there should be no outstanding balances anywhere in your answer.

Revision activity

Identify the items you would expect to find on the debit side of a realisation account. Then identify the items you would expect to find on the credit side.

Now test yourself Tested

13 Give two examples of structural changes to a partnership.

14 Explain why it is necessary to revalue the assets held by a partnership when a structural change takes place.

15 **(a)** Identify two items that you might expect to find on the debit side of a realisation account.

(b) Identify two items that you might expect to find on the credit side of a realisation account.

16 The debit side of a revaluation account is greater than the credit side.

(a) Does this represent a profit or a loss on realisation?

(b) Where would you expect to find the corresponding double entry?

Answers on p.189

Assets taken over by a limited company

Some assets may be sold to a limited company. The purchase consideration could take the form of:

- cash
- cash and shares
- cash and debentures
- debentures and shares
- cash, debentures and shares

The major problem area in such questions is the allocation of shares in the limited company purchasing some or all of the assets of the partnership. The distribution of shares is in some ratio that will be given in the question. The value of the shares is used as the basis for distribution *not* the number of shares given.

Example

Abel, Bart and Carmen share profits and losses 2:2:1 respectively. The partnership was sold to Delerm Ltd. The purchase consideration was $600 000 made up of $30 000 cash; $90 000 of 7% debentures and 100 000 $1 ordinary shares. A statement of financial position for the partnership immediately prior to the dissolution showed the following.

	$
Net assets (other than cash)	350 000
Cash	10 000
Capital account balances — Abel	120 000
— Bart	90 000
— Carmen	150 000

Debentures were distributed according to the last agreed capital account balances. Shares were distributed in profit-sharing ratios. Each partner received:

	Abel $	Bart $	Carmen $
Value of:			
Debentures	30 000	22 500	37 500
Shares	192 000	192 000	96 000
Cash	(2 000)	(24 500)	66 500
Number of shares	40 000	40 000	20 000

Workings

	Abel $	Bart $	Carmen $	
Capital account balances	120 000	90 000	150 000	
Profit on sale of partnership	100 000	100 000	50 000	*($600 000 less $350 000)*
Debenture distribution	(30 000)	(22 500)	(37 500)	
Share distribution	(192 000)	(192 000)	(96 000)	*(Value $480 000)*
Cash paid	2 000	24 500		
Cash received			(66 500)	

Now test yourself Tested

17 The purchase consideration paid by a limited company to acquire a partnership business of A, B and C was $450 000 made up of $10 000 cash, $44 000 debentures and 180 000 ordinary shares of $1 each. The shares were split between the partners in the ratio of A ½ : B ⅓ : C ⅙. How many shares did partner B receive and what was the value of each ordinary share?

Answer on p.189

Redemption of shares

The effect on the statement of financial position

Revised

When preference shares are redeemed or a company purchases its own shares, an amount equal to the value of the shares redeemed must be transferred from revenue reserves (generally retained earnings) to a **capital redemption reserve**. Capital reserves cannot be distributed to shareholders in the form of cash dividends.

The Companies Act 1985 seeks to protect payables whose interest may suffer if the company's capital is depleted. Therefore, the equity of the company must be restored by either a new issue of shares or by converting a revenue reserve into a capital reserve (which cannot be distributed in cash), or by a combination of these. The application of this rule means that the capital structure of the company is maintained.

Example

A summarised statement of financial position of Wong plc is as follows.

	$000
Non-current assets	2000
Net current assets	300
Non-current liabilities	
7% redeemable preference shares of $1 each	(500)
	1800
Equity	
Ordinary shares of $1 each	1000
Share premium account	200
Retained earnings	600
	1800

Prepare a summarised statement of financial position immediately after the events in each of the following scenarios.

Scenario 1 — the preference shares are redeemed out of a new issue of 500 ordinary shares at par.

Scenario 2 — the preference shares are redeemed out of a new issue of ordinary shares at $2 each.

Scenario 3 — the preference shares are partly redeemed by an issue of 450 ordinary shares at par.

Scenario 4 — the preference shares are partly redeemed by an issue of 200 ordinary shares at $2 each.

Answer to scenario 1

	$000	
Non-current assets	2000	*(The issue of new ordinary shares*
Net current assets	300	*has raised sufficient capital to*
	2300	*redeem the preference shares)*
Equity		
Ordinary shares of $1 each	1500	
Share premium account	200	
Retained earnings	600	
	2300	

Answer to scenario 2

	$000	
Non-current assets	2000	*(The issue of new ordinary shares has raised sufficient capital to redeem the preference shares)*
Net current assets	300	
	2300	
Equity		
Ordinary shares of $1 each	1250	
Share premium account	450	
Retained earnings	600	
	2300	

Answer to scenario 3

	$000	
Non-current assets	2000	*(The new issue of ordinary shares has raised $450 000.This is insufficient to fund the total redemption. In order to protect the payables, $50 000 must be transferred into a capital reserve which cannot be distributed as cash)*
Net current assets	250	
	2250	
Equity		
Ordinary shares of $1 each	1450	
Share premium	200	
Capital redemption reserve	50	
Retained earnings	550	
	2250	

Answer to scenario 4

	$000	
Non-current assets	2000	*(The new issue of ordinary shares has raised $400 000. This is insufficient to fund the total redemption. In order to protect the payables, $100 000 must be transferred into a capital reserve which cannot be distributed as cash)*
Net current assets	200	
	2200	
Equity		
Ordinary shares of $1 each	1200	
Share premium account	400	
Capital redemption reserve	100	
Retained earnings	500	
	2200	

Revision activity

Draft some notes to explain to a junior clerk the function of a capital redemption reserve and how it can be used in the future.

Premium on redemption of shares

Revised

When a premium is paid to the shareholders on redemption of their shares, certain rules must be adhered to if the premium is to be debited to the share premium account. The shares must:

- originally have been issued at a premium
- be funded by a new issue of shares

Also, any amount debited to the share premium account must be the lesser of the amount received as a premium on the new issue of shares or the credit balance in the share premium account.

The amount to be debited to the share premium account must not exceed the credit balance in the account. Any excess must be debited to retained earnings. Any premium on redemption must be debited to retained earnings if the shares being redeemed:

- were not originally issued at a premium
- are not being redeemed out of a new share issue

Example

The summarised statement of financial position of Coloccini plc is as follows. Note that the preference shares were originally issued at a premium of $0.25.

	$000
Non-current assets	3000
Net current assets	800
Non-current liabilities	
8% redeemable preference shares of $1 each	(400)
	3400
Equity	
Ordinary shares of $1 each	2000
Share premium account	750
Retained earnings	650
	3400

Prepare a summarised statement of financial position immediately after the events in each of the following scenarios.

Scenario 1 — 350 000 preference shares were redeemed at $1.25 each. No new issue of shares was made.

Scenario 2 — the preference shares were redeemed at $1.25 each. A new issue of 350 000 ordinary shares of $1 each was made at $1.10 each.

Scenario 3 — the preference shares were redeemed at $1.25 each. A new issue of 400 000 ordinary shares of $1 each was made at $1.30.

Answer to scenario 1

	$000	
Non-current assets	3000	
Net current assets	362.5	*(800 less 350 less 87.5)*
Non-current liabilities		
8% redeemable preference shares of $1 each	(50)	*(400 less 350)*
	3312.5	
Equity		
Ordinary shares of $1 each	2000	
Share premium	750	
Capital redemption reserve	350**	
Retained earnings	212.5	*(650 less 87.5* less 350)***
	3312.5	

* The premium on redemption has been debited to retained earnings as no issue of shares has been made — the share premium cannot be used.

** No new issue of shares has been made, so payables are protected by the creation of a capital redemption reserve.

Answer to scenario 2

	$000	
Non-current assets	3000	
Net current assets	685	*(800 less 400 less 100 + 385)*
	3685	
Equity		
Ordinary shares of $1 each	2350	*(2000 + 350)*
Share premium account	750	*(35 less 35)**
Capital redemption reserve	50**	
Retained earnings	535	*(650 less 65* less 50)***
	3685	

* Part of the premium on redemption has been debited to share premium and part to retained earnings. Only $35 000 can be debited to share premium as this is the amount of share premium raised by the new issue of shares.

** A capital redemption reserve has been created to protect payables as the proceeds from the new share issue is $50 000 less than the amount needed to redeem the preference shares.

Answer to scenario 3

	$000	
Non-current assets	3000	
Net current assets	820	*(800 less 500 + 520)*
	3820	
Equity		
Ordinary shares of $1 each	2400	*(2000 + 400)*
Share premium account	770	*(750 less 100 + 120)*
Retained earnings	650	
	3820	

All of the premium on redemption can be debited to share premium as it is less than the premium charged on the new issue of shares. There is no need to protect the payables by creating a capital redemption reserve as the permanent capital of the company has not been depleted by the redemption.

Now test yourself Tested

1 What is a capital redemption reserve and what is its purpose?

2 A company redeems $50 000 of redeemable preference shares. It issues 100 000 ordinary shares of $0.25 each at par in order to fund the redemption. Explain:
   (a) if a capital redemption reserve is needed
   (b) if needed, the value of the reserve
   (c) where any amount comes from

3 20 000 redeemable preference shares of $1 each are redeemed for $1.05. The shares were originally issued for $1.10 in 1991. Explain how the premium on redemption should be treated.

Answers on p.190

Revision activity

List the rules that are necessary when a premium on redemption of shares can be debited to a share premium account

Capital reduction and reconstruction

The effect on the statement of financial position

Revised

Limited companies may reduce their share capital provided they do so legally and do not endanger the position of payables. A company that has been trading unsuccessfully for a number of years and has, as a consequence, a debit balance on retained earnings may seek to undertake a scheme of capital reduction.

Example

The summarised statement of financial position of Xain Ltd at 30 June 2014 is as follows.

	$000
Net assets	290
Equity	
400 000 ordinary shares of $1 each	400
Retained earnings	(110)
	290

The net assets are overvalued; a more realistic valuation is $200 000. The company has not paid dividends for a number of years. After signing several new contracts for work, the directors believe that the company can become profitable and start to pay dividends again in the future. The shareholders agree to a scheme of capital reduction. The scheme reduces the net assets by $90 000 and the debit balance on retained earnings by $110 000. Debit balances are reduced in total by $200 000. Capital (equity) is reduced by an equivalent amount.

Therefore, the reconstructed statement of financial position would appear as:

	$000
Net assets	200
Equity	
Ordinary shares	200

The equity could be made up of 400 000 ordinary shares of $0.50 or 200 000 ordinary shares of $1 each. A limited company may alter its share capital if permitted by its articles of association, so either course of action is possible. You would be directed in the question how the 'new' share capital is to be made up.

Revision activity

Explain to a non-accountant how retained earnings could be a negative amount.

Bonus and rights issues

A bonus issue of shares

Revised

The effect in a statement of financial position

Bonus shares are issued to existing shareholders for free. The shares are 'paid' for by using reserves. Reserves are profits retained within a company. Over the lifetime of a limited company, reserves may increase. This may be because of an upward revaluation of non-current assets, the premium paid by investors in a new issue of shares, the 'ploughing back' of profits or because of the creation of a capital redemption reserve (see earlier in this topic, p. 108).

If reserves reach a level that makes the equity of a company totally unrepresentative of the asset base of the business, the directors may distribute the reserves as bonus shares. Revenue reserves are built up from retained profits. They are distributable reserves, which means they can be brought back into the income statement at some future date and may be distributed as cash dividends.

Expert tip

Examination questions generally say that it is company policy to maintain reserves in their most flexible form. This means that a bonus issue of shares should be funded by using capital reserves first.

Example

The following statement of financial position has been prepared after Manchu plc has traded for many years.

	$000	
Non-current assets	5600	*(It can be seen clearly that the asset base of the company of $6 050 000 is much greater than the issued share capital $1 500 000)*
Net current assets	450	
	6050	
Equity		
Ordinary shares of $1	1500	
Share premium account	500	
Revaluation reserve	2500	
Retained earnings	1550	
	6050	

The directors of Manchu made a bonus issue of shares on the basis of two shares for every one ordinary share held. It is company policy to maintain reserves in their most flexible form. A statement of financial position prepared immediately after the completion of the bonus issue is as follows.

	$000	*(It can now be seen that the asset base is more in line with the value of issued ordinary shares)*
Non-current assets	5600	
Net current assets	450	
	6050	
Equity		
Ordinary shares of $1 each	4500	
Retained earnings	1550	
	6050	

Note that retained earnings have not been used; these can be used if needed to provide cash dividends in the future. From a company's point of view:

- the statement of financial position now shows a more realistic picture
- the shareholders can now be seen to own the major part of the company's value
- the liquid resources of the business have not been depleted

From the shareholders' point of view:

- they now own more shares in the company
- the monetary value of their holdings has not changed as the market value of each share will decrease pro rata
- the decrease in the value of each share may make them more marketable
- if the dividend per share is maintained, a greater total dividend will be received

Revision activity

Identify the similarities and differences between an issue of bonus shares and a rights issue of shares.

A rights issue of shares

Revised

The effect in a statement of financial position

Limited companies can raise more permanent capital by issuing more shares. A rights issue is a cheaper method than a public offering. It is an invitation to existing shareholders to subscribe for further shares based on their existing holding. The effect that a rights issue has in a statement of financial position is exactly the same as the effects of an issue to the general public at large.

Example

The summarised statement of financial position of Fawaz plc was as follows.

	$000
Net assets	5400
Equity	
Ordinary shares of $0.50 each	3800
Retained earnings	1600
	5400

The company made a rights issue of one new ordinary share for every four shares held. The issue price was $1.20. All shareholders took up their rights. After all the monies were paid, the statement of financial position appeared as follows.

	$000
Net assets	7680
Equity	
Ordinary shares of $0.50 each	4750
Share premium	1330
Retained earnings	1600
	7680

Shareholders who do not wish to take up their right to purchase more shares can sell the rights to a third party.

Reserves

Reserves are not cash; they are past profits and as such they belong to the shareholders. They are either accumulated profits earned from trading activities or capital adjustments.

Revenue reserves

Revised

Revenue reserves are the most flexible form of reserves. If they are found to be excessive, they can be transferred back to the income statement, which allows them to be available for the payment of dividends. You might encounter the following revenue reserves:

- retained earnings
- general reserve
- non-current asset replacement reserve

Revenue reserves may also be used to issue bonus shares, but this may not be a wise move as it may affect company liquidity adversely.

Capital reserves

Revised

Capital reserves are created from capital transactions or adjustments to the capital structure of the company. They are not available for distribution as cash dividends as they are not created from 'normal' operating activities. You might encounter the following capital reserves:

- share premium account
- revaluation reserves
- capital redemption reserve

Any distribution to shareholders using these reserves will be in the form of bonus shares.

Now test yourself

Tested

4 Distinguish between a bonus issue of shares and a rights issue of shares.

5 A company wishes to raise $100 000. Should the company use a bonus issue or a rights issue to raise the extra capital?

6 Explain the difference between revenue reserves and capital reserves. Give an example of each type of reserve.

Answers on p.190

15 Business purchase

The purchase of an unincorporated business by a limited company

Goodwill

Revised

When a successful business is sold, the vendor generally sets the selling price at a level greater than the value of the net assets being sold. The cash paid by the purchaser to acquire the **goodwill** is paid in order to gain access to future profits generated by the business taken over. These principles apply to any business purchasing net assets at a price greater than the value of these assets.

Goodwill is an intangible asset. It is the cost of acquiring a business less the total value of the assets and liabilities that have been purchased. If the amount paid for a business is less than the value of its net assets, the result is **negative goodwill**. This is shown as a negative figure under the heading 'Intangible non-current assets'.

Example

Akrim's business has non-current assets of $180 000 and net current assets of $30 000 at 31 December 2013. A summarised statement of financial position of Yukiya plc on the same date shows:

	$000
Non-current assets	2050
Net current assets	380
	2430
Equity	
Ordinary shares of $1 each	2000
Reserves	430
	2430

Yukiya plc purchased Akrim's business at the start of business on 1 January 2014. The purchase consideration was $300 000 made up of $50 000 cash and 100 000 ordinary shares. Yukiya plc valued the non-current assets taken over at $200 000 and net current assets at $25 000.

After the acquisition, Yukiya's summarised statement of financial position at 1 January 2014 would be as follows.

Yukiya plc. Summarised statement of financial position at 1 January 2014

	$000	
Non-current assets	2250	*($2050 + 200)*
Goodwill	75	*($225 000 assets purchased for $300 000)*
Net current assets	355	*($380 less 50 + 25)*
	2680	
Equity		
Ordinary shares of $1 each	2100	*($200 000 + 100 000)*
Share premium	150	*(100 000 shares with a value of $250 000)*
Other reserves	430	
	2680	

1 Akrim has made a capital gain (profit) on the sale of his business of $90 000. (Net assets $210 000 sold for $300 000)

2 Akrim's 100 000 ordinary shares have a value of $250 000 ($300 000 purchase consideration less cash $50 000) or $2.50 per share ($65 000/30 000).

Calculation of goodwill (intangible assets) and negative goodwill (intangible assets)

A purchase consideration may be the same as the value of assets taken over, less than the value of assets taken over or more than the value of assets taken over. If the purchaser pays more than the value of the net assets taken over, they are paying for the advantage of acquiring profits greater than those that could be expected on the tangible assets taken over. Negative goodwill arises when the purchase consideration is less than the value of net assets taken over.

Revision activity

Identify two unincorporated businesses near your school/college.

Merger of unincorporated businesses to form a partnership

Revised

After the two (or more) owners have agreed on values for the assets and liabilities that are to form the new partnership, the two statements of financial position are combined. It may be necessary for the partners to make payments or withdrawals of capital to achieve the required capital account balances that have been agreed.

Unincorporated businesses describes all businesses that are not limited companies.

Example

Axel and Bea agree to merge their two businesses into a partnership from 1 January 2014. The following are statements of financial position at 31 December 2013.

	Axel		Bea	
	$	$	$	$
Non-current assets		40000		70000
Current assets				
Inventory	5000		15000	
Trade receivables	3500		9000	
Cash and cash equivalents	1000		4000	
	9500		28000	
Current liabilities				
Trade payables	(2500)	7000	(7000)	21000
		47000		91000
Capital accounts		47000		91000

The following values have been agreed for assets to be taken over by the partnership:

	Axel	Bea
	$	$
Non-current assets	50000	60000
Inventories	4000	14000
Trade receivables	3000	9000

The partnership would assume responsibility for the current liabilities of both businesses. Each partner would start with capital of $60000. Bankers have agreed to provide any necessary overdraft facilities.

A statement of financial position for the partnership at the start of trading on 1 January 2014 shows:

Axel and Bea. Statement of financial position at 1 January 2014

	$
Non-current assets	110000
Current assets	
Inventories	18000
Trade receivables	12000
Current liabilities	
Trade payables	(9500)
Cash and cash equivalents (overdraft)	(10500)
	120000
Capital accounts — Axel	60000
— Bea	60000
	120000

Workings

Capital account — Axel				Capital account — Bea			
Cash	1 000	Balance b/d	47 000	Cash	4 000	Balance b/d	91 000
Balance c/d	54 500	Valuation	8 500	Valuation	11 000		
	55 500		55 500	Balance c/d	76 000		
		Balance b/d	54 500		91 000		91 000
		Cash	5 500	Cash	16 000	Balance b/d	76 000

Axel pays $5500 to the business. Bea receives $16 000 so a $10 500 bank overdraft is necessary.

Now test yourself Tested

1. Value of Jorge's net assets taken over $129 000; purchase consideration paid by Bandi $200 000. Calculate the value of goodwill and state how it should be shown in the statement of financial position of Bandi.
2. Value of Adnan's net assets taken over $560 000; purchase consideration paid by Baldeep $500 000. Calculate the value of goodwill and state how it should be shown in the statement of financial position of Baldeep.
3. Rollo sells his business net asset value $250 000 to Sukhdev for a purchase consideration of $300 000. Calculate the value of goodwill for both Rollo and Sukhdev.

Answers on p.190

The purchase of a partnership by a limited company

Purchasing a partnership

Revised

When a limited company purchases a partnership, the process is similar to when a sole trader's business is purchased. Technical difficulties could be encountered when apportioning shares and debentures between partners. The proportions of each security to be allocated to each partner will be given in the question.

Expert tip

Remember, don't try to close the partnership books of account at the same time as you prepare the company's statement of financial position. Treat each part of such a question as if it were two totally separate questions. If you need help in remembering how to do this, partnership dissolution is covered in Topic 13, Partnership changes (see p. 105).

Example

Yak and Moin are in partnership, sharing profits and losses in the ratio of 3:1 respectively. Their statement of financial position at 31 January 2014 showed the following.

	$
Non-current assets	
Premises	210 000
Office equipment	30 000
Vehicles	50 000
Current assets	
Inventory	16 000
Trade receivables	26 000
Bank balance	5 000

Non-current liabilities	
Loan — Moin	(80 000)
Current liabilities	
Trade payables	(7 000)
Net assets	250 000
Capital accounts — Yak	150 000
— Moin	100 000
	250 000

The partnership was taken over by Shalev plc before the start of business on 1 February 2014. The purchase consideration was $500 000, consisting of:

- $50 000 cash
- $52 000 7% debentures shared between the partners in their profit-sharing ratios
- 1 000 000 ordinary shares of $0.25 each shared equally between the partners

For the purposes of the takeover, the partnership assets were valued as follows.

	$
Premises	300 000
Office equipment	25 000
Vehicles	40 000
Inventory	14 000
Trade receivables	25 000

A statement of financial position for Shalev plc at 31 January 2014 showed:

	$000
Non-current assets	
Land and buildings	6400
Machinery	1400
Vehicles	230
Current assets	
Inventory	62
Trade receivables	49
Cash and cash equivalents	7
Non-current liabilities	
7% debentures	(400)
Current liabilities	
Trade payables	(58)
Net assets	7690
Equity	
Ordinary shares of $0.25 each	5000
Share premium	1500
Other reserves	1190
	7690

A statement of financial position for Shalev plc at 1 February 2014 after the takeover shows:

Shalev plc. Statement of financial position at 1 February 2014

	$000
Non-current assets	
Goodwill	103
Land and buildings	6700
Machinery	1400
Office equipment	25
Vehicles	270
Current assets	
Inventory	76
Trade receivables	74
Non-current liabilities	
7% debentures	(452)

Current liabilities	
Trade payables	(65)
Cash and cash equivalents	(43)
Net assets	8088
Equity	
Ordinary shares of $0.25 each	5250
Share premium	1648
Other reserves	1190
	8088

The entries necessary to dissolve the partnership of Yak and Moin:

Realisation account

Premises	210000	Shalev	500000	Realisation	500000	Cash	50000
Office equipment	30000	Trade payables	7000			Capital Yak	39000
Vehicles	50000					Capital Moin	13000
Inventory	16000					Capital Yak	199000
Trade receivables	26000					Capital Moin	199000
Capital Yak	131250				500000		500000
Capital Moin	43750						
	507000		507000				

Shalev plc

Cash	50000	
Capital Yak	39000	(deb)
Capital Moin	13000	(deb)
Capital Yak	199000	(shares)
Capital Moin	199000	(shares)
	500000	

Loan account — Moin

Bank	80000	Balance b/d	80000

Capital accounts

	Yak	Moin		Yak	Moin
Shalev (debentures)	39000	13000	Balance b/d	150000	100000
Shalev (shares)	199000	199000	Profit on realisation	131250	43750
Bank	43250		Bank		68250
	281250	212000		281250	212000

Bank account

Balance b/d	5000	Loan Moin	80000
Shalev plc	50000	Capital Yak	43250
Capital Yak	68250		
	123250		123250

The purchase of assets and the assumption of liabilities

The purchase of an existing business

Revised

When more than one business is taken over by a limited company, similar procedures to those used in the previous example are followed.

Example

Ewa and Divya form Divewa Ltd, a company incorporating both businesses. The company commenced trading on 1 April 2014 with share capital of 500000 ordinary shares of $1 each issued at par; the shares were divided equally. Statements of financial position for the two businesses at 31 March 2014 are:

	Ewa $	Divya $
Non-current assets		
Premises	100000	80000
Equipment	40000	20000
Vehicles	30000	25000
Current assets		
Inventory	12000	8000
Trade receivables	20000	18000
Cash	2000	3000
Current liabilities		
Trade payables	(4000)	(12000)
Net assets	200000	142000
Capital	200000	142000

The new company assumed responsibility for current liabilities. All assets were taken over by Divewa Ltd at the following values.

	Ewa $	Divya $
Premises	140000	120000
Equipment	35000	18000
Vehicles	25000	15000
Inventory	10000	7000
Trade receivables	20000	16000

A statement of financial position for Divewa Ltd at the start of trading on 1 April 2014 shows:

	$
Non-current assets	
Goodwill	105000
Premises	260000
Equipment	53000
Vehicles	40000
Current assets	
Inventory	17000
Trade receivables	36000
Cash and cash equivalents	5000
Current liabilities	
Trade payables	(16000)
Net assets	500000
Equity	
Ordinary shares of $1 each	500000

Goodwill calculations

'Purchase' consideration less Ewa's net assets taken over by the company:

250000 ordinary shares of $1 each = $250000
$140000 + $35000 + $25000 + $10000 + $20000 + $2000 less $4000 = $228000
Value of goodwill (Ewa) = $22000
Value of goodwill (Divya) = $83000
$250000 less ($120000 + $18000 + $15000 + $7000 + $16000 + $3000 less $12000)

Example

We can use the information given in the previous worked example to prepare relevant accounts in the books of account of Divya to show the entries necessary to close her business.

Realisation account

Premises	80 000	Trade payables	12 000
Equipment	20 000	Divewa Ltd	250 000
Vehicles	25 000		
Inventory	8 000		
Trade receivables	18 000		
Cash	3 000		
Profit on realisation	108 000		
	262 000		262 000

Capital account — Divya

Divewa Ltd	250 000	Balance b/d	142 000
		Realisation	108 000
	250 000		250 000

Divewa Ltd

Realisation	250 000	Capital — Divya	250 000

Revision activity

A friend says that when one business buys another, an additional payment is made to purchase the customers. This additional payment is for goodwill. Do you agree with your friend? Give reasons for your reply.

The purchase of a business by issue of shares, debentures and cash

Revised

The agreed **purchase consideration** could comprise:

- a cash payment
- an issue of debentures
- an issue of shares
- any combination of cash, debentures and shares

Purchase consideration is the agreed amount paid to acquire a business.

Shares given as part of a purchase consideration should be allotted to the vendor according to *value*, not the number of shares involved.

Example

Pietr sold his business to Ekal plc. The purchase consideration was $400 000, made up of $20 000 cash, $30 000 6% debentures and 25 000 $1 ordinary shares. Pietr would receive:

- $20 000 in cash
- $30 000 in debentures
- $350 000 worth of ordinary shares

Pietr receives cash, debentures and a share certificate for 25 000 shares valued at $350 000. Each share must be worth $14.

Example

Pascal and Christophe share profits and losses in the ratio of 3:2. They sold their business to Tournier Ltd. The purchase consideration was $100 000, made up of $35 000 cash and 40 000 ordinary shares of $1 each. Pascal receives 24 000 ordinary shares worth $39 000; Christophe receives 16 000 ordinary shares worth $26 000.

Mergers and amalgamations

Revised

A **merger** takes place when two or more businesses join together to form a new business. The term is generally applied to the agreed takeover of one limited company by another.

An **amalgamation** occurs when one limited company purchases the assets of another company and assumes the responsibility of paying any trade and other payables.

Example

The statements of financial position at 31 January 2014 of Audouard Ltd and Busch Ltd were as follows.

	Audouard Ltd	Busch Ltd
	$	$
Non-current assets	400000	100000
Current assets	160000	30000
Current liabilities	(100000)	(18000)
Net assets	460000	112000
Equity		
Ordinary shares of $1 each	300000	70000
Retained earnings	160000	42000
	460000	112000

On 1 February 2014 Audouard Ltd acquired the net assets except the bank balance ($4000) of Busch Ltd. The purchase consideration consisted of 100000 shares in Audouard Ltd at par, with any balance being paid in cash. A statement of financial position for Audouard Ltd at 1 February 2014 (immediately after the acquisition of the net assets of Busch Ltd) shows:

	$	
Non-current assets	500000	*($400000 + $100000)*
Current assets	178000	*($160000 + $26000 less $8000)*
Current liabilities	(118000)	*($100000 + $18000)*
	560000	
Equity		
Ordinary shares of $1 each	400000	*($300000 + $100000)*
Retained earnings	160000	
	560000	

Workings

Net assets of Busch Ltd are $108000. The purchase consideration was $100000 in shares and $8000 cash. The retained earnings was a book entry in Busch's books of account, so it is disregarded. The assets of the company taken over are unlikely to be taken over at book value. When the purchase price is greater than the value of the net assets being taken over, the excess represents a payment for goodwill.

Evaluating a business with a view to acquiring it

A positive return on investment

Revised

When one business takes over another business, it does so to gain a positive **return on investment** that might include:

- synergy — greater effectiveness obtained by joining forces
- vertical integration — control of different stages of production or sale of a product

Return on investment describes the financial benefits that will result from investing in another business.

- the acquisition of larger more profitable contracts
- greater geographical coverage
- greater skills coverage — a larger business may attract a more skilful workforce
- perception of new, larger business being more prestigious
- an increase in market share that may disadvantage rivals
- an ability to take advantage of internal economies of scale, such as:
  - technical economies — larger businesses can often be more efficient as costs are not generally proportionate to the increase in size
  - managerial economies — larger businesses can generally afford specialists who concentrate on their areas of expertise
  - financial economies — larger business are generally able to raise finance more easily and tend to have a greater variety of potential sources from which to choose
  - purchasing economies — larger businesses are more likely to purchase materials in larger quantities and therefore take advantage of bulk discounting
- more effective research and development in a larger business
- a more diverse portfolio of products that may open up further markets and reduce the risk associated with a limited range of products

Example

The following statements of financial position are given.

	Abwit plc $000	Borood Ltd $000
Non-current assets		
Premises	2900	300
Plant and machinery	1500	100
Vehicles	500	50
Office equipment	300	70
Current assets		
Inventory	84	18
Trade receivables	97	25
Cash and cash equivalents	48	12
Current liabilities		
Trade payables	(49)	(6)
Net assets	5380	569
Equity		
Ordinary shares of $1 each	3800	400
Retained earnings	1580	169
	5380	569

On 1 August 2014 Abwit plc took over the assets of Borood (except cash and cash equivalents) at the following values.

	$000
Premises	450
Plant and machinery	60
Vehicles	30
Office equipment	50
Inventory	17
Trade receivables	23

Abwit settled the payables of Borood Ltd. The purchase consideration was $720 000, settled by the issue of 400 000 ordinary shares of $1 in Abwit plc at a price of $1.80 each and the balance in cash. The statement of financial position for Abwit plc at 1 August 2014 (immediately after the acquisition of Borood Ltd) is as follows:

	$000	
Non-current assets		
Goodwill	96	
Premises	3350	*($2900 + $450)*
Plant and machinery	1560	*($1500 + $60)*
Vehicles	530	*($500 + $30)*
Office equipment	350	*($300 + $50)*
Current assets		
Inventory	83	*($65 + $18)*
Trade receivables	120	*($97 + $23)*
Current liabilities		
Trade payables	(49)	
Cash and cash equivalents	(42)	*($48 less $6)*
Net assets	6100	
Equity		
Ordinary shares of $1 each	4200	*($3800 + $400)*
Share premium	320	
Retained earnings	1580	
	6100	

The value to Abwit plc of the net assets taken over was $624 000. Goodwill is therefore valued at $96 000 (shares + premium $720 000 less $624 000 value of net assets). The assets and liabilities of the two companies are combined in the books of account.

The acquisition of a shareholding

A company may purchase shares in another company as an investment that would financially benefit the business.

Example

If Amado plc gained control of Bernheim Ltd by purchasing more than 50% of ordinary shares in Bernheim Ltd, Amado plc is the **holding company** and Bernheim Ltd is the **subsidiary company**. Bernheim Ltd would become a **wholly owned subsidiary** if Amado plc owned all of the ordinary shares. The shareholding would be recorded as a non-current asset.

Example

The following summarised statements of financial position are given for two limited companies at 30 November 2013.

	Pine plc	Palm plc
	$000	$000
Non-current assets	34000	230
Net current assets	7680	125
	41 680	355
Equity		
Ordinary shares of $1 each	30000	300
Retained earnings	11 680	55
	41 680	355

Before start of business on 1 December 2013, Pine plc purchased ordinary shares in Palm plc. The effects on the statements of financial position of Pine plc and Palm plc are shown for three different scenarios.

Purchase of ordinary shares in Palm plc at par by Pine plc:

Scenario 1 — 50 000 shares

Scenario 2 — 151 000 shares

Scenario 3 — all the shares in Palm plc

In all cases, the statement of financial position for Palm would remain the same as shown. The only change that has taken place is the change in the ownership of the ordinary shares; this would be recorded in Palm's register of members. Statements of financial position for Pine plc show:

	Scenario 1 $000	Scenario 2 $000	Scenario 3 $000
Non-current assets			
Other non-current assets	34000	34000	34000
Ordinary shares in Palm plc	50	151	300
Net current assets	7630	7529	7380
	41680	41680	41680

The equity section has not changed:

	$000
Equity	
Ordinary shares of $1 each	30000
Retained earnings	11680
	41680

The purchase price of $1 per share in Palm plc was at par. If the purchase price per ordinary share had been as follows, the net assets section would be as below. (The equity section remains unchanged.)

Scenario 1 — $1.20 per share

Scenario 2 — $1.75 per share

Scenario 3 — $4.50 per share

	Scenario 1	Scenario 2	Scenario 3
Price per share	$1.20	$1.75	$4.50
Non-current assets			
Other non-current assets	34000000	34000000	34000000
Ordinary shares in Palm plc	60000	264250	1350000
Current assets	7620000	7415750	6330000
	41680000	41680000	55340000

Book value and equity methods of valuing an investment

Revised

IAS 28 Investments in associates suggests that any of the following factors could be an indication of **significant influence**:

- representation on the board of directors of the **associated company**
- interchange of managers between the two companies
- provision of essential technical information
- participation in policy-making of the associated company
- material transactions between the two companies

There are two methods of recording the investment in one company by another company:

- the equity method. The initial investment is recorded in the investing company's books of account using the cost of purchase. Each year the cost of this investment is adjusted up or down to reflect the value of the retained profits (or losses) in the associated (subsidiary) company. This reflects the value of total equity and net assets held in the associate or subsidiary company
- the book value method (also known as the cost method). The investment is recorded at purchase price and this value remains unchanged each year. The value of the investment is not adjusted to reflect the share of the associate's retained earnings. The associate or subsidiary profits are not recorded by the investing company; only dividends received are recorded

Significant influence is where an investing company takes an active part in policy decisions of the subsidiary company, but is not in control (i.e. the holding company has less than 50% of the ordinary shares of the other company).

An **associated company** is a company that is partly owned by another company. The associated company is between 20% and 50% owned by the investor company, which can exert significant influence in the running of the associated company.

Table 15.1 Book value and equity methods of valuing an investment

Investment	Description	Recorded as	Method of valuation
Less than 20% of issued shares	Trade investment	Non-current asset or current asset	Book value (cost)
Between 20% and 50%	Associated company	Non-current asset	Equity
Over 50%	Subsidiary company	Non-current asset	Equity

An investing company using the equity method of valuation records changes to the book value of the investment.

Example

Geko plc purchased 25% of the issued ordinary shares of Hastone plc for $200 000. In the year ended 31 December 2013, Hastone's reported profit was $120 000. It paid ordinary share dividends of $15 000. Entries in the financial statements of Geko plc show how the investment in Hastone is recorded:

Book value (cost) method in the books of account of Geko plc

Cost of investment	Entries in financial statements	
25% of ordinary shares in Hastone plc for $200 000	**Statement of financial position**	
	Non-current assets	
	Investment in associate	$200 000
	Current assets	
	Cash and cash equivalents reduce by	$200 000
Dividends paid on ordinary shares $15 000	**Statement of financial position**	
	Current assets	
	Cash and cash equivalents increase by	$3 750
	Income statement	
	Revenue increase by	$3 750

Equity method in the books of account of Geko plc

Cost of investment	Entries in financial statements	
25% of ordinary shares in Hastone plc for $200 000	**Statement of financial position**	
	Non-current asset	
	Investment in associate	$200 000
	Current assets	
	Cash and cash equivalents reduce by	$200 000
Hastone plc reported profits $120 000	**Income statement**	
	Revenue	$30 000
	Statement of financial position	
	Non-current asset	
	Investment in associate	$30 000
25% of $15 000 dividends paid on ordinary shares	**Statement of financial position**	
	Non-current asset	
	Investment in associate reduce by	$3 750
	Current assets	
	Cash and cash equivalents increase by	$3 750

A statement of financial position prepared for a company using the book value (cost) method would show only the initial investment $200 000. Dividends received would increase the revenue shown in an income statement by $3600. Using the equity method, the total investment in the associate company would be $194 400 ($200 000 + $30 000 – $3750). Dividends would increase revenue shown in the income statement by $3750.

Now test yourself Tested

4 Make a list of reasons why one business might wish to purchase another business.

5 Explain the following terms.

(a) holding company

(b) subsidiary company

(c) wholly owned subsidiary

(d) associated company

6 Explain how an investment in Bhuni Ltd would be shown in the statement of financial position of Chan plc if Chan held:

(a) one-tenth of the ordinary shares in Bhuni

(b) all the ordinary shares in Bhuni

Answers on p.190

16 Published company accounts

Principles governing the disclosure requirements of company reports

A true and fair view

Revised

The Companies Act 1985 requires that the financial statements give a **true** and **fair** view of the financial state of the company. Financial statements must comply with the Companies Act 1985 and International Accounting Standards. This means that information contained in the published accounts is fair and unbiased. The directors must ensure that the company's accounting records contain:

- details of all monetary transactions
- records of all the company's assets and liabilities, including inventories held at the financial year end

Directors must ensure that the records:

- show and explain the company's financial transactions
- disclose the financial position of the company with reasonable accuracy
- enable the directors to ensure that the income statement and the statement of financial position show a true and fair view of the company's financial position

IAS 1 details the presentation of financial statements; it requires that the notes to the accounts state that the accounts comply with the standards. Departure from standards must be noted and reasons for such deviation explained. A departure from the application of standards may be necessary to achieve a fair presentation.

Standards are intended to reduce the subjectivity that could occur if company directors had the freedom to produce accounting information in a form of their choice. They also help to increase uniformity in presentation. Standards are the rules that apply to the preparation of published financial statements and to their audit.

True means that all the transactions reported in the income statement have taken place and assets recorded in the statement of financial position actually exist and are valued appropriately.

Fair implies that all transactions conform to generally accepted accounting rules.

The contents of published accounts and principles of disclosure

Revised

You need to understand:

- the contents of published accounts, although you will not be expected to prepare income statements or statements of financial position in a form suitable for publication
- some of the principles governing the disclosure requirements of the annual reports of limited companies

The financial statements that a limited company produces are used by the directors and managers for decision-making purposes and are extremely detailed. If the statements were published in this form, competitors might gain access

to information that could be used to undermine the company. Although the shareholders, lenders and others must be sent a copy of the financial statements, the company's interests are protected by allowing an 'abridged' version to be published. The financial statements are incorporated into an annual report.

A complete set of financial statements should include:

- the directors' report
- an income statement
- a statement of financial position
- a statement of cash flows
- a statement of changes in equity
- a statement of accounting policies and explanatory notes
- the auditors' report

Note that the directors' report and auditors' report are not part of IAS 1; they are statutory requirements under the Companies Act 1985.

You can obtain copies of company reports by writing to the company's registered office or visiting the company's website.

Directors' report

Revised

The Companies Act 1985 requires that directors report regularly to shareholders on the way that they have managed the company. This is an example of the stewardship function of accounting. The report details the principal activities of the company; it reviews the activities over the period and comments on results and dividend policies. It outlines company employment policy, paying particular attention to equal opportunities and policies on the employment of disabled people. Directors and their shareholdings are listed. It itemises political and charitable donations and health and safety policy, and provides an insight into future developments for the company.

Income statement (statement of comprehensive income)

Revised

Published income statements measure the financial performance of a company by identifying gross profit and profit for the year, but they do not detail all the company's expenses. **Overheads** are deducted from gross profit and are generally split into distribution and administrative expenses.

IAS 1 requires that the following items are shown:

- **revenue** comprising the receipts from the sales of goods
- **finance costs** (interest paid on all debts), which are deducted from the **profit from operations**
- **tax expense** (corporation tax based on profits), which is deducted from the profit
- **profit (or loss) for the year**, which is transferred to the statement of changes in equity

The income statement concludes with the profit for the year.

Overheads are the expenses incurred by a company during the financial year.

Profit from operations is the profit earned by a company before deducting finance costs and taxation.

Expert tip

Learn the layout for a set of financial statements for a limited company. You already know most of it, so concentrate on the lower third — the parts after the profit from operations has been calculated.

Statement of financial position

Revised

Capital structure

The capital structure section should be headed '**Equity**'.

Issued share capital can have ordinary and preference shares:

- **Issued share capital** is the amount of share capital that has actually been issued by the company. The issued share capital can never exceed the authorised share capital.
- **Called-up share capital** is the amount of issued share capital that the shareholders have been asked to pay to date. It may be less than the value of the issued share capital.
- **Paid-up share capital** is the amount of share capital that appears on the statement of financial position and is the amount of cash that the company has actually received from its shareholders.
- **Dividends** are the rewards paid to shareholders out of profits earned by a limited company. The dividends are paid to individual shareholders in proportion to the number of shares they own. Dividends are paid annually, but most limited companies will pay **interim dividends** part-way through their financial year. Only dividends actually paid during a financial year are recorded in the financial statements (see IAS 10 Events after the reporting period, Topic 18, Company financing on p. 144).
- **Ordinary dividends** are variable in nature. The dividend varies according to the level of profits earned by the company.
- **Preference dividends** are normally a fixed amount. Generally, part of the total dividend is paid as an interim dividend, with the balance being paid at the year end.

Equity is made up of the ordinary share capital, permanent preference share capital and reserves of a limited company.

Revision activity

Download or send for a copy of the published financial statements of a publicly quoted company and identify each of the components required by IAS 1.

Ordinary shares

Ordinary shares are the most common type of share. The holders of ordinary shares are part owners of the company. At meetings in which voting is required, each shareholder can cast one vote for each share they own, so they can influence policies that directors and managers wish to follow. They may receive interim dividends during the year and a final dividend. These dividends vary according to the level of company profits.

Preference shares

Preference shareholders are entitled to a fixed dividend (if profits and cash are available). The percentage is calculated on the **nominal value** of the shares. In the event of **liquidation**, the preference shareholders are entitled to be repaid the nominal value of their shares before the ordinary shares are repaid.

Most preference shares are **cumulative**; the dividends due will accumulate if the company is unable to pay a dividend in any particular year. For example, if 7% cumulative preference shareholders have not received a dividend for 3 years, the shareholders would receive a dividend of 28% in year 4 if sufficient profits were made. If the preference shares are **non-cumulative**, any dividends not paid are forfeited and will not be paid at a later date.

Nominal value (or **par value**) is the face value of shares. Once shares have been issued, their market price can rise or fall. Any change in the market price is not reflected in the company's books of account.

Liquidation is a legal procedure applied to a limited company when it is unable to discharge its liabilities.

Participating preference shares receive an additional dividend above the normal percentage that they would usually receive if the company's profits exceed a predetermined level.

Redeemable preference shares may be bought back by the company on a specified date. The date is shown on the statement of financial position or as a note to the statement.

Revision activity

From the set of financial statements you obtained earlier, determine the issued share capital.

Debentures

Debentures are bonds recording a long-term loan. The holder is entitled to a fixed rate of interest each year. They may be repayable at some future date or they may be irredeemable: the holder will only be repaid if the company goes into liquidation. Debentures are not part of equity. They are shown as a non-current liability except in the year of redemption.

Mortgage debentures have the loan secured against specific non-current assets or against all the company's assets. If a company is wound up or fails to pay the interest due, the holders can sell the assets and recoup any outstanding amounts.

Debenture interest is paid to debenture holders (investors) who have loaned money to a company. The interest is usually paid in two equal instalments during the year.

Table 16.1 Comparing ordinary shares, preference shares and debentures

Ordinary shares	Preference shares	Debentures
Shares	Shares	Long-term loans (payables)
Part owner of company	Not owners	Not owners
Voting rights	(Usually) no voting rights	No voting rights
Paid out last in case of liquidation	Paid out before ordinary shareholders in case of liquidation	Paid out before preference shareholders in case of liquidation
Dividends	Dividends	Interest
Variable dividend	Fixed dividend	Fixed rate of interest
Part of equity capital	Part of equity capital (unless they are redeemable)	Not part of equity capital

Reserves

Reserves are profits retained within a company. All profits earned by a limited company belong to the owners, i.e. the ordinary shareholders. Any profit that remains in the business increases the capital structure of the business. There are two types of reserves: revenue and capital.

Revenue reserves

These are the most flexible form of reserve. If in the future the revenue reserves are found to be excessive or unnecessary, they can be added back to current profits and used for dividend purposes. They are normal trading profits that have been retained ('ploughed back') by the company to strengthen its financial position. They form a major source of finance for most limited companies. You might encounter these revenue reserves:

- retained earnings
- general reserve
- non-current asset replacement reserve

Capital reserves

These arise from capital transactions and adjustments to the capital structure of the company. They do not arise through normal trading activities, so are not available for the payment of cash dividends. These reserves may be distributed to shareholders in the form of bonus shares. Capital reserves you might encounter include:

- share premium account
- revaluation reserve
- capital redemption reserve

Typical mistake

Students often say that reserves are cash, but they are not. Some of the profits will already have been used to replace non-current and other assets.

Share premium account

A share premium account arises when a company issues shares at any price that is greater than the nominal value of the shares. A share premium account may be used to:

- pay up unissued shares to issue as bonus shares
- write off preliminary expenses (expenses incurred in the formation of a company)
- write off any expenses incurred in an issue of shares
- provide any premium payable on the redemption of shares or debentures

Typical mistake

Students frequently state that a share premium arises when shares are sold for a price greater than the par value. This is too imprecise. A premium arises only when shares are issued by a company.

Revaluation reserves

A revaluation reserve is created when non-current assets are revalued upwards. It shows a permanent increase in value of a non-current asset. A revaluation reserve may be used to issue bonus shares.

Capital redemption reserves

See Topic 14 Capital (equity) on p. 114.

Now test yourself Tested

1 List the three components of equity.
2 How are the dividends paid by a company accounted for?
3 How does a share premium account arise and what may it be used for?
4 Explain the term *participating preference* shares.
5 **(a)** What is a debenture?
(b) How is debenture interest paid accounted for in the financial statements?
6 'Debentures are shares that pay a fixed dividend each year.' Is this statement true or false?
7 **(a)** Explain the difference between capital and revenue reserves.
(b) How may an amount withdrawn from reserves be used?

Answers on p.190

Other headings used in statements of financial position of a limited company

Current assets

Current assets comprise:

- **cash** and cash equivalents
- **assets that will be disposed of within the next normal operating cycle** (usually the next financial year), such as inventories, trade receivables and cash and cash equivalents

All other assets are classified as non-current assets.

Non-current assets

Non-current assets are shown under three headings:

- **intangible non-current assets** are non-physical assets such as goodwill, the ownership of a patent, a licence or a trademark
- **tangible non-current assets** are assets that can be seen and touched, such as land and buildings, plant and machinery, fixtures and fittings, vehicles
- **investments** are long-term investments for more than 1 year and should be valued at cost. If the investment was for less than 1 year, it is classified as a current asset

Provisions and reserves

Provisions are amounts that are set aside out of profits for a known expense the amount of which is uncertain. **Reserves** are any other amount set aside out of profits.

Liabilities

Liabilities are amounts owed by the company that can be determined with substantial accuracy. **Non-current liabilities** fall due for repayment in more than 1 financial year and include debentures, mortgages and long-term bank loans. **Current liabilities** include trade payables and other payables (e.g. current taxation due and accrued expenses).

Statement of cash flows

Revised

This has been dealt with in Topic 13, Preparation of financial statements (see p. 98).

Statement of changes in equity

Revised

IAS 1 requires that a **statement of changes in equity** is prepared as a component of financial statements. Limited companies must show how the shareholders' stake in the company has changed over the course of the financial year.

A **statement of changes in equity** details changes that have taken place in share capital and reserves during the financial year.

A statement of changes in equity provides the link between the income statement and the statement of financial position by showing changes to permanent share capital and reserves (equity). The statement itemises the changes that have occurred during the year to components of equity. Any changes to permanent share capital are shown, as well as any increases or decreases to the company's reserves.

Dividends are the part of the profits of a company that are paid to its shareholders. Any part of the profit that is not paid out to the shareholders as dividends is retained within the company as a revenue reserve. The portion of profit retained in the company is sometimes said to be 'ploughed back'. These retained profits are described on the statement of financial position as retained earnings.

All profits (after taxation and preference dividends) belong to the ordinary shareholders, so the amount of profit retained within the company will, generally, have a positive effect on the price of second-hand shares in the (stock) market place.

Accounting policies and explanatory notes

Revised

Explanatory notes:

- give details about items that are summarised in the main body of the financial statements
- provide additional information to help in the understanding of the financial statements
- are used to explain the bases used in the treatment of items contained in the main body of the financial statements

Revision activity

From the set of financial statements you examined previously, identify two pieces of information covered in the accounting policies and explanatory notes.

Auditors' report

Revised

The auditors' report is a statutory requirement for larger organisations. It is usually brief and contains little detailed information. It is divided into three sections:

- an indication of the responsibilities of directors and auditors
- the basis of opinion — the auditors' standards of governing the audit and how it was planned and performed
- an opinion as to whether or not the financial statements give a true and fair view of the financial position of the organisation

Now test yourself

Tested

8 List the items that make up a complete set of financial statements according to IAS 1.

9 Give another name for an income statement.

10 Make a list of the items that must be shown in a published income statement according to IAS 1.

11 Explain the purpose of a statement of changes in equity.

Answers on p.190

Disclosure of accounting policies

Accounting principles and bases

Revised

IAS 1 requires that details of the policies used in the preparation of financial statements are given. IAS 8 is more detailed and defines accounting policies as 'the specific **principles**, **bases**, conventions, rules and practices applied … in preparing and presenting financial statements'.

The **notes on accounting policies** should explain the accounting policies used in the preparation of accounting statements and will show details of some figures published in the income statement, the statement of financial position and the statement of cash flows. They cover items such as turnover, depreciation policy and treatment of goodwill.

Accounting **principles** are the concepts applied to the preparation of financial statements.

Accounting **bases** are the methods of applying the principles.

Disclosure details concerning non-current assets and depreciation

Non-current assets

Revised

Non-current assets must be shown at **cost** when acquired. Depreciation is calculated on cost. The **carrying amount** must also be disclosed. Revaluations should be carried out on a regular basis so that the carrying amount does not differ significantly from its **fair value**. Depreciation should be calculated on the revalued amount. Increases in the value of a non-current asset should be credited to equity as a revaluation reserve.

Cost includes all costs incurred in getting a non-current asset into a condition and location where it can perform its intended use.

Carrying amount is cost (or revalued amount) less aggregate depreciation to date.

Fair value is the amount that could be realised from selling the asset.

Depreciation

Revised

All assets with a finite life should be depreciated. The process starts when the asset is put to use and ceases on **derecognition**. The method should reflect the way in which the asset is used and this method should be reviewed on an annual basis. Depreciation is charged as an expense in the income statement.

Derecognition occurs when a non-current asset is disposed of.

Treatment of intangible assets

What are intangible assets?

Revised

IAS 38 defines an intangible asset as 'an identifiable non-monetary asset without physical substance ... from which future benefits ... are expected'. They appear in a statement of financial position at cost and should be **amortised** over their useful life. The method and period should be reviewed annually and the method used should reflect the use of the asset.

Amortisation is the writing-off of part (or all) of the cost of an intangible asset over its useful life.

Revision activity

From the set of financial statements you obtained earlier, identify the tangible and intangible non-current assets and determine the value of any of those assets that have been disposed of during the financial year.

Now test yourself

Tested

12 **(a)** What is an intangible non-current asset?

(b) What is meant by the amortisation of an intangible non-current asset?

13 Define an intangible asset in accordance with IAS 38.

Answers on p.190

17 Interpretation and analysis

Ratios to aid the appraisal of financial structure

Gearing

Revised

Gearing measures the relationship that exists between fixed cost capital and total capital. The ordinary shareholders' return may be at risk if the company's capital is provided mainly by debenture holders and preference shareholders. The degree of risk is measured by the gearing ratio:

$$\text{gearing} = \frac{\text{fixed cost capital}}{\text{total capital}}$$

which is:

$$\frac{\text{non-current liabilities + preference share capital}}{\text{issued ordinary share capital + all reserves + non-current liabilities + preference shares}}$$

The gearing of a company is said to be:

- **high geared** (high borrowing, high debt, high risk) when the ratio is more than 50%
- **neutral geared** when the ratio is 50%
- **low geared** (low borrowing, low debt, low risk) when the ratio is less than 50%

Investment in a highly geared company is riskier than investment in a low geared company because if the company is unable to service its long-term liabilities, it may be forced into liquidation by the long-term investors. A highly geared company may also find it more difficult to borrow further funds because of the inherent risk. Banks may be reluctant to lend to highly geared companies as they may feel that the ordinary shareholders should be prepared to finance their own company rather than rely on outsiders.

Revision activity

From the set of financial statements you obtained in Topic 16, calculate the company's gearing ratio.

Working capital cycle

Revised

This ratio measures the time taken between a business making payment for goods received and the receipt of cash from customers for the sale of the goods. The shorter the time between the business laying out cash for the purchase of goods and the collection of cash for the sales of the goods, the better for the business as less finance from other sources is needed.

working capital cycle (in days) = trade receivables turnover (in days) + inventory turnover (in days) – trade payables turnover (in days)

or

working capital cycle (in days) = average collection period + inventory turnover (in days) – average payment period

The shorter the cycle, the lower the value of working capital needed to be financed from other sources. The cycle can be shortened by lowering levels of inventories held, speeding up the collection of monies from receivables or delaying payment to payables.

Net working assets to sales

Revised

This ratio shows the proportion of sales revenue that is tied up in less liquid net current assets, i.e. the value of the net working assets that is not immediately available for use in the business.

$$\text{net working assets to sales} = \frac{\text{inventories} + \text{trade receivables} - \text{trade payables}}{\text{sales}} \times 100$$

Income gearing

Revised

This ratio shows the percentage of operating profit that is taken up covering current interest payments. It is generally thought that the interest charges should not take up more than one-third of operating profits.

$$\text{income gearing} = \frac{\text{interest expense}}{\text{profit before interest and tax (operating profit)}} \times 100$$

Stock exchange (investment) ratios

Investment ratios are primarily of interest to those who are contemplating an investment in a company by purchasing ordinary shares.

Earnings per share (EPS)

Revised

This ratio measures the amount of profit attributable to each ordinary share. Earnings are profit after interest paid, taxation and preference dividends, i.e. the earnings that belong wholly to the ordinary shareholders.

$$\text{earnings per share} = \frac{\text{profit after tax} - \text{preference share dividends}}{\text{number of issued ordinary shares}}$$

Expert tip

This calculation uses the number of ordinary shares issued, not the value. Therefore, $2 000 000 ordinary shares of $0.25 each would use 8 000 000 as the denominator in the calculation.

Price earnings ratio (P/E)

Revised

The price earnings ratio relates the market price of the share to the earnings per share. It represents the number of years' earnings that investors are prepared to pay in order to purchase one of the company's shares. The higher the P/E ratio, the greater the confidence investors have in the future of the company.

$$\text{price earnings ratio} = \frac{\text{market price per ordinary share}}{\text{earnings per ordinary share}}$$

As the ratio compares current market price with earnings per share, an increase in market price increases the ratio. Demand for shares is dependent on investors' perception of the company's future performance. An increase in demand for

the shares will generally cause an increase in the share price. A high P/E ratio indicates expected future growth (or an overvalued share). A low P/E ratio indicates expected poor performance in the future (or an undervalued share).

Dividend yield

Revised

Shareholders invest in a company in order to gain a return (dividends) on their investment. They also hope that the market price of the share will rise so that if they sell their holding they will make a capital profit — a capital gain. The dividend yield expresses the actual dividend received by the shareholder as a percentage of the market price of the share. It shows the percentage return an investor can expect based on the current market price of the shares.

$$\text{dividend yield} = \frac{\text{dividend paid and proposed}}{\text{market price of ordinary shares}}$$

or

$$\text{dividend yield} = \text{declared rate of dividend} \times \frac{\text{nominal value of ordinary shares}}{\text{market price of ordinary shares}}$$

Dividend cover

Revised

This ratio calculates how many times current dividends could have been paid out of the year's profit. It indicates how likely it is that the company can continue to pay its current rate of ordinary share dividend in the future. A high figure suggests that the company should be able to maintain dividends to ordinary shareholders at the current level even if profits fall. It may indicate that the directors operate a conservative dividend policy and that much of the profits are being reinvested in the company. Low dividend cover may indicate a reckless dividend policy and that a small reduction in company profits may have an adverse effect on dividends future.

$$\text{dividend cover} = \frac{\text{profit available to pay ordinary dividend}}{\text{ordinary dividend paid}}$$

Dividend per share

Revised

This ratio calculates the actual dividend paid per share.

$$\text{dividend per share} = \frac{\text{ordinary dividend paid}}{\text{number of issued ordinary shares}}$$

Revision activity

Using the set of published financial statements you obtained for Topic 16, calculate the stock exchange ratios.

Now test yourself

Tested

1 Explain the term *gearing*.
2 Why might a potential investor have concerns about investing in a highly geared company?
3 Give the formulae for each of the following ratios:
   (a) earnings per share
   (b) price earnings ratio
   (c) dividend yield
   (d) dividend cover
4 Explain what the price earnings ratio tells us.

Answers on p.191

18 Company financing

Capital gearing and capital structures

Finance is vitally important to the survival and growth of all businesses. It can be generated from within the business or it can be provided by external sources. Retained earnings are probably the most important source of finance available to any business. Some sources are used for short-term financing whereas others are used to finance the business in the long term.

Capital gearing

Revised

Gearing is the term that describes the relationship between ordinary share capital and fixed return funding — see p. 136 for gearing ratios. Gearing is important because of the order in which payments are made to the providers of finance:

1. Debenture interest must be paid first.
2. Preference dividends are paid if profits are available after payment of debenture interest.
3. Ordinary dividends are paid if profits are available after debenture interest and preference dividends have been paid.

The likelihood of ordinary shareholders receiving low dividends or no dividend is dependent on the company's gearing. The higher the gearing ratio, the greater is the risk of this happening.

Table 18.1 The advantages and disadvantages of high gearing

Advantages	Disadvantages
Interest paid is a charge against profits. Therefore, when tax is taken into account, the rate of interest is lower than that stated on the debenture	If a large proportion of profits are committed to interest payments, it might constrain directors' ability to reward ordinary shareholders
In times of inflation, the interest paid gets more manageable as time goes on	In times when the economy is flat, investors may prefer low geared companies as only a small proportion of profits are directed towards fixed cost capital
If the return on the capital employed is greater than the interest payable, it makes sound business sense	
In times of high profits, potential 'risk' investors are likely to be attracted	

Capital structures

Revised

The issued share capital of a limited company can be increased by a share issue, a rights issue or a bonus issue. Rights issues and bonus issues are covered in Topic 14 Capital (equity) on p. 112–13. You should be able to show how an issue of shares affects a statement of financial position.

Example

The summarised statement of financial position of Bendanic plc showed the following position at 31 March 2014.

	$
Net assets (including $120 000 cash)	560 000
Equity	
Ordinary shares of $1 each	340 000
Retained earnings	220 000
	560 000

On 1 April 2014, before any other transactions took place, the company issued 200 000 ordinary shares at $1.70. All the shares were taken up and monies paid on that date. A statement of financial position would show:

	$
Net assets (including $460 000 cash)	900 000
Equity	
Ordinary shares of $1 each	540 000
Share premium account	140 000
Retained earnings	220 000
	900 000

Now test yourself

1 **(a)** Explain how gearing is calculated.

(b) Outline one advantage and one disadvantage of a limited company being highly geared.

Answers on p.191

Tested

Loan capital is covered in Topic 10, Capital (equity) (see p. 73). The disclosure standards adopted by quoted companies is dealt with in detail in Topic 16, Published company accounts (see pp. 128–29).

International Accounting Standards and their application

Why is there a need to have standards?

Revised

Limited companies must prepare their financial statements within a regulatory framework consisting of:

- the Companies Act 1985 as amended by the Companies Act 1989
- International Accounting Standards (IAS) and International Finance Reporting Standards (IFRS)
- regulations required by the stock exchange (these will not be discussed here as Cambridge International does not examine these regulations)

Standards seek to:

- iron out areas of difference in the preparation and presentation of accounting information
- recommend disclosure of accounting bases
- identify any departure from the standards
- improve existing disclosure requirements

The Companies Act 1989 introduced a requirement that the financial statements of companies must be prepared in accordance with the standards in force and that any material deviations from these standards should be identified and reasons given for any such deviation.

In 1989 'Framework for the Preparation and Presentation of Financial Statements' was issued by the International Standards Committee. It set out the underlying principles for the preparation and presentation of financial statements. The

framework stated that 'financial statements … provide information about the financial position, performance and changes in financial position of an entity'.

It is assumed that financial statements have been prepared using:

- the **accruals concept**. This records the value of the resources used and the benefits derived from their use in the financial year of use, not when cash is paid or received
- the **going concern concept**. Unless there is knowledge to the contrary, it is assumed that the business will continue to trade in its present form for the foreseeable future

The framework identified four characteristics of financial statements that are meant to ensure that financial statements are useful to all users of the statements:

- Information should be capable of being **understood** by users with a reasonable knowledge of business and accounting. This may require 'study with reasonable diligence on behalf of the user'.
- Statements must be **relevant** and contain information that is able to influence the decisions of users.
- Statements must contain information that can be **relied on** as a faithful representation of the substance of what has taken place.
- Users of financial statements must be confident that they can **compare** data from one time period to another.

The framework states that if the four characteristics of understandability, relevance, reliability and comparability are present, the statements will show a true and fair view of the financial position.

The concepts that should influence the preparation of financial statements have been covered in Topic 2 Accounting principles. They are business entity, materiality, prudence, consistency, historical cost and duality. You need to have an understanding of the disclosure standards adopted by quoted companies and a basic knowledge of the standards and how these standards relate to the topics in the syllabus.

Expert tip

You don't need to have a detailed knowledge of any of the International Accounting Standards, with the exception of IAS 7 Statement of cash flows. You should know the IAS number and the heading, e.g. IAS 18 Revenue.

IAS 1 Presentation of financial statements

Revised

IAS 1 details the ground rules of how financial statements should be presented. This means that comparisons can be made with previous accounting periods and with other companies. According to IAS 1, five components make up a complete set of financial statements:

- an income statement
- a statement of financial position
- a statement of cash flows
- a statement of changes in equity
- a statement of accounting policies and explanatory notes

Note that the directors' report and auditors' report are not part of IAS 1; they are statutory requirements under the Companies Act 1985.

The financial statements should contain an explicit and unreserved statement that they comply with international standards. The statements must comply with accounting concepts and in order to facilitate comparisons the figures from previous periods must be published.

Income statement

Although much of the detail does not need to be shown in a published income statement, your answer to a question is likely to require more detail than that

prescribed by the standard. Income statements are covered in Topic 16, Published company accounts (see p. 129).

Example

The following is an example of an income statement as it might appear in answer to a question.

Kieri plc. Income statement for the year ended 31 August 2014

	$000	
Revenue	941	*(Sales less sales returns)*
Cost of sales	(382)	*(Opening inventory plus purchases less closing inventory)*
Gross profit	559	
Distribution costs	(176)	*(Warehouse costs plus cost of getting goods to customers)*
Administrative expenses	(133)	*(Costs of maintaining and running the offices)*
Profit from operations	250	
Finance costs	(32)	*(Interest paid)*
Profit before tax	218	
Tax	(58)	
Profit for the year	160	

Statement of financial position

IAS 1 states the items that must be shown as minimum in information in a statement of financial position. These are dealt with in detail in Topic 16, Published company accounts (see pp. 130–32).

Statement of cash flows

This is dealt with in Topic 13, Preparation of financial statements (see pp. 98–102).

Statement of changes in equity

This statement shows the changes to the shareholders' stake in the company during a year.

Example

At 1 September 2013 the statement of financial position of Kieri plc showed non-current assets at valuation $1 420 000, retained earnings of $945 000 and a revaluation reserve of $762 000. At 31 August 2014 non-current assets were revalued at $1 550 000. Dividends paid during the year amounted to $52 000.

A statement of changes in equity would appear as follows.

Kieri plc. Statement of changes in equity for the year ended 31 August 2014

	$000	
Retained earnings		
Balance at 1 September 2013	945	
Profit for the year	160	*(From income statement above)*
	1105	
Dividends paid	(52)	
Balance at 31 August 2014	1053	
Revaluation reserve		
Balance at 1 September 2013	762	
Revaluation of non-current assets	130	
Balance at 31 August 2014	892	

IAS 1 also allows an alternative layout to the one shown above, known as a statement of recognised gains and losses. This shows the changes in equity and the individual changes that make up the total change.

Example

Using the same information for Kieri plc, the statement of recognised gains and losses would appear as follows.

Statement of recognised gains and losses for the year ended 31 August 2014

	$000
Gains/(losses) on revaluation of non-current assets	130
Net income recognised directly in equity	130
Profit/(loss) for the year	160
Total recognised gain for the year	290

Statement of accounting policies and explanatory notes

IAS 1 requires that explanatory notes to the financial statements are included. These notes:

- give details about items that are summarised in the main body of the financial statements
- provide additional information to help in the understanding of the financial statements
- are used to explain the bases used in the treatment of items contained in the main body of the financial statements (see IAS 8, p. 144)

IAS 2 Inventories

Revised

Inventories are:

- goods or other assets purchased for resale
- consumable stores
- raw materials and components for inclusion into products for sale
- work in progress
- finished goods

They should be categorised in a statement of financial position as one of the following:

- raw materials
- work in progress
- finished goods

Costs of conversion comprise:

- costs that can be specifically attributed to units of production, including purchase price; import taxes; transport and handling costs; other costs, e.g. direct labour, other direct expenses and sub-contracted work
- production overheads are expenditures on materials, labour or services for production purposes based on the normal level of activity
- other overheads

Cost is expenditure which has been incurred in the normal course of business in bringing the product or service to its present location and condition.

Inventory should be valued at the lower of cost and **net realisable value** of separate items or of groups of similar items. Net realisable value is the actual or estimated selling price (net of trade discount but before any cash discount that may be allowed) less all further costs to completion and all marketing, selling and distribution costs.

The standard accepts the use of the:

- first in first out method (FIFO)
- weighted average cost method (AVCO)
- standard cost if it bears a reasonable relationship to actual costs obtained during the period

The standard does *not* accept the last in first out method (LIFO) or replacement cost (unless it is the best measure of net realisable value).

IAS 7 Statement of cash flows

Revised

This is dealt with in Topic 13, Preparation of financial statements (see pp. 98–102).

IAS 8 Accounting policies, changes in accounting estimates and errors

Revised

IAS 1 requires companies to include details of specific accounting policies used in the preparation of financial statements. IAS 8 defines accounting policies as 'the specific principles, bases, conventions, rules and practices applied … in preparing and presenting financial statements'. The principles are the concepts that you have already learned. They are the going concern concept, the accruals concept, prudence, consistency and materiality. They apply to all the financial statements that you have prepared in your studies so far.

Where a standard deals with a policy, the policy must be applied. If there is no standard providing guidance, directors must use their own judgement in selecting a policy. Accounting policies should be applied consistently to similar situations.

Accounting bases are individual methods of treatment selected by directors. They should be used to apply accounting principles, e.g. selecting methods of depreciation used in preparing the financial statements.

IAS 8 also deals with the effect of errors in financial statements. Once discovered, a material error should be corrected by adjusting the comparative figures in the next set of financial statements.

IAS 10 Events after the reporting period

Revised

Events that occur after the reporting period but before the financial statements are authorised for issue may be:

- **adjusting events** — if there is evidence that certain material conditions arose at or before the end of the reporting period that have not been taken into account, changes should be made before the financial statements are authorised. For example, it would be necessary to make a change to the amount recorded as trade payables if a customer who owed a material debt at the financial year end became insolvent immediately after the end of the financial year
- **non-adjusting events** — these arise after the end of the reporting period and do not require the financial statements to be adjusted. However, if the event is material, such as the large purchase of non-current assets shortly after the year end, a note to the accounts should be made

Proposed dividends at the financial year end are non-adjusting events and, therefore, are not recorded as a current liability on the statement of financial position. They are recorded as a note to the accounts.

Example

The following information is available for Kundera plc for the financial year ended 31 March 2014.

- April 2013 — a final ordinary dividend of $48 000 based on reported profits for the year ended 31 March 2013 is proposed
- June 2013 — shareholders approve the final dividend for the year ended 31 March 2013
- August 2013 — final dividend of $48 000 for the year ended 31 March 2013 paid to shareholders
- November 2013 — interim dividend of $25 000 paid to shareholders based on reported profits for the half-year ended 30 September 2013
- April 2014 — a final ordinary dividend of $62 000 based on reported profits for the year ended 31 March 2014 is proposed

Dividend entry in financial statements for the year ended 31 March 2014 shows:

	$
Final dividend for year ended 31 March 2013	48 000
Interim dividend for half-year ended 30 September 2013	25 000
Total entry for dividends	73 000

A note to the published accounts would show details of dividends paid during the financial year:

Dividends

	$
Equity dividends on ordinary shares	
Amounts recognised during the year:	
Final dividend for the year ended 31 March 2014 of 4.8p	48 000
Interim dividend for the year ended 31 March 2014 of 2.5p	25 000
	73 000
Proposed final dividend for the year ended 31 December 2013 of 6.2p	62 000

The proposed final dividend is subject to approval by shareholders at the annual general meeting and accordingly has not been included as a liability in the financial statements.

Now test yourself Tested

2 Complete the following sentence:
There is an assumption that financial statements will be prepared using the _____ concept and the _____ concept.

3 Complete the following sentence:
Financial statements must have the four characteristics of understandability, relevance, reliability and _____.

4 Explain why there is a need to have internationally recognised International Accounting Standards.

5 List the components of a complete set of financial statements identified in IAS 1.

6 Which standard deals with goods that remain unsold at the end of a financial year?

7 IAS 10 identifies adjusting events and non-adjusting events. Explain the difference and state how each should be dealt with in financial statements.

Answers on p.191

IAS 16 Property, plant and equipment

Revised

This standard ensures that accounting principles are applied to non-current assets consistently and that treatment of the assets is understood by the users of the financial statements.

Property, plant and equipment (PPE) is initially valued at cost. Cost includes expenditure directly attributable to bringing the asset into a usable condition and could include import duties, delivery charges, the costs of preparing the site

Property, plant and equipment (PPE) comprises all non-current tangible assets from which economic benefit flows. They are held for more than one time period. Examples include land and buildings, plant and machinery, office equipment and vehicles.

and other installation costs. After acquisition, the financial statements must show the **carrying amount** of the asset at either:

- cost less accumulated **depreciation** and impairment losses, or
- revaluation based on its **fair value** less subsequent depreciation and impairment losses (see IAS 36, p. 147)

Fair values based on revaluation of land and buildings are generally based on market value calculated by a professional valuer. The fair value of plant and equipment is usually based on market value.

Carrying amount is the amount shown on the statement of financial position after the deduction of accumulated depreciation or impairment losses.

Depreciation is the apportioning of the cost or valuation of an asset over its useful economic life.

Fair value is the amount for which an asset could be exchanged between knowledgeable, willing parties in an arm's length transaction.

Depreciation

Depreciation reflects the cost of using an asset during a financial period and is shown in the income statement. It should reflect the pattern in which the economic benefits derived from the asset are consumed. Factors affecting the useful life of an asset are:

- expected use
- expected wear and tear
- economic and technical obsolescence
- legal or similar restraints

See also Topic 9, Depreciation (p. 64) for more on these factors.

Repairs and/or maintenance do not affect depreciation policy. The **residual value** and the useful life of an asset should be reviewed on an annual basis to decide if any changes need to be made in the depreciation policy.

Residual value is the amount that the company expects to obtain for an asset less any disposal costs at the end of its useful life.

As freehold land is not depreciated, land and buildings should be treated separately. Leasehold land, however, does have a finite life and should be depreciated.

There are three ways of providing for depreciation, which are examined in more detail in Topic 9, Depreciation (see pp. 65–67). They are the:

- straight-line method
- reducing balance method
- revaluation method

If the pattern of use of an asset is uncertain, the straight-line method is usually adopted. Changing the basis of calculating the annual charge is allowable when the new method gives a fairer representation of use. Change must be permanent and should reflect the way that the asset's benefits are consumed. The change must be shown in a note to the financial statements.

Derecognition means that the asset is no longer recognised in a statement of financial position. The profit (or loss) on disposal is shown in the income statement.

Derecognition occurs when an asset is disposed of or when it is incapable of yielding any further economic benefits.

Financial statements must show (generally as a note):

- the basis for determining the carrying amount
- the depreciation method used
- the duration of the useful economic life or the rates of charging depreciation
- the carrying amount
- the accumulated depreciation and impairment losses at the start and end of the accounting period
- a reconciliation of the carrying amount at the start and end of the accounting period, which shows:
  - additions
  - disposals
  - revaluations
  - impairment losses
  - depreciation

IAS 18 Revenue

Revised

Revenue is the inflow of economic benefits arising from the normal activities of the business. Revenue comprises income derived from:

- the sale of goods
- the provision of a service
- royalties
- interest, dividends etc.

Revenue is recognised when the seller of the goods has transferred to the buyer significant risks and rewards of ownership. Revenue is recorded when goods have been replaced by a receivable or by cash.

IAS 23 Borrowing costs

Revised

This standard deals with costs incurred when funds are borrowed. **Borrowing costs** fall into two types:

- interest on loans, overdrafts and other finance charges, which appear as revenue expenditure
- net interest payable on the funds, which may be capitalised when funds are borrowed to finance the purchase of a **qualifying asset**

  net interest = costs of borrowing – any income earned on the investment of the funds before use

Borrowing costs comprise interest and other costs charged when funds are borrowed.

A **qualifying asset** is a non-current asset that takes a substantial period of time to get ready for its intended use or sale.

IAS 33 Earnings per share

Revised

This standard allows comparisons to be made between different companies. Public limited companies must show on the face of their income statement the earnings per ordinary share. (In practice, earnings per share is generally shown after the income statement.)

$$\text{earnings per share} = \frac{\text{profit for the year} - \text{preference share dividends}}{\text{number of issued ordinary shares}}$$

See also Topic 17, Interpretation and analysis (p. 137).

IAS 36 Impairment of assets

Revised

Impairment occurs when the **recoverable amount** is less than the carrying amount of an asset. The amount of the loss is shown in the income statement.

The value of assets needs to be reviewed at the date of each statement of financial position to determine impairment. Evidence of impairment could be a significant fall in the:

- market value of the asset
- value of an asset because of technological change
- value of an asset because of an economic downturn
- fair value of the asset due to damage
- future cash generating ability
- value due to a restructuring of the business

Recoverable amount is the higher of fair value (the amount for which the asset could be sold less selling costs) and value in use (calculated by discounting all the future cash flows that will be generated by using the asset).

IAS 37 Provisions, contingent liabilities and contingent assets

Revised

This standard ensures that there is sufficient information given to enable the users of the financial statements to understand the effects of **provisions**, **contingent liabilities** and **contingent assets**.

Provisions are recognised as a liability if there is more than a 50% chance of a requirement to settle an obligation. It is also necessary that a reliable estimate of the liability can be made. A note to the financial statements should detail the provisions.

Contingent liabilities mean that there is less than a 50% chance of a possible occurrence. No disclosure is necessary in the main body of the statements for contingent liabilities, but if the liability is possible it should be disclosed as a note to the financial statements. If there is only a remote chance of the occurrence, no reference is necessary.

Contingent assets are possible assets arising from past events that could accrue economic benefits in the future. If there is a probable economic benefit in the future, a note to the financial statements should be made. No reference is necessary if future benefits are only possible or remote.

A **provision** is an amount set aside out of profits for a known expense, the amount of which is uncertain.

A **contingent liability** is a potential liability that exists when the statement of financial position is drawn up, the full extent of which is uncertain.

A **contingent asset** is a potential asset that exists when the statement of financial position is drawn up, although the inflow of economic benefit is uncertain.

IAS 38 Intangible assets

Revised

Intangible assets include licences, quotas, patents, copyrights, franchises and trademarks. International Finance Reporting Standards (IFRS) 3 Business combinations deals with goodwill, although this standard is not presently part of the Cambridge International syllabus.

Intangible assets are either purchased or internally generated. Internally generated assets cannot be recognised in financial statements. Intangible assets are initially shown at cost in the statement of financial position. After acquisition, they can be shown at:

- cost less accumulated depreciation and impairment losses
- revaluation based on fair value less subsequent **amortisation** and impairment losses

Regular revaluations should be undertaken to ensure that the carrying value does not differ materially from the fair value. Increases in value should be recognised in a statement of changes in equity and shown as a revaluation reserve. Reductions in value are shown as expenses in the income statement. Intangible assets with a finite life are amortised over their useful economic life. Intangible assets with an infinite life are not amortised.

Amortisation is the writing-off of part (or all) of the cost of an intangible asset such as goodwill.

Now test yourself

Tested

8 Identify two factors that affect the useful life of a non-current asset.

9 Explain the terms *derecognition* and *carrying amount*.

10 Which of the following would not form part of the revenue of a manufacturer of clothing?

Monies received from:

- the sales of men's trousers
- royalties earned on the design of saris
- the sale of an unused weaving machine
- dividends received from a subsidiary company

11 Explain the term *contingent*.

12 **(a)** According to IAS 36, explain when impairment will have occurred.

(b) How would an impairment loss be treated in the accounts?

Answers on p.191

Revision activity

In pairs, one person should state the number of an IAS and the other should give the description. Then the second person states a number and their partner gives the description.

19 Costing principles and systems

Process costing

What is process costing?

Revised

Industries producing more or less identical products that pass through a series of continuous or repetitive processes use a system of process costing. The system is used extensively in the chemical and oil refining industries, as well as many other industries that produce high volume, low value identical products.

The finished output at the end of one stage of the process becomes the starting point for the next stage. When the final process is completed, products are transferred to inventory or sold. The characteristics of a process-costing system include:

- separate, clearly defined processes
- output from one process becomes the input in the next process
- both direct costs and overheads are charged to each process
- as production progresses through each process, costs are accumulated for each process
- average cost for each process can be determined

Revision activity

Name a nationally known business that uses a system of process costing. Give reasons for your answer.

Process-costing ledger accounts

Revised

The total cost involved at each stage of production can be divided by the number of units completed and so the average cost of each individual unit can be calculated at each point in its progress towards becoming a finished product. **Cost units** that are similar pass through each stage of the production process. They can be liquid measures such as litres in the case of a cola manufacturer, or they can be grams or kilograms in the case of a breakfast cereal manufacturer. It should be fairly obvious that it would be not be sensible to attempt to cost each individual packet of breakfast cereal or bottle of cola.

A **cost unit** is a unit of production to which costs can be allocated.

An account is maintained for each separate process. As production moves through each individual process, the output of one process becomes materials used in the next process. The next process carries out additional work that may require further inputs of all or some elements of cost. Any additional costs incurred in the second process are added to the total costs transferred from the first process. The total costs from the first two processes are then transferred to the third process.

In a manufacturing business, there are three types of inventory:

- raw materials and/or components to be used in manufacturing
- work in progress — goods that are part-way through the production process
- finished goods waiting to be dispatched to customers

The average cost per unit plays a vital role in process costing. The formula for this is:

$$\text{average cost per unit} = \frac{\text{costs incurred during the period}}{\text{number of units produced during the period}}$$

Example

Dertin plc produced 127 000 'dertinis' during August. Production costs were:

	$
Direct materials	184 000
Direct labour	66 000
Manufacturing overheads	87 820
	337 820

Therefore:

$$\text{average cost per unit} = \frac{\$337\,820}{127\,000}$$

$$= \$2.66$$

Example

Mendoza plc manufactures a fruit drink product that passes through three processes. The costs for production of 750 000 litres of the drink in October were:

	Process 1	*Process 2*	*Process 3*
	$	$	$
Direct materials	66 000	34 000	24 000
Direct labour	25 000	8 000	18 500
Production overheads	12 000	23 000	22 000

There was no work in progress at the start or end of October. The cost ledger accounts for each of the three processes for October are:

Process 1

	$		$
Direct materials	66 000	Transfer to process 2	103 000
Direct labour	25 000		
Production overheads	12 000		
	103 000		103 000

Process 2

	$		$
Transfer from process 1	103 000	Transfer to process 3	168 000
Direct materials	34 000		
Direct labour	8 000		
Production overheads	23 000		
	168 000		168 000

Process 3

	$		$
Transfer from process 2	168 000	Transfer to finished goods	232 500
Direct materials	24 000		
Direct labour	18 500		
Production overheads	22 000		
	232 500		232 500

Therefore, the cost of producing 1 litre of fruit drink was:

$$\text{average cost per unit} = \frac{\$232\,500}{750\,000}$$

$$= \$0.31$$

Normal wastage

Revised

Even in the most efficient production processes there will be some wastage. An industry producing liquid products will incur losses through evaporation, whereas an industry producing timber products will lose material when the wood is cut or smoothed. Losses that cannot be eliminated totally are known as **normal losses**. Managers are generally able to predict the amount of wastage that will occur in their business. They will be able to quantify the acceptable level of wastage in each process.

The units wasted are credited to the appropriate process account. As the cost of the wasted units is absorbed as part of the cost of production, no value is attached to it.

Example

In October 6000 kg of materials costing $720 were introduced into a process. From past experience, it has been estimated that a normal loss of 240 kg can be expected.

An account for the process is as follows.

Process

	Units	$		Units	$
Direct materials	6000	720	Normal loss	240	–
			Transfer to next process	5760	720
	6000	720		6000	720

The average cost per unit of the expected output was $0.12 ($720 ÷ 6000). The average cost per unit of actual production was $0.125 ($720 ÷ 5760).

The sale of scrap

On occasions, materials lost in a process can be sold as scrap. The sale proceeds are offset against the costs incurred in the process.

Example

Details are the same as in the previous example. All lost units have a sale value of $0.06 per unit.

Process

	Units	$		Units	$
Direct materials	6000	720.00	Normal loss	240	14.40
			Transfer to next process	5760	705.60
	6000	720.00		6000	720.00

Cost per unit in this process was $0.1225 ($705.60 ÷ 5760).

Work in progress

Revised

All incomplete units of production are valued in terms of their value of the equivalent units of the finished product. For example, 4200 units that are only a quarter completed are equivalent to 1050 units of completed goods. If the goods were only 10% completed, this would be the equivalent of 420 completed goods.

It would be rather unusual if all production started at the beginning of the month was completed by the end of the same month. There are usually a number of units of production that are only partly completed and these are known as work in progress. The costs detailed in any process account are for units completed and units that are only partially completed.

To calculate accurately the unit cost in any process, partly completed goods must be converted into their equivalent number of complete units. The actual complete units can then be added to the partly finished units converted into the equivalent number of fully completed units. This figure can then be used as the divisor.

$$\text{cost per unit} = \frac{\text{costs incurred during the period}}{\text{units completed + equivalent units of work in progress}}$$

Example

Completed production for February: 45 000 units. Work in progress 60% complete: 6500 units.

	$
Production costs	
Direct materials	65 300
Direct labour	29 126
Production overheads	20 000

The cost of one unit of production was $2.34 ($114 426 ÷ (45 000 + (6500 x 60%)).

Revision activity

Imagine you work for a business manufacturing woollen carpets. Your line manager requires you to draft a memo for issue to new interns explaining the term work in progress and its relevance to the calculation of the cost of one unit of production.

Cost elements with differing degrees of completion

As the degree of completion may be different for each of the elements making up the cost incurred in a process, calculations must be made for each **cost element** used when work in progress is valued.

Cost elements are the different resources that are used in each process of manufacturing, i.e. direct materials, direct labour and manufacturing overheads.

Example

The following cost information is for process 1 for September.

	$
Direct materials	147 240
Direct labour	225 330
Overheads	36 380

120 000 units were fully complete. 3600 units were work in progress. The work in progress was 75% complete as to materials, 50% complete as to labour and 35% complete as to overheads.

Work in progress:

- materials (equivalent units): 2700 units (75% x 3600)
- labour (equivalent units): 1800 units (50% x 3600)
- overheads (equivalent units): 1260 units (35% x 1200)

A table can be used to summarise the work in progress and the value of completed production:

Element	Total cost $	Completed units	Work in progress equivalent units	Total equivalent units	Cost per unit $
Materials	147 240	120 000	2700	122 700	1.20
Labour	225 330	120 000	1800	121 800	1.85
Overheads	36 380	120 000	1260	121 260	0.30

The table helps with calculating the total cost of elements transferred to process 2 (completed units x the cost per unit) and the value of work in progress to be carried forward in process 1 in October (work in progress equivalent units x the cost per unit). The account looks like this:

Process 1

	$		$	
Materials	147 240	Transfer to process 2	402 000	*(144 000 + 222 000 + 36 000)*
Labour	225 330	Work in progress c/d	6 950	*(3240 + 3330 + 380)*
Overheads	36 380			
	408 950		408 950	
Work in progress b/d	6 950			

Process 2

	$		$
From process 1	402 000		

Joint products

Revised

Joint products are produced simultaneously from the same process and have a significant sales value. If the product has only a minor sales value, it is known as a by-product. The Chartered Institute of Management Accountants defines joint products as 'having a sufficiently high saleable value to merit recognition as a main product'.

At the start of the process, individual products are indistinguishable. However, at some stage during production each product becomes identifiable. Before this separation point, costs cannot be traced to an individual product. Two methods often used to apportion joint costs up to the point of separation or split-off point are by:

- production volume of each product
- relative sales value of each product

After the point of separation, each separate product can be identified and further costs can be charged appropriately.

Example

Using production volume to apportion costs

Products M and N pass through the same process. 60 000 kilograms of M and 10 000 kilograms of N are produced. Total joint costs of the process are $154 000.

Product M = $132 000 (60 000 ÷ 70 000 x $154 000)

Product Y = $22 000 (10 000 ÷ 70 000 x $154 000)

Example

Using relative sales value to apportion costs

Abacus and Baratus are joint products. Abacus sells for $87 per litre and Baratus sells for $13 per litre. Production was 2000 litres of Abacus and 8000 litres of Baratus. Up to the point of separation, the joint costs amounted to $40 000.

Total sales revenue generated from production:

		$
Abacus:	2000 x $87 =	174 000
Baratus:	8000 x $13 =	104 000
		278 000

Calculating the apportionment of joint costs:

	$	
Costs apportioned to Abacus	25 036	*(174 000 ÷ 278 000 x $40 000)*
Costs apportioned to Baratus	14 964	*(104 000 ÷ 278 000 x $40 000)*

By-products

Revised

By-products arise during the production of the main product. They have a low sales value so a complex costing system is inappropriate. The sales value of the by-product less costs incurred after the point of separation is deducted from the total cost of production.

Example

Cost of production for January from previous process: $670 000. Revenue from sales of by-product: $1200. Costs incurred by the by-product: $48.

Ignoring work in progress, the relevant process account would show:

Process account for the month of January

	$		$
Previous process	670 000	Sales of by-product	1 200
		Transfer to next process	668 800
	670 000		670 000

Valuation of inventory using absorption and marginal costing principles

Valuing inventories

Revised

IAS 2 requires that inventories should be valued at the lower of cost and net realisable value (see Topic 8, Valuation of inventory — see p. 59). Costs include the cost of purchase, conversion costs such as fixed and variable manufacturing overheads, and other costs incurred in bringing the inventories to their present location and condition. All normal costs are included in the total cost of the product when using absorption costing, so this is an acceptable method of valuing closing inventories. Marginal costing principles ignore fixed costs, so inventories cannot be valued using marginal costing techniques. Managers can use whatever basis they like when producing financial statements for internal management use as IAS 2 does not apply.

Revision activity

Your line manager wishes you to inform the new interns about by-products derived from the manufacture of the woollen carpets. Draft notes to aid you when you speak to them.

Relevant costs

Marginal costing

Revised

Marginal costing is a decision-making technique based on the extra costs incurred and the extra revenue generated by the production and sale of an additional unit of output. A clear distinction is made between fixed and variable costs. No attempt is made to allocate or apportion any fixed costs incurred by cost centres or cost units. An increase in production, i.e. an increase in business activity, does not increase fixed costs — they will remain unchanged. Marginal costing is used when a business is:

- costing special or one-off opportunities
- deciding whether to make or buy a product
- choosing between competing alternative actions
- employing a penetration/destroyer pricing strategy
- calculating the break-even level of output

All of these circumstances tend to be short-term decisions.

Marginal cost statements

Marginal cost statements offer an alternative layout to traditional income statements. They emphasise the total fixed costs incurred by showing fixed and variable costs separately.

Example

A marginal cost statement for the year ended 31 May 2014 could look like this:

Marginal cost statement for the year ended 31 May 2014

	$	$
Sales		1 240 000
Less variable costs		
Direct materials	(80 000)	
Direct wages	(420 000)	
Factory expenses	(90 000)	
Selling and distribution expenses	(61 000)	
Administrative expenses	(23 000)	(674 000)
Total contribution		566 000
Less fixed costs		
Factory overheads	(143 000)	
Selling and distribution overhead	(28 000)	
Administrative overhead	(41 000)	(212 000)
Profit for the year		354 000

Absorption costing

Revised

Absorption costing determines the total cost of production. It is important that a business is able to calculate what each product or service (or group of products or services) has cost to make or provide. This is necessary so that a selling price can be arrived at in order to recover the costs and provide profits to ensure the survival of the business. All costs incurred in production are absorbed into the cost of production. The total cost of producing goods is necessary for long-term planning as total revenue must cover both direct costs as well as overheads.

Example

An absorption costing statement for January 2014 might look like this:

	$
Direct materials	124 000
Direct labour	560 000
Royalties	4 000
Prime cost	688 000
Indirect materials	14 000
Indirect labour	65 000
Other indirect costs	18 000
Depreciation	44 000
Total production cost	829 000
Selling and distribution costs	48 000
Administration costs	176 000
Total cost	1 053 000

If 40 000 units of production were manufactured, the cost of each unit would be $26.325.

Limiting factors relating to production and capacity

Revised

A business may be faced by a short-term shortage of one or more factors of production necessary in the manufacturing process. A shortage of any resource could limit the ability to maximise profits. A scarce resource is sometimes referred to as a **key factor** or **limiting factor**. Managers must utilise scarce resources in a way that will yield the maximum return to the business.

Now test yourself

Tested

1. Explain the term *work in progress*.
2. Total costs incurred in process 1 amounted to $3081. There were 1200 complete units and 800 units that were only one-eighth complete. Calculate the cost of one unit of production in process 1.
3. Explain the term *normal loss*.
4. Explain the difference between a joint product and a by-product.
5. Explain the difference between a marginal cost statement and a 'traditional' income statement.
6. What is the connection between a key factor and a limiting factor?

Answers on p.191

20 Budgets

Using budgets

The purpose of budgeting

Revised

Accounting fulfils two purposes: stewardship and management.
The management function can be broken down into:

- planning
- co-ordinating
- communicating
- decision-making
- controlling

All these functions are achieved by the preparation of **budgets**.

A **budget** is a short-term financial plan prepared in advance and based on the objectives of the business.

Budgets:

- are 'plans expressed in money' and show what the management of a business hopes to achieve in terms of departmental plans and strategic plans
- must be co-ordinated, so managers must communicate with each other when preparing budgets. They must communicate plans to staff below and senior managers above
- depend on and influence each other — it is important to ensure that individual budgets do not contradict or conflict with other budgets
- mean that decisions have to be made regarding future levels of sales and production etc. if profits are to increase
- should be compared with actual results. Action can be taken if actual results are worse than budgeted; if actual results are better than budgeted, examples of good practice may be identified and replicated elsewhere

Budgetary control delegates financial planning to managers. Performance is evaluated by continuously comparing actual results achieved departmentally against those set in a budget.

Revision activity

Prepare a memo for presentation to your line manager listing three advantages and three disadvantages of using a system of budgetary control.

Table 20.1 The advantages and disadvantages of using budgets

Advantages	Disadvantages
Planning must take place when individual budgets are prepared	If departmental budgets are unrealistic, this could have a knock-on effect on other budgets
Plans need to be co-ordinated, which requires communication throughout the business	Resources could be wasted if budgets became an overriding goal
Areas of responsibility and targets to be achieved by different personnel are defined	If budgets are imposed rather than negotiated, they might demotivate staff
Budgets can act as a motivating influence, but this is only true when all staff are involved in the preparation of budgets	Budgets might be based on plans that can be easily achieved, so making departments/managers appear to be more efficient than they really are. This could also lead to complacency and/or underperformance
Individual departmental and personal goals are more likely to be an integral part of the strategic plan	Budgets might lead to departmental rivalry
Budgets generally lead to a more efficient use of resources and therefore better control of costs	

The preparation of budgets

Master budgets

Revised

All budgets are drawn together to prepare a master budget. This provides a summary of all the individual budgets prepared by the different parts of the business and their planned operations. It is made up of a budgeted:

- manufacturing statement (where appropriate)
- income statement
- statement of financial position

Figure 20.1 Components of the master budget

When budgets are being prepared, it is essential that any **limiting factors** are identified and amendments made. Changes made to one departmental budget will have a knock-on effect on other budgets. Changes may be necessary to take account of a limiting factor. For example, a factory may be able to produce 120 000 units per month. It would be pointless for a sales budget to be prepared estimating sales volume at 140 000 units. Production of 120 000 units is a limiting factor. This limiting factor would affect not only the sales budget; it would also have an impact on the cash, purchases, trade receivables and trade payables budgets, as well as the master budget.

A **limiting factor** is anything that limits the activity of a business; it is also known as a key factor.

Preparation of a set of forecast financial statements will test your ability to:

- apply the concepts of accruals and realisation
- differentiate between capital and revenue expenditures and capital and revenue incomes
- distinguish between cash and non-cash expenses.

Production budgets

Revised

A production budget is prepared to determine whether the levels of production necessary to satisfy the anticipated level of sales are attainable. It shows the quantities of finished goods that must be produced in order to meet expected sales, together with any increase in inventory levels that might be required.

Purchases budgets

Revised

A purchases budget is required to determine the quantities of purchases required for resale or for use in production. The method used is similar to that used to compile a production budget.

Expenditure budgets

Revised

This budget includes all anticipated payments to be made. You need to include all payments made and include the payments in the correct month. Information is used from the purchases budget and the sales budget. You must consider carefully when suppliers are to be paid and when customers settle their debts. Other payments made must be carefully included according to the information supplied.

Trade receivables budgets

Revised

This budget forecasts the amounts that will be owed by credit customers. It is linked to the production, sales and cash budgets. It considers the length of credit period that is allowed on customers' debts. Note that cash sales are not included in the trade receivables budget as these are recorded in the cash budget.

Trade payables budgets

Revised

This forecasts the amounts that will be owed to suppliers of components, raw materials or goods for resale at the end of each month. It is linked to the purchases and the cash budgets.

Cash budgets

Revised

Cash is an essential element for the survival of any business in the short term:

- holding too much cash is a waste of the resource
- holding too little cash can lead to problems in acquiring the factors of production necessary to function effectively

In order to predict if either of these situations is about to arise, managers prepare a **cash budget**. Forecast receipts result in positive cash flows (or cash inflows), whereas forecast expenditures result in negative cash flows (or cash outflows). The difference between the cash inflows and cash outflows gives net cash flows. Cash budgets allow managers to determine if there is sufficient cash to continue in business.

Cash budgets are sometimes called cash flow forecasts.

Expert tip

A cash budget might show a negative cash flow at the end of a time period. This is possible as cash budgets also include bank transactions.

Preparing a cash budget

A cash budget shows estimates of future cash incomes and cash expenditures. It is usually prepared monthly and includes both capital and revenue transactions. It helps managers to be aware of any potential shortages or surpluses of cash so that they can make the necessary financial arrangements.

A cash budget has three parts:

- forecast receipts (cash inflows)
- forecast expenditure (cash outflows)
- a summary of forecast receipts and forecast expenditure, with the resulting closing forecast cash balance

Revision activity

Cash is to be paid to a supplier of goods on credit. Identify all the budgets that would be affected by this one transaction.

A cash budget is just what it says: transactions involving cash. Non-cash transactions are *not* included, neither are provisions. The preparation of a cash budget will:

- help to ensure that there is always sufficient cash available to pursue normal business activities
- highlight times when the business may have cash surpluses, allowing managers time to arrange short-term investment of the surpluses to gain maximum return

Expert tip

Cash budgets are often examined, so it is worth practising the layout.

- highlight times when the business might have cash deficits, allowing managers time to arrange short-term alternative sources of finance

Example

The following budgeted information is given.

	July	August	September	October	November
	$	$	$	$	$
Credit sales	30000	25000	48000	28000	35000
Credit purchases	18000	13000	17000	12000	20000
Wages paid	9000	9000	9500	9500	9500
Other expenses	6200	7400	8500	6100	8000
Purchase of machine			20000		
Depreciation of machine			200	200	200

Trade receivables will pay 1 month after goods are sold. Trade payables will be paid 2 months after receipt of the goods. All expenses are paid in the month in which they occur. It is expected that cash in hand at 1 September will be $2600. Inventory at 1 September is expected to be $1500. Inventory at 30 November is expected to be $2500.

A cash budget for the 3 months ended 30 November would show:

Cash budget for the 3 months ending 30 November

	September	October	November
	$	$	$
Receipts			
Cash received from credit customers	25000	48000	28000
Payments			
Cash paid to credit suppliers	18000	13000	17000
Wages	9500	9500	9500
Other expenses	8500	6100	8000
Purchase of machine	20000		
	56000	28600	34500
Balance b/d	2600	(28400)	(9000)
Receipts	25000	48000	28000
	27600	19600	19000
Payments	56000	28600	34500
Balance c/d	(28400)	(9000)	(15500)

Note that depreciation has not been included as it is a non-cash expense. There are alternative layouts, but the one shown above is the version used most frequently.

A budgeted income statement for the 3 months ended 30 November has been prepared:

	$	$
Sales		111000
Less cost of sales		
Inventory 1 September	1500	
Purchases	49000	
	50500	
Inventory 30 November	2500	48000
Gross profit		63000
Less expenses		
Wages	(28500)	
Other expenses	(22600)	
Depreciation of machinery	(600)	(51700)
Profit for the 3 months		11300

The sales figure is the total of the budgeted figures — September $48000, October $28000 and November $35000 — not the amounts shown in the cash budget. The purchases figure is the total of the budgeted figures — September $17000, October $12000 and November $20000.

Depreciation is included in the budgeted income statement because of the accruals concept: the machinery is a resource that will be used to generate profits, so a charge has to be made.

Expert tip

Include the words 'cash budget' or 'cash forecast' as part of your heading. The heading should also include the time period.

Expert tip

Always show the months separately when preparing a cash budget. All budgets use the same summarised layout:

- opening balance
- plus increases
- less decreases
- closing balance

Expert tip

There are many different ways of summarising the cash transactions shown in a budget. Choose one and use it consistently.

Sales budgets

Revised

Sales budgets show predicted sales and revenues and are usually prepared before other budgets as most businesses are sales-led. Other budgets can be prepared using information derived from a sales budget. If the sales budget is inaccurate, errors will filter through and make other budgets inaccurate too.

A sales budget is based on forecast sales for the budget period; it is difficult to prepare because of the many variables that are out of the control of the management. These variables include:

- customers changing to or from other suppliers
- competitors increasing or decreasing prices and/or output
- the state of the economy
- government action, such as changes in levels of taxation, government spending and the imposition of trade sanctions

Revision activity

Explain to a non-accountant why the amounts shown in a cash budget for sales is generally different to the amount shown for sales in an income statement.

Typical mistake

Don't show separate monthly figures in the budgeted income statement. This is one of the most common errors made in answering this type of examination question.

Now test yourself

Tested

1. Explain the term *budget*.
2. Identify five functions of budgeting.
3. Explain the term *budgetary control*.
4. Explain the term *master budget*.
5. Complete the following sentence:
   A master budget draws together individual budgets and is summarised by the preparation of an _____ statement and a statement showing the _____ of the business.
6. Complete the following formula for a trade payables budget:
   opening balance of trade payables + ? – ? = closing balance of trade payables
7. Explain why the preparation of a cash budget is vital to the decision-making of any business.
8. Is depreciation entered in a cash budget? Explain your answer.
9. List three items that might appear in a budgeted income statement but would not appear in a cash budget.

Answers on pp.191–92

Principal budget factors and the flexing of budgets

Principle budget factors

Revised

A **principal budget factor** (also known as a **key factor** or **limiting factor**) restricts a business from achieving its desired level of output.

During the preparation of budgets, obstacles to achieving the desired outcomes should be identified. These could include shortages of materials or components, factory space or skilled labour. When production is restricted so that demand cannot be met, the limiting factor must be identified. While individual budgets are being prepared, it is essential that co-ordination takes place and changes are made. For example, it would be pointless:

- to set a sales budget of 1 000 000 units if the factory is capable of producing only 900 000 units
- to set a production budget requiring 200 000 hours of labour if only 80 000 labour hours were available

Budgets may be used as control mechanisms when actual performance is compared to the budgeted performance. **Variances** need to be investigated and action taken. **Adverse variances** need corrective action whereas **favourable variances** need to be identified and, where possible, applied to other areas of the business.

Variances arise when there is a difference between actual and budgeted figures.

Adverse variances reduce profits.

Favourable variances increase profits.

Flexing budgets

Revised

Actual results that are compared to a fixed budget based on a set level of sales or output can give misleading results, which can lead to managers making inappropriate decisions. This problem may be overcome if budgets are 'flexed' in order to reflect changes in output and turnover.

Example

The production of 1500 containers is budgeted to require 600 kg of materials; actual usage is 420 kg of materials. Therefore, budgeted use of materials is calculated to be 0.4 kg per unit and actual usage is calculated to be 0.28 kg per unit. In fact, only 1400 containers were manufactured, so actual usage was 0.3 kg per unit.

Managers need to adjust budgeted levels of activity to prepare accurate budgets capable of being used for budgetary control purposes. If the actual level of activity is different to the budgeted level, they have to allow for differing levels of expenditure on the factors of production they use. Variable costs and revenues must be changed in order to reflect the actual level of activity achieved.

Flexed budgets should reflect different behaviour patterns of fixed and variable costs and should be based on adjusted levels of activity. The process requires that variances are analysed; in the case of adverse variances, remedial action should be taken. Responsibility for variances rests with departmental heads.

Example

The following data are available for Momsen for the year ended 30 September.

	Budget	Actual
Level of production (units)	9000	8500
	$	$
Variable costs — direct materials	37 800	33 150
— direct labour	41 400	42 500
— variable overheads	17 100	19 125
Total variable costs	96 300	94 775
Fixed costs	45 000	52 000
Total costs	141 300	146 775

A flexed budgeted operating statement for Momsen for the year ended 30 September is as follows.

	Flexed budget	Actual	Variance	
	$	$	$	
Direct materials	35700	33150	2550	*(Favourable)*
Direct labour	39100	42500	(3400)	*(Adverse)*
Variable overheads	16150	19125	(2975)	*(Adverse)*
Total variable costs	90950	94775	(3825)	*(Adverse)*
Fixed costs	45000	52000	(7000)	*(Adverse)*
Total costs	135950	146775	(10825)	*(Adverse)*

Now test yourself Tested

10 Explain the term *principal budget factor.*

11 Identify two principal budget factors that could prevent the desired outcomes for a business.

12 Explain what is meant by a flexed budget.

Answers on p.192

21 Standard costing

Cost standards for unit costs

Standard costing

Revised

Standard costing sets levels of costs and revenues that ought to be achievable when reasonable levels of performance are attained, together with efficient working practices. In order to achieve an efficient production process, **budgets** are prepared. They set the targets for future performance. If a business does not achieve the standards set, managers will want to find out why.

A **budget** is a short-term financial plan prepared in advance and based on the objectives of the business.

Types of cost standard

Revised

There are a number of ways of setting standards.

Attainable standards are standards that are set so that they can be achieved under generally efficient operating conditions. The Chartered Institute of Management Accountants defines an attainable standard as one 'which can be achieved if a standard unit of work is carried out efficiently, a machine properly operated or a material properly used'. They are most often used in practice as they are not too easy or too difficult to achieve.

Basic standards remain unchanged over a number of years and are useful for determining trends in efficiency. The danger is that such standards will become outdated over time and so reveal variances that have little use for analysis purposes. Therefore, basic standards are rarely used for control purposes.

Ideal standards assume that production is carried out under the most favourable conditions leading to perfect performance. The Chartered Institute of Management Accountant's definition is 'a standard that can be attained under the most favourable conditions, with no allowance for normal losses, waste and machine downtime'.

Calculation of standard unit price

Revised

Estimated costs for labour, materials and overheads are totalled to give the standard cost for the product. The estimated costs are based on the costs that should be incurred under efficient production conditions. **Standard unit price** is the total standard costs of all the factors of production that make up one finished unit of production. Standard costs can be based on:

- past data used to forecast likely usage of materials and labour
- detailed study of the processes involved in production

Material standards are based on the quantity of materials that will be necessary to complete each unit of output. Labour standards are based on production methods and the hours required by an average worker to complete each unit of output.

Standard hours

Revised

This output measure is used in departments that produce several different products and it represents the work that can be done in an hour. Using such a measure, each production department has a standard number of hours set for its output.

Now test yourself Tested

1 List three methods used to set standards.

Answer on p.192

Variance analysis

A variance is the difference between budgeted (standard) revenue and costs and actual revenue and costs. It arises when actual results do not correspond with predicted results.

Direct materials variances

Revised

Total direct materials variance identifies the difference between the amount that managers thought would be spent on direct materials (the standard/budgeted set) and the amount that was actually spent.

An adverse total direct materials variance means that materials have cost the business more than anticipated, which has reduced profits (profits affected **adversely**). A favourable total direct materials variance means that materials have cost the business less than anticipated, which has increased profits (a **favourable** effect on profits).

The difference in the cost of direct materials to a business could because of:

- more (adverse variance) or fewer (favourable variance) materials being used than was expected
- an increase in the price of materials since the budget was prepared (adverse variance) or a decrease in the price of materials since the budget was prepared (favourable variance)
- a combination of a change in the use of materials and a change in prices

We can identify the causes of differences in budgeted and actual expenditure arising from the above factors by calculating **sub-variances**.

A **sub-variance** is a constituent part of a total variance; sub-variances added together give the total variance.

Direct materials usage sub-variance

Direct materials usage sub-variance calculates the change in total expenditure caused by changes in the quantity of materials used. An **adverse usage sub-variance** indicates that production used more materials than anticipated (and therefore reduces predicted profits), whereas a **favourable usage sub-variance** indicates that production used fewer materials than anticipated (and therefore increases predicted profits).

Direct materials price sub-variance

A direct materials price sub-variance calculates differences between budgeted and actual costs due to sub-variances that arise because of changes in the prices of the raw materials used.

An **adverse price sub-variance** arises when the cost of direct materials has risen, whereas a **favourable price sub-variance** occurs when the cost of direct materials has fallen.

Expert tip

Always indicate in your answer which sub-variance you have calculated and state whether it is an adverse or favourable sub-variance.

The calculation of sub-variances is relatively straightforward when only one variable is considered. When there are changes to both usage and price, using the following grid will help to calculate both sub-variances.

Sq	×	Sp
Aq	×	Sp
Aq	×	Ap

where:

S = the standard (budgeted) figure

q = the quantity

p = the price

A = the actual figure

so:

Sq = the standard quantity

Sp = the standard price

Aq = the actual quantity used

Ap = the actual price of the materials used

Sq	x	Sp	A difference (variance) between these two totals must be due to a difference in the budgeted usage and the actual usage as the standard price remains the same
Aq	x	Sp	A difference (variance) between these two totals must be due to a difference in the budgeted price and the actual price as the quantities remain the same
Aq	x	Ap	

The two differences combined gives the total materials variance.

Example

The following information relates to the manufacture of Xow cola.

	Budgeted	Actual
Direct materials	4800 litres	4250 litres
Direct materials cost per litre	$2	$3

To calculate the direct materials usage and materials price sub-variances, the amounts are inserted into the grid:

Sq	x	Sp				
4800	x	$2	=	$9600		
					$1100	Favourable direct materials usage sub-variance
Aq	x	Sp				
4250	x	$2	=	$8500		
Aq	x	Ap			$4250	Adverse direct materials price sub-variance
4250	x	$3	=	$12750		
					$3150	Adverse direct total materials variance

Materials cost $3150 more than budgeted. The price increased by $4250, but a saving of $1100 was made because of more efficient use of materials.

Direct labour variances

Revised

Direct labour variances identify the difference between the amount that managers thought would be spent on direct labour costs and the amount that was actually spent. It is useful to determine whether the total variance was because of:

- workers being more or less efficient
- workers being paid more or less
- some combination of a change in efficiency and a change in wage rates

In order to calculate the sub-variances that make up the total direct labour variances we can use the grid, but we do need to make some changes to our descriptions of the sub-variances. Labour usage is referred to as labour efficiency and labour price is referred to as wage rate or labour rate.

Sq	x	Sp
Aq	x	Sp
Aq	x	Ap

where:

S = the standard (budgeted) figure

q = the number of hours

p = the wage rate

A = the actual figure

so:

Sq = the standard hours required

Sp = the standard wage rate

Aq = the actual hours taken

Ap = the actual wage rate paid

Sq	x	Sp	A difference (variance) between these two totals must be due to the hours that managers thought would be worked and the hours that were actually worked
Aq	x	Sp	A difference (variance) between these two totals must be due to a difference in the wage rate that had been budgeted and the wage rate that was actually paid
Aq	x	Ap	

The two differences combined gives the total direct labour variance.

Example

The following information for direct labour for April is given.

	Budgeted	Actual
Direct labour	9200 hours	9250 hours
Direct labour rate per hour	$5.50	$5.30

To calculate the direct labour efficiency and wage rate sub-variances, the amounts are inserted into the grid:

Sq	x	Sp				
9200	x	$5.50	=	$50600		
Aq	x	Sp			$275	Adverse direct labour efficiency sub-variance
9250	x	$5.50	=	$50875		
Aq	x	Ap			$1850	Favourable direct labour rate sub-variance
9250	x	$5.30	=	$49025		
					$1575	Favourable total direct labour variance

The workers took longer to complete their tasks, costing $275 more than the budgeted amount. However, they were paid a lower hourly rate so $1850 was saved.

Many questions (and real life) are based on both direct materials and direct labour and require the calculation of all seven variances. The seventh variance is the total direct expenses variance, which is the total materials variances and the total labour variances added together.

The flexed budget

Revised

A standard costing system is used to identify problem areas in production so that remedial action can be taken. The system identifies areas of cost saving which may be copied in other sections of the business. The system identifies variances by comparing standard costs and the costs that have actually been incurred. It is important that any findings are made by comparing like with like. This principle should be applied when comparing standard costs with actual costs. If actual activity differs from budgeted activity, budgets must be flexed to produce a budget that reflects actual levels of activity.

Example

Managers wish to produce 20000 pairs of soccer boots in August. They believe that 4000 m^2 of leather should be used. Actual figures available in September show that only 3500 m^2 of leather were used and 18000 pairs of boots were made.

Less leather than thought has been used, but fewer boots were manufactured, so we would expect less leather to have been used. 4000 m^2 should have made 20000 pairs of boots; 3500 m^2 actually made 18000 pairs of boots.

Therefore, the budgeted figures must be flexed to see if materials have been used efficiently or not. If we had known when the standard was set that only 18000 pairs of boots would be made, the budgeted figure for materials would have been 3600 m^2 (18000 ÷ 20000 x 4000 m^2).

Standard materials usage: 18000 pairs of boots requires 3600 m^2 of leather

Actual materials usage: 18000 pairs of boots has required 3500 m^2 of leather

Therefore, less material was used than anticipated, giving rise to a favourable materials usage sub-variance.

Example

The following information is given for direct labour hours for October for the production of switches.

	Standard (budgeted)	Actual
Production	40 000 units	38 000 units
Direct labour hours	60 000 hours	59 000 hours

Production of 38 000 switches should use 57 000 hours of direct labour (38 000 ÷ 40 000 x 60 000 hours). In fact, 2000 extra hours have been used. An investigation should be undertaken to determine why this has happened and, if possible, remedial action should be taken.

Expert tip

Only flex the standard quantity of direct materials and/or the standard hours of direct labour to be used in your grid.

Example

The following information is given for the production of plastic cases.

Standard (budgeted) costs for 1000 cases:

Direct materials	80 kilograms at $40.00 per kg
Direct labour	30 hours at $3.50 per hour

Actual costs for the production of 900 cases:

Direct materials	70 kilograms at $41.50 per kg
Direct labour	29 hours at $3.00 per hour

To use the grid to calculate sub-variances, the budget must first be flexed. Only 900/1000th of the budgeted cases have been produced, so the standard usage of direct materials and direct labour should be calculated to construct a flexed budget. Remember that only the standard (budgeted) quantities will change.

Direct materials

Sq	x	Sp				
72	x	$40.00	=	$2880		
Aq	x	Sp			$80	Favourable direct materials usage sub-variance
70	x	$40.00	=	$2800		
Aq	x	Ap			$105	Adverse direct materials price sub-variance
70	x	$41.50	=	$2905		
					$25	Adverse total direct materials variance

Direct labour

Sq	x	Sp				
27	x	$3.50	=	$94.50		
Aq	x	Sp			$7.00	Adverse direct labour efficiency sub-variance
29	x	$3.50	=	$101.50		
Aq	x	Ap			$14.50	Favourable direct labour rate sub-variance
29	x	$3.00	=	$87.00		
					$7.50	Favourable total direct labour variance

Expert tip

You might find that sub-variances are referred to as variances, although a direct labour efficiency variance is in fact a sub-variance.

Sales variances

Revised

Sales variances are not flexed and can be calculated by using the grid. Be careful when labelling 'adverse and favourable'. Ask yourself 'Is the business better off (favourable variance) or worse off (adverse variance)?'

Example

The budgeted sales of cartridges was 8100 units at a selling price of $12.50. The actual sales were 8600 units sold at $11.80.

Using the grid to calculate the sales variances:

Sq	x	Sp				
8100	x	$12.50	=	$101 250		
Aq	x	Sp			$6250	Favourable sales volume sub-variance (a favourable impact on profit)
8600	x	$12.50	=	$107 500		
Aq	x	Ap			$6020	Adverse sales price sub-variance (an adverse effect on profit)
8600	x	$11.80	=	$101 480		
					$230	Favourable total sales variance

You should be able to tell quickly whether a variance is favourable or adverse.

Managers introduce a system of standard costing because it highlights variances between predicted costs and actual costs. Variances should lead to an investigation into their causes. Budgetary control tries to ensure that individual departments or sections of a business are efficient, thereby improving the performance of the whole business. Standard costing provides more details than budgeting by examining the individual costs of the production process for each product. When adverse variances are identified, corrective action can be taken. Action requires that the causes of any variances are identified. Variance analysis identifies areas of concern and areas of good practice.

You may be asked to explain possible reasons for variances. You may also be asked to identify some inter-relationship between different sub-variances. The comments you make may be speculative because of the limited details given in a question.

Expert tip

The most common type of question relates to the calculation of total and sub-variances for direct materials and direct labour, so you should learn the grid and how to use it.

Causes of sub-variances

Revised

Actual results may differ from standards because there have been errors in the setting of the standards. Errors could be caused by:

- setting unrealistic targets
- managers deliberately setting low standards

In an answer, show that you are aware of these two points but do not labour them. Make a general comment that will apply to all sub-variances.

Table 21.1 Direct materials usage sub-variance

Favourable sub-variance	Adverse sub-variance
Use of: • better quality materials • highly skilled workers • state-of-the-art equipment	Use of: • poorer materials • less-skilled workers • poor capital equipment
	Also: • theft of materials • deterioration of materials

Table 21.2 Direct materials price sub-variance

Favourable sub-variance	Adverse sub-variance
Deflation — either general or specific to the materials being purchased	Inflation — either general or specific to the materials being purchased
Supplier reducing price	Supplier increasing price
Use of: • a cheaper alternative • less good quality of same material • better trade discount obtained	Use of: • more expensive alternative • better quality of same material • loss of trade discount
Increase in value of dollar against other currencies	Decrease in value of dollar against the value of other currencies

Table 21.3 Direct labour efficiency sub-variance

Favourable sub-variance	Adverse sub-variance
Use of: • workers with higher skills • better machinery	Use of: • workers with lower skills • poor machinery
Good working conditions	Poor working conditions
High staff morale — highly motivated	Poor staff morale — poor motivation
Good levels of quality control	Poor levels of quality control

Table 21.4 Direct wage rate sub-variance

Favourable sub-variance	Adverse sub-variance
Use of lower grade workers	Use of higher grade workers
Wage deflation	Wage inflation
Reduction in overtime or premium rates being paid	Increase in overtime or premium rates being paid

Table 21.5 Sales volume sub-variance

Favourable sub-variance	Adverse sub-variance
More aggressive marketing strategy	Less aggressive marketing strategy
Increased seasonal sales	Decrease in seasonal sales
Less competition in sector	More competition in sector
Fewer sales by competitors — higher market share	More sales going to competitors — lower market share
High staff morale — highly motivated	Poor staff morale — poor motivation
Change in consumer tastes	Change in consumer tastes
	Defective product

Table 21.6 Sales price sub-variance

Favourable sub-variance	Adverse sub-variance
Increase in price to compensate for increased costs	Reduction in selling price for bulk sales
Increase in price after use of marginal cost pricing	Reduction in price — using marginal cost pricing to penetrate a new market or to attract new customers; to quickly sell off goods etc.

Many sub-variances influence other sub-variances. Identification of these inter-relationships could gain 'development' marks. Table 21.7 gives two examples.

Table 21.7 Examples of inter-relationships between sub-variances

Fewer materials being used	because	a higher skilled workforce is being used and has to be paid more
Workers taking longer to make goods because of faulty machinery	resulting in	the machinery spoiling much of the materials being used

Revision activity

Imagine you work in a factory making ice cream. Draft notes to your line manager explaining how raw material variances can be connected to direct labour variances. Give examples of these connections.

Now test yourself Tested

2 What are the effects on the profits of a business of adverse variances and favourable variances?

3 Write down the grid used to calculate sub-variances.

4 Managers predict that 40 000 hats can be produced in a month using 16 000 m^2 of material. Only 30 000 hats were produced using 12 500 m^2 of material. Explain whether or not the material has been used efficiently or inefficiently.

5 During 1 month a business had a favourable sales volume variance of $2000 and an adverse sales price variance of $1000. Calculate the total sales variance and state whether actual profits have increased or decreased compared to those budgeted.

6 Identify two factors that could have caused:

(a) an adverse direct materials usage sub-variance

(b) a favourable direct labour rate sub-variance

(c) an adverse sales volume sub-variance

Answers on p.192

22 Investment appraisal

The elements of investment appraisal

The need for appraisal of capital projects

Revised

Non-current assets are the wealth generators of a business. They are acquired with the intention that they will generate profits. They are used in the business for more than one financial time period. Non-current assets used in business include land, buildings, machinery, plant, vehicles and office equipment.

Cash is a scarce resource so some form of capital rationing is often required. Managers look for good value when they purchase non-current assets. They plan carefully so that they get the best value for the money they spend. They want to ensure that they earn maximum benefits from their purchase.

Capital investment appraisal techniques assist managers to help them in their choice of appropriate investment opportunities. Care should be taken when making capital investment decisions because:

- large sums of money are often involved
- the money may well be tied up for a considerable length of time
- decisions cannot generally be easily reversed
- money committed is usually non-returnable

It is important that managers obtain as much detailed information from all sources that may be affected by the decision or that may affect the decision.

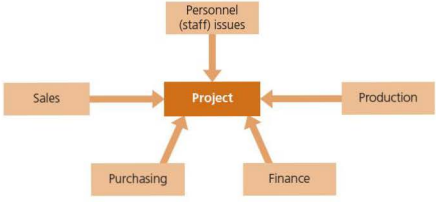


Figure 22.1 Factors involved in appraising a capital investment

Capital projects are evaluated in terms of their potential earning power. If managers have to replace a machine, they must decide which machine is most appropriate. There would be no decision to be made if there was only one machine available: the only question would be whether to buy or not to buy. However, there are usually alternatives from which to choose. Machines might:

- have different prices
- have different qualities
- produce different quantities of goods
- produce goods of different quality
- have different life spans
- have different rates of obsolescence

Methods of appraisal

There are five main methods of evaluating a capital project:

- payback
- accounting rate of return (ARR)
- net present value (NPV)
- discounted payback
- internal rate of return (IRR)

All methods require predictions about future flows of either cash or profits. If predictions are inaccurate, there could be serious problems for the business. Managers often use more than one method of appraising a project that could affect the business for many years.

Capital expenditure appraisal considers only **additional revenues** generated by a project and **additional expenditure** that may be incurred by the project (expenditure may include **opportunity costs**).

Opportunity costs are the benefits from the alternative use of resources that are foregone when a new project is undertaken.

Payback

Revised

The payback period is the number of years required for the total cash flows to equal the initial capital investment. Risk is an important factor when considering a project lasting a few years. The sooner the capital expenditure is recouped, the better. If a machine has a scrap or trade-in value, this is treated as an income in the year of disposal.

There are two types of examination question:

- When profits are given in the question, any non-cash expenses such as depreciation must be added to the profit to obtain the cash flows generated.
- When annual cash inflows and outflows are shown separately, the outflows must be deducted from the inflows to obtain the net cash flows.

Expert tip

Payback uses cash flows, so non-cash items such as depreciation, accruals and prepayments are ignored.

Table 22.1 The advantages and disadvantages of using payback

Advantages	Disadvantages
It is relatively simple to calculate	It ignores the **time value of money**
It is fairly easy for non-accountants to understand	It does not consider cash flows that take place after the payback period
The use of cash is more objective than using profits that are dependent on the accounting policies decided by managers	Projects may have different patterns of cash inflows, which do not give a realistic appraisal (see example below)
As all future predictions carry an element of risk, it shows the project that involves the least risk because it recognises that cash received earlier in the project life cycle is preferable to cash received later	
It shows the project that benefits the liquidity of a business	

Example

	Project 1	Project 2
	$	$
Year 0	(10000)	(10000)
Year 1	10000	1
Year 2	1	1
Year 3	1	50000

Project 1 has a payback period of 1 year. Project 2 has a payback period of 2.2 years. Payback in this case does not give a realistic appraisal.

The **time value of money** is the concept that money received or paid in the future does not have the same value as money received or paid today. It recognises that $1 today is worth more than $1 in the future.

Revision activity

Explain to a non-accountant what is meant by the term *time value of money*.

Accounting rate of return (ARR)

Revised

The accounting rate of return shows the return on the investment expressed as a percentage of the average investment over the period.

$$\text{average investment} = \frac{\text{initial investment} + \text{scrap value}}{2}$$

It seems improbable that the scrap value is added, but it works.

$$\text{accounting rate of return} = \frac{\text{average profits}}{\text{average investment}} \times 100$$

Expert tip

The calculation of ARR uses profits, not cash flows.

Some projects require an injection of additional working capital in the form of extra inventory and as a result more trade payables. The increase in working capital can be assumed to be a constant during the lifetime of the project. This means that there is no need to calculate the average increase in working capital over this time.

Example

Kosuke is considering an investment in a new project. The initial investment is $450 000. The project requires an increase in working capital of $50 000. The average investment in the project is $275 000.

$$\frac{\$450\,000}{2} + \$50\,000 = \$275\,000$$

Table 22.2 The advantages and disadvantages of using ARR

Advantages	Disadvantages
It is relatively simple to calculate	The time value of money is not considered
The results can be compared to present profitability	It does not consider cash flows that take place after the ARR period
It takes into account the aggregate earnings of the project(s)	

Net present value (NPV)

Revised

The net present value method of investment appraisal is calculated by taking the present-day (discounted) value of all future net cash flows based on the business's **cost of capital** and subtracting the initial cost of the investment.

A discount factor allows the value of future cash flows to be calculated in terms of their value today. Managers evaluate a project by comparing the capital investment with the return that the investment will bring in the future. In order to make a meaningful comparison between the amount originally invested and the income generated in the future by that investment, the cash flows need to be discounted so that they are the equivalent of cash flows now. The discount factor used in net present value calculations is generally based on a weighted average cost of capital available to the business. If you are given a number of discount factors to choose from, select the one identified in the question as the cost of capital.

Cost of capital is based on the weighted average cost of capital available to a business.

Revision activity

You have been asked to explain to a junior clerk that discount factors are not based on the predicted rate of future inflation. Draft notes to help in your explanation, including the concept of current cost of capital in your notes.

Typical mistake

There is a misconception that a discount factor is used to take into account the effects of inflation on future cash flows, but this is not so. The effect that inflation has on results is self-correcting.

Cash flows are calculated from the revenue income less revenue expenditure (both discounted, of course). Any project that yields a positive net present value should be considered. Projects that yield negative net present values should be rejected on financial grounds but may be considered on other grounds, for example to keep a good customer happy, to keep a skilled workforce within the business or perhaps to get further orders in the future.

Examination questions generally require a **mutually exclusive** decision. When a selection has to be made, the machinery that yields the highest net present value should be chosen. If all the machines yield a negative net present value, none of them should be purchased.

Expert tip

Net present value tables will be given in any examination question requiring the use of net present value.

Mutually exclusive means that the pursuit of one course of action precludes the pursuit of any other course of action.

Table 22.3 The advantages and disadvantages of using NPV

Advantages	Disadvantages
The time value of money is taken into account as calculations are made to take account of the present value of future cash flows	Because all the figures are projections, all of them are speculative
It is relatively easy to understand	Inflows and outflows of cash are difficult to predict
Greater importance is given to earlier cash flows	The current cost of capital may change over the life of the project
	The life of the project is difficult to predict

Expert tip

If the net cash flows to be discounted are the same amounts, you can save time by totalling the discount factors for the appropriate years and multiplying the amount by this total.

Discounted payback

Revised

A major drawback of the payback method was that it does not take into account the time value of money. However, we can take the current cost of capital into account by using discounting techniques. This method is widely used in business as a method of selecting a machine or project. At the end of a project's life, there may be some residual or scrap value. This should be treated as income in the year in which it occurs.

Internal rate of return (IRR)

Revised

A business must ensure that all projects undertaken are profitable in order to survive. Net present value compares present-day values of future estimated cash inflows with present-day cash outflows. However, such comparisons do not give managers the rate of return expected on the investment.

If a business has a cost of capital of 12%, the return on a project must cover the cost of capital and yield a return that is greater than 12%. Managers should be able to calculate the rate of return that any project under consideration is likely to yield. This expected yield can then be compared with the cost of the capital needed to fund the project. The process involved is to calculate the present value of future cash flows which, when discounted, will equal zero.

Select two discounting rates: one that gives a positive net present value and another that gives a negative net present value. The results are then used in the following formula:

$$\text{internal rate of return} = P + \left[(N - P) \times \frac{p}{p - n} \right]$$

where:

P = % rate giving positive NPV N = % rate giving negative NPV

p = $ value of positive NPV n = $ value of negative NPV

If n is a negative value, it should be added to the value of p in the denominator as mathematically the subtraction of a negative number will result in an increase in value. The internal rate of return can be calculated using two positive net present values. In this case, the n part of the denominator should be deducted from the value of p.

Other considerations affecting investment decisions

Social accounting issues

Revised

Investment decisions are often linked to social accounting issues. You might be asked to consider how a decision arrived at by using any of the methods of appraisal might affect:

- the workforce — does the decision require more workers? Does the decision mean that some workers will lose their jobs?
- the environment — could the decision harm the environment or cause pollution?
- the locality — is more space needed for expansion? Is the local infrastructure capable of supporting the new project?

Revision activity

As director of a business manufacturing office furniture, you are considering the purchase of a computerised machine to cut the pieces of timber required. The machine produces the pieces 12 times faster and more accurately than at present. List the non-financial factors that you should take into account before deciding on the purchase.

Sensitivity analysis

Revised

The time horizon involved in making sound capital investment decisions is generally long. Looking into the future makes the reliability of forecast data uncertain. Sensitivity analysis measures how responsive the outcome of such decisions is to the variability of revenues and costs.

As you can imagine, in the real world sensitivity analysis can be much more complicated because, in a dynamic business environment, it is likely that several variables could change after the projected data were produced.

Now test yourself

Tested

1. Explain the term *capital rationing*.
2. What is the difference between payback and discounted payback?
3. What is the payback period?
4. Identify two advantages of using payback as a method of investment appraisal.
5. Write down the formula for calculating accounting rate of return.
6. The initial investment in a project is $200 000 and the project requires additional working capital of $40 000. Calculate the average investment in the project.
7. A project yields a negative net present value. Identify two reasons why the managers of a business might still go ahead with the scheme.
8. Write down the formula for calculating the internal rate of return on a project and identify each component.
9. What does the internal rate of return represent?

Answers on p.192

A level questions and answers

This section contains exam-style questions for selected A level topics followed by example answers. The answers are interspersed by expert comments (shown by the icon) that indicate where credit is due and areas for improvement. Where the candidate has used their own figure, this is indicated by 'of' after the mark awarded.

Topic 13 Preparation of financial statements

Question 1

The income statement for Abracadabra plc for the year ended 31 May 2014 was as follows.

	$000
Revenue	27 835
Cost of sales	(14 323)
Gross profit	13 512
Dividends received	85
Gain on disposal of non-current asset	213
Distribution costs	(4 087)
Administrative expenses	(2 678)
Profit from operations	7 045
Finance costs	(120)
Profit before tax	6 925
Tax	(3 450)
Profit attributable to equity holders	3 475

The last two statements of financial position were as follows.

Statements of financial position for the year ended 31 May 2014

	2014 $000	2013 $000
Non-current assets		
Property, plant and equipment	16 630	10 785
	16 630	10 785
Current assets		
Inventories	3 551	2 873
Trade receivables	2 668	2 957
Cash and cash equivalents	754	–
	6 973	5 830
Total assets	23 603	16 615
Equity		
Ordinary share capital ($1)	2 500	1 500
Share premium	2 000	1 200
Retained earnings	12 661	9 376
Total equity	17 161	12 076
Non-current liabilities		
8% 2024 debentures	1 500	
	1 500	
Current liabilities		
Trade payables	1 492	2 865
Taxation	3 450	1 580
Bank overdraft	–	94
	4 942	4 539
Total liabilities	6 442	4 539
Total equity and liabilities	23 603	16 615

Additional information

1 **The company paid total dividends during the year totalling $190 000.**
2 **During the year property, plant and equipment costing $430 000, on which the accumulated depreciation was $182 000, was sold.**
3 **The total depreciation charge for the year was $1 875 000.**

REQUIRED

(a) Prepare a statement to show the net cash flow from operating activities. [10]

(b) Prepare a statement of cash flows for the year ended 31 May 2014 in accordance with IAS 7. [18]

Candidate A answer

(a)

	$000	
Profit from operations	7045	(1)
Depreciation	1875	(1)
Gain on disposal	213	
Dividends received	(85)	(1)
Increase in inventories	(678)	(1)
Decrease in trade receivables	289	(1)
Decrease in trade payables	(1373)	(1)
	7286	
Interest paid	(120)	(1)
Tax paid	(1580)	(1)
Net cash from operating activities	5586	(1)of

(b)

Statement of cash flows for the year ended 31 May 2014

	$000	$000
Cash flows from operating activities		5586 (1)of
Cash flows from investing activities		
Purchase of property, plant and equipment	(7968) (6 — see below)	
Proceeds from property, plant and equipment	461 (1)	
Dividends received	85 (1)	
Net cash used in investing activities		(7422) (1)
Cash flows from financing activities		
Proceeds from share issue	1800 (1)	
Proceeds from issue of debentures	1500 (1)	
Dividends paid	(190) (1)	
Net cash from financing activities		3110 (1)
Net increase in cash and cash equivalents		1274 (1)(of)
Cash and cash equivalents at start of year		(94) (1)
Cash and cash equivalents at end of year		754 (1)

Purchase of property, plant and equipment

PPE at start of period	10785 (1)
Depreciation	(1875) (1)
Carrying amount of disposed PPE	(248) (1)
PPE at end of period	(16630) (1)
PPE additions	(7968) (2)

This candidate has made one error in calculating the net cash flow from operating activities and has added the gain on disposal instead of deducting it. An own figure has been brought forward correctly to the cash flow statement and all other entries are correct. The candidate uses the correct cash and cash equivalents figures, but the statement does not reconcile because of the error. Nevertheless, 26 of the available 28 marks are awarded and the candidate obtains an A grade.

Candidate B answer

(a)

	$000
Profit from operations	7045 (1)
Depreciation	1875 (1)
Gain on disposal	(213) (1)
Dividends received	(85) (1)
Increase in inventories	678
Decrease in trade receivables	(289)
Decrease in trade payables	1373
	10384
Interest paid	(120) (1)
Tax paid	(1580) (1)
Net cash from operating activities	8684 (1)of

(b)

Statement of cash flows for year ended 31 May 2014

	$000	$000
Cash flows from operating activities		8648 (1)of
Cash flows from investing activities		
Purchase of property, plant and equipment	(7968) (6)	
Proceeds from property, plant and equipment	(461)	
Dividends received	85 (1)	
Net cash used in investing activities		(8344) (1)of
Cash flows from financing activities		
Proceeds from share issue	1800 (1)	
Proceeds from issue of debentures	1500 (1)	
Dividends paid	190	
Net cash from financing activities		3490 (1)of
Net increase in cash and cash equivalents		3830 (1)of
Cash and cash equivalents at start of year		(94) (1)
Cash and cash equivalents at end of year		754 (1)

Purchase of property, plant and equipment

PPE at start of period	10785 (1)
Depreciation	(1875) (1)
NBV of disposed PPE	(248) (1)
PPE at end of period	(16630) (1)
PPE additions	(7968) (2)

This candidate has made some key errors. The changes in inventories, trade receivables and trade payables have all been reversed, e.g. the increase in inventories has been added instead of being subtracted. The candidate has calculated correctly the cash spent on additions and treated it correctly in the statement but has deducted the disposal proceeds. You must always add any cash which comes in to the business (inflows) and deduct that which goes out (outflows). The dividends paid (an outflow) have been added but should have been subtracted. Due to these errors, the net increase in cash and cash equivalents does not reconcile with the opening and closing balances on the cash and cash equivalents account. The candidate demonstrates a sound knowledge of IAS7 but the errors reduce the marks gained and the answer achieves a C grade.

Question 2

Peter, Ronald and Sultan have been in partnership for several years sharing profits in the ratio 4:3:2, after charging a salary for Peter of $20 000 and interest on opening capital of 5%. Accounts are prepared to 30 September.

Peter decided to retire on 31 March 2014, withdrawing the balance owed to him and Tulilah was admitted to the partnership on this date, introducing fixed capital of $75 000. It was decided that the profit-sharing ratio for Ronald, Sultan and Tulilah would be 3:2:1 after charging a salary for Tulilah of $20 000 and interest on opening capital of 5%.

The opening capital and current account balances were:

		$
Capital	Peter	50 000
	Ronald	40 000
	Sultan	35 000
Current	Peter	12 743 Cr
	Ronald	3 482 Dr
	Sultan	14 927 Cr

The net profit for the year was $60 000 and this was earned evenly throughout the year.

REQUIRED

(a) Prepare an appropriation statement for the year ended 30 September 2014. Goodwill was valued at $54 000 and was not to be maintained in the books of account. [14]

(b) Prepare capital accounts in columnar form to show this. [10]

Candidate A answer

(a)

Appropriation statement

1 October 2013 to 31 March 2014

	Peter	Ronald	Sultan	Total
	$	$	$	$
Salary	10 000 (1)			10 000
Interest on capital	1 250 (1)	1 000 (1)	875 (1)	3 125
Profit 4:3:2	7 500 (1)	5 625 (1)	3 750 (1)	16 875
				30 000

1 April 2014 to 30 September 2014

	Ronald	Sultan	Tulilah	Total
	$	$	$	$
Salary	10 000			10 000
Interest on capital	1 000 (1)	875 (1)	1 875 (1)	3 750
Profit 3:2:1	8 125 (1)	5 417 (1)	2 708 (1)	16 250
				30 000

(b)

Capital

	P	R	S	T		P	R	S	T
Goodwill		27 000	18 000	9 000 (2)	Bal b/d	50 000	40 000	35 000 (1)	
					Cash				75 000 (1)
Bank	74 000				Goodwill	24 000	18 000	12 000 (2)	
Bal c/d		31 000 (1)	29 000 (1)	66 000 (1)					
	74 000	58 000	47 000	75 000		74 000	58 000	47 000	75 000
					Bal b/d		31 000	29 000	66 000 (1)

An excellent answer with just one careless error. The salary due to Tulilah has been given to Ronald and 1 mark has therefore been lost. All other entries are correct. The goodwill has been posted correctly. Net credit entries of $9000 and $6000 for Ronald and Sultan would have been equally acceptable. The candidate scores 23 of the 24 marks available and is awarded an A grade.

Candidate B answer

(a)

Appropriation statement

1 October 2013 to 31 March 2014

	Peter	Ronald	Sultan	Total
	$	$	$	$
Salary	20000			20000
Interest on capital	2500	2000	1750	6250
Profit 4:3:2	1677 (1)of	1250 (1)of	833 (1)of	3750
				30000

1 April 2014 to 30 September 2014

	Ronald	Sultan	Tulilah	Total
	$	$	$	$
Salary			10000	10000
Interest on capital	1000 (1)	875 (1)	1875 (1)	3750
Profit 3:2:1	8125 (1)of	5417 (1)of	2708 (1)of	16250
				30000

(b)

Capital

	P	R	S	T		P	R	S	T
Goodwill	24000	18000	12000		Bal b/d	50000	40000	35000 (1)	
					Cash				75000 (1)
Bank	26000				Goodwill	27000	18000	9000	
Bal c/d		49000	41000	66000 (3)					
	74000	67000	53000	84000		50000	67000	53000	84000
					Bal b/d		49000	41000	66000 (1)

This candidate has erroneously charged a full year's salary to Ronald and has made the same error when calculating the interest on capital for the first half of the year's appropriation. The errors have not been repeated following Ronald's retirement and Tulilah's admission. The candidate has calculated the goodwill adjustments correctly but has reversed the entries. These errors result in marks being lost and are avoidable.

Topic 19 Costing principles and systems

Question 3

Spurgeon Ltd make a single product and have two production and two service departments.

Information for May 2014 was as follows:

	Production departments		Service departments	
	Mixing	Packaging	Stores	Canteen
Overheads	$195500	$127850	$108450	$147645
Direct machine hours	23625	17815		
Direct labour hours	9845	28975		

Apportionment of the service departments' overheads is made at the following rates:

	Mixing	Packaging	Canteen
Stores	50%	30%	20%
Canteen	40%	60%	–

REQUIRED

(a) Prepare an overhead absorption apportionment table that shows the reapportionment of the service departments' overheads to the appropriate departments for May 2014. [10]

(b) Calculate the overhead absorption rate for each production department using the most appropriate base. [6]

Candidate's answer

(a)

	Mixing	Packaging	Stores	Canteen
Overheads	195500	127850	108450	147645 (1)
Stores	54225 (1)	32535 (1)	(108450) (1)	21690 (1)
Canteen	84667	84668		(169335) (1)
	334392 (1) of	245053 (1) of		

(b)

Mixing	334392 (1) of ÷ 23625 (1) = $14.15 per machine hour (1) of
Packaging	245053 (1) of ÷ 28975 (1) = $8.46 per labour hour (1) of

This candidate has produced a table in good form, but makes the error of reapportioning the canteen's overheads in a 50:50 ratio rather than 40:60. The calculation of the overhead absorption rate for both departments is correct using the candidate's own figures. Consequently, only 2 marks are lost and the candidate is awarded 14 out of the total available of 16 marks and receives an A grade.

Question 4

Information for Alfred's business for May 2014 consisted of the following:

Sales	12 000 units
Selling price per unit	$40
Direct materials cost	$150 000
Direct labour cost	$180 000
Variable overheads	$30 000
Fixed costs	$100 000

REQUIRED

Calculate the:

(a) contribution per unit [5]

(b) break-even point in units [3]

(c) margin of safety in units [2]

Candidate's answer

(a)

Selling price			40.00	(1)
Direct materials	12.50	(1)		
Direct labour	15.00	(1)		
Variable overheads	4.50			
			(32.00)	
Contribution per unit			8.00	(1)of

(b) Break-even = 100 000 (1) ÷ 8 (1)of
= 12 500 units (1) of

(c) Margin of safety = 12 500 − 10 000 = 2500 units

This candidate makes a calculation error of the variable overheads (it should be $2.50), but has not made any other mistakes. The contribution per unit has been carried forward to correctly calculate the break-even point. The margin of safety calculation is incorrect. It should be based on actual sales (12 000 units) less the break-even level of sales. The candidate fails to score marks for part (c). Seven marks out of a possible 10 for the question is just below the level required for a grade A answer.

Question 5

Jarminder plc makes a product, the jarm. The company operates a standard costing system and sales and production are expected to be 3500 units each month. The selling price is $11.

Jarminder purchases materials from a local supplier in bulk and receives a 10% discount on the standard price of $10 per kg and requires 4 kg to make each unit. The workforce is paid $12 per hour and it takes a worker 4 hours to fully complete a unit.

Actual results for a recent month were as follows.

Sales units	3 400
Sales revenue ($)	38 650
Units produced	3 550
Material quantity (kg)	14 250
Material cost ($)	127 600
Direct labour hours	14 300
Labour cost ($)	168 500

REQUIRED

(a) Calculate the following variances for May:

- **(i) Sales price variance**
- **(ii) Sales volume variance**
- **(iii) Total sales variance**
- **(iv) Materials price variance**
- **(v) Materials usage variance**
- **(vi) Total materials variance**
- **(vii) Labour rate variance**
- **(viii) Labour efficiency variance**
- **(ix) Total labour variance** [18]

(b) What do the labour rate and labour efficiency variances that you have calculated indicate? [4]

Candidate's answer

(a)

- **(i)** Sales price variance: 37 400 − 38 650 = 1250 (F) (2)
- **(ii)** Sales volume variance: 38 500 − 37 400 = 1100 (A) (2)
- **(iii)** Total sales variance: 1250 (F) + 1100 (A) = 150 (F) (2) of
- **(iv)** Materials price variance: 128 250 − 126 700 = 1550 (F)
- **(v)** Materials usage variance: 127 800 − 128 250 = 450 (A) (2)
- **(vi)** Total materials variance: 1550 (F) + 450 (A) = 1100 (F) (2)of
- **(vii)** Labour rate variance: 171 600 − 168 500 = 3100 (F) (2)
- **(viii)** Labour efficiency variance: 170 400 − 171 600 = 1200 (A) (2)
- **(ix)** Total labour variance: 3100 (F) + 1200 (A) = 1900 (F) (2)of

(b) The favourable labour rate variance shows less was spent on labour than standard. (1)of

The efficiency was adverse as more labour hours than standard were used. (1)of This may have been because of a poorly trained workforce charging less but taking longer. (1)of

As the labour rate favourable variance is greater than the efficiency adverse variance, the actual labour cost is favourable. (1)of

This candidate makes a transposition error in the calculation of the materials price variance: 126 700 should be 127 600 and therefore loses 2 marks. The 2 own-figure marks for the total materials variance have been awarded and the candidate scores 16 out of the 18 marks available, as well as the 4 marks for a good narration. The candidate scores 20 out of the 22 marks available and is awarded an A grade.

Topic 22 Investment appraisal

Question 6

Gurdeep Ltd is considering investing in a 5-year project that will require an initial outlay of $500 000 and there will be no residual value. The expected cash inflow for each of the first 2 years is expected to be $125 000 and it is then expected to grow year by year by 4% then 5% and finally 6% when the project will be discontinued.

The company's cost of capital is 10% and the rates are as follows:

Year	10%
1	0.909
2	0.826
3	0.751
4	0.683
5	0.621

REQUIRED

(a) Calculate the net present value of the project and advise the directors, giving a reason, whether they should proceed. [14]
The discount rates at 15% are as follows.

Year	15%
1	0.870
2	0.756
3	0.658
4	0.572
5	0.497

(b) Calculate the internal rate of return and explain what your answer shows. [14]

Candidate A answer

(a)

Year	Cash flow		Discount factor	Net present value	
0	(400 000)		1.000	(400 000)	(1)
1	125 000	(1)	0.909	113 625	(1)
2	125 000	(1)	0.826	103 250	(1)
3	130 000	(1)	0.751	97 630	(1)
4	136 500	(1)	0.683	93 230	(1)
5	144 690	(1)	0.621	89 852	(1)
				97 587	(1)

The directors should proceed (1) because there is a positive net present value. (1)of

(b)

Year	Cash flow		Discount factor	Net present value	
0	(400 000)		1.000	(400 000)	
1	125 000		0.870	108 750	
2	125 000		0.756	94 500	(1)
3	130 000		0.658	85 540	(1)
4	136 500		0.572	78 078	(1)
5	144 690	(1)	0.497	71 911	(1)
				38 779	(1)

$$\text{IRR} = 10\%\ (1) + \frac{97\,587\ (1)\ \text{of}}{97\,587\ (1)\ \text{of} + 38\,779} \times 5\ (1)$$

$$= 13.58\%$$

This shows the interest rate which will give zero net present value (1). At interest rates lower than the IRR the project should be accepted, but at higher rates it should be rejected. So the project should be undertaken, the IRR is greater than Gurdeep's cost of capital (1).

This candidate correctly calculates the net present value of the project and advises the directors correctly, so they are awarded maximum marks for this part of the question. An error has been made in the calculation of the IRR in spite of calculating the net present value at 15% correctly. The candidate has added the NPV at 15% in the denominator instead of subtracting it. Note that the IRR must be higher than 15% as a positive NPV is obtained at that rate. The candidate has accordingly lost 2 marks but scores 26 out of the 28 available and is awarded an A grade.

Candidate B answer

(a)

Year	Cash flow		Discount factor	Net present value	
0	400 000		1.000	400 000	
1	125 000	(1)	0.909	113 625	(1)
2	125 000	(1)	0.826	103 250	(1)
3	130 000	(1)	0.751	97 630	(1)
4	136 500	(1)	0.683	93 230	(1)
5	144 690	(1)	0.621	89 852	(1)
				897 587	

The directors should not proceed because there is not a profit.

(b)

Year	Cash flow		Discount factor	Net present value	
0	400 000		1.000	400 000	
1	125 000		0.870	108 750	
2	125 000		0.756	94 500	(1)
3	130 000		0.658	85 540	(1)
4	136 500		0.572	78 078	(1)
5	144 690	(1)	0.497	71 911	(1)
				838 779	

$$\text{IRR} = 10\% + \frac{897\,587}{897\,587 + 838\,779} \times 5 \text{ (1)}$$

$$= 12.58\%$$

This shows the interest rate which will give zero net present value (1). At interest rates lower than the IRR the project should be accepted, but at higher rates it should be rejected (1).

This candidate has made some fundamental errors. The investment made by the business has been treated incorrectly as an inflow. There is a resultant high positive net present value making the project worthwhile but the candidate does not understand this and has advised the directors not to proceed as 'there is not a profit'. The incorrect handling of the initial outlay has been repeated while discounting at 15% and the resultant net present value has been added (it should be subtracted) to the denominator in the calculation of the internal rate of return. Note that the internal rate of return will be considerably higher than 15% because at this rate there is still a large positive net present value.

Now test yourself answers

Topic 1

1 A personal account is found in the purchases and sales ledgers. It is the account of credit suppliers and credit customers.

2 (a) Nominal accounts record revenue incomes and expenses.

(b) They are found in the general ledger.

3 (a) Ledgers are divided into three parts to make their use more manageable as all the accounts of a similar nature are kept together.

(b) General ledger, sales ledger and purchases ledger.

4 Answers include tills rolls, receipts from suppliers, copies of receipts given to customers, paying-in slips, bank statements, cheque counterfoils.

5 Purchases book, sales book, purchases returns book, sales returns book, journal and cash book.

6 The cash book.

7

Dr			**Cr**
Bad debts account	500	Customer's account	500

8 (a) $25 500 × 3% = $765

(b)

Dr	Provision for doubtful debts	$55	Statement of financial position
Cr	Adjustment to provision	$55	Income statement

9 (a) Capital expenditure is money spent on non-current assets and their improvement; revenue expenditure is money spent on regular running costs.

(b) Items involving capital expenditure appear in a statement of financial position; revenue expenditure appears in an income statement.

10 A further injection of capital by the trader and the sale of a delivery vehicle that is no longer needed.

11 The accruals concept.

12 Freehold land.

13 The straight-line method, the reducing balance method and the revaluation method.

14 assets = equity + liabilities

Topic 2

1 The assumption that a business will continue to operate in its present form for the foreseeable future.

2 (a) $3700 ($3500 + $200)

(b) $2400 ($3000 less $600)

3 Consistency.

4 (a) Prudence.

(b) $98 000.

5 The affairs of the business and the individual must be separated. Only those relating to the business are recorded in the financial statements.

Topic 3

1 Credit $130.

2 To confirm that the total of debit entries is equal to the total of credit entries.

3 Debit side: motor vehicles, returns outwards, carriage inwards and carriage outwards. Credit side: sales and discounts received.

4 There may be errors in ledger accounts that do not prevent a trial balance from balancing.

5 Commission, reversal, omission, principle, original entry and compensating

6 An error of commission occurs when the correct amount is posted to the correct side of the wrong account; an error of principle occurs when a transaction is posted to the wrong class of account. An error of commission does not affect the accuracy of either an income statement or a statement of financial position, but an error of principle makes both statements inaccurate.

7 **Dr** $2000 to suspense account.

8 (a) Commission.

(b) Omission.

(c) Commission.

9 (a)

	Dr	**Cr**
Suspense account	246	
Wong		246

(b)

	Dr	**Cr**
Suspense account	550	
Rent payable account		50
Rent receivable account		500

10 To check the accuracy of transactions made through his or her bank account.

11 Whenever the bank sends the trader a statement or whenever the trader feels it is necessary.

12 Both are payments made automatically by a bank on behalf of a trader. Standing orders are for a fixed amount determined by the trader; direct debits give authority to the payee to withdraw variable amounts from the trader's account.

13 Lodgements are deposits paid into a bank account.

14 False. They are cheques already entered in the cash book that have not been cleared by the bank and so do not appear on the copy of the trader's account prepared by the bank.

15 $23.78 as this is the amount written on the instruction to the bank (i.e. the cheque).

16 They may differ because the cash book is not updated with such entries as bank charges, interest etc. and also because of unpresented cheques and outstanding lodgements.

17 Update the cash book with payments made by the bank; update the cash book with payments received by the bank; correct any errors in the cash book (assuming the bank statement is correct); prepare the bank reconciliation statement.

18 To check the accuracy of entries made in an individual ledger.

19 One for each separate purchases ledger and each separate sales ledger.

20 All would appear in a sales ledger control account except for the provision for doubtful debts and cash sales, which would be accounts in the general ledger.

21 A memorandum account is one that does not form part of the double-entry system.

22 (a) Contra items arise when a customer is also a supplier and therefore has entries in both the sales ledger control account and the purchases ledger control account.

(b) They are also known as set-offs as amounts owed by a business may be set off against amounts owed to the same business.

23 Purchases ledger control account.

24 Greater credit entries in the accounts than debit entries.

25 Answers include settling the account and then returning the goods; payment of a fixed amount each month, the total of which is greater than the current value of purchases made; overpayment of the amount owed.

26 Answers include that control accounts check the accuracy of entries made in the personal ledgers; they enable some errors to be located quickly; they allow the amounts owed to trade payables and owed by trade receivables to be determined quickly.

27

	Type of error	Change in profit	Change in statement of financial position
(a)	Transposition	Increase of $153	Capital account increase (profit increase of $100)
(b)	Compensating	Increase of $100	Capital account increase of $100; non-current assets increase of $100
(c)	Commission	No change	No change
(d)	Omission	Decrease of $519	No change
(e)	Principle	Decrease of $375	Non-current assets decrease of $375
(f)	Reversal of entries	Increase of $388	Trade receivables increase of $388

Topic 4

1 Direct materials, direct wages and manufacturing royalties.

2 (a) Direct materials, direct wages and manufacturing royalties.

(b) Depreciation of factory machinery and any other costs incurred in the factory, e.g. factory insurance and factory power.

3 Royalties are payments made to the inventor of a process or product for the right to use it. They are included in the prime cost section.

4 Raw materials, work in progress and finished goods.

5 Inventories are valued at the lower of **cost** and **net realisable value**.

6

Dr	*Provision for unrealised profit account*				Cr
Year 1	Balance b/d	600	Year 1	Income statement	600
Year 2	Income statement	120	Year 2	Balance b/d	600
Year 3	Balance c/d	480			
		600			600
			Year 3	Balance b/d	480

7 Returns inwards and opening inventory.

8 opening inventory + purchases

9 cost of sales + gross profit = sales

10 To calculate the profit (or loss) made by each department as large profits may disguise a department that is not performing efficiently.

11 Rent and electricity should be apportioned according to floor space occupied, although electricity could be allocated to the consuming department if meters were installed in each department. Sales and staff wages should be allocated to the department in which they occur. Staff canteen facilities should be apportioned according to numbers of staff employed in each department.

12 The department should be closed if it is truly making losses. The costs incurred by the department should be examined to see if they can be allocated rather than apportioned in some arbitrary way. After this exercise, profitability can be gauged more accurately.

13 Carriage inwards should not appear in the profit and loss section of an income statement — it should be charged to the prime cost section in a manufacturing statement or to the purchases in the cost of sales in the trading section of the income statement. Carriage outwards is added with the other expenses and deducted from gross profit.

14 (a) profit for the year + revenue expenses = gross profit

(b) gross profit – revenue expenses = profit for the year

(c) gross profit – profit for the year = revenue expenses

15 A break-down recovery vehicle; a lifting jack; a desk for a sales representative.

16 Premises; machinery; office equipment; vehicles.

17 Inventory; trade receivables; bank balance; cash in hand.

18 Cash inflows are important for the short-term survival of a business as they are used to pay suppliers, which otherwise might stop their provision, for goods and services.

19 Cash is money held in the form of coins and notes; cash equivalents are highly liquid short-term investments that can be converted easily into cash.

20 Profits are calculated on the accruals basis but cash flows do not take these into account. An income statement can include 'non-cash expenses' such as depreciation, whereas cash flows deal with movements of cash.

21 (a) No movement in cash as this is a credit transaction.

(b) No movement in cash as this is a credit transaction.

(c) Cash outflow of $450.

(d) Cash outflow of $5000.

(e) Cash inflow of $300.

(f) No movement in cash as this is a credit transaction.

22 The cash resources will increase as credit customers will have paid off part of the amounts owed.

Topic 5

1 False. It could be verbal or implied, but it is safer to have a written agreement to settle any problems that might arise.

2 A partnership agreement covers matters that arise in the course of business so that any disputes or misunderstandings can be resolved speedily.

3 Partners must contribute equal amounts of capital and are not entitled to a salary or interest on capital. Profits (or losses) are to be shared equally. Loans will earn 5% interest per annum and partners will not be charged interest on their drawings.

4 An appropriation section shows how profits are shared among partners.

5 Partners, like all owners of businesses, earn profits. A salary paid to a partner is part of profits and is not a business expense, so it should not be included in the income statement along with other salaries.

6 False. Partners can be charged interest on drawings (as a method of preventing excessive drawings). They can also earn interest on capital (as a reward for their investment in the partnership).

7 A partner could have a debit balance on their current account if they make drawings and interest on drawings that exceeds the balance on the account plus all forms of profit.

8 Answers include goodwill adjustment and capital withdrawn from the business.

9 Answers include the balance brought down; drawings; interest on drawings; balance carried down.

10 Answers include balance brought down; salary; interest on capital; share of residual profits; balance carried down.

11 Answers include entry of new partner; retirement of a partner; a change in profit share; dissolution of the partnership.

12 To ensure that the 'old' partners are credited with changes in the value of net assets that have occurred during their time in the business.

13 Answers include when a partner dies or retires; is declared bankrupt; by agreement of the partners.

14 Goodwill is the cost of acquiring a business less the total value of the assets and liabilities that have been purchased.

15 Answers include average profits; average weekly sales; average gross fees; super profits.

16 False. A purchaser cannot buy customers.

17 $32 000 ($100 000 less $56 000 less $12 000).

18 Inherent goodwill is goodwill that is enjoyed by a business while it is a going concern — it has not been purchased. It is not included in a statement of financial position.

Topic 6

1 Accumulated fund.

2 (a) Ancillary activities are those that are not core activities.

(b) Answers include running a snack bar; treasure hunts; dinner dances, family games' nights.

3 Advantages include large sums are raised in one go; members feel that they should be active in the club in order to get value for money. Disadvantages include no further income from the member; members might feel that they no longer need to attend the club.

4 False. Subscriptions in arrears is a current asset; subscriptions in advance is a current liability.

5 Accumulated fund.

6

Subscriptions account

Balance b/d	500	Balance b/d	400
Income and expenditure account	10 565	Bank	10 500
Balance c/d	85	Balance c/d	250
	11 150		11 150
Balance b/d	250	Balance b/d	85

Topic 7

1 Opening capital is derived by deducting the total liabilities from the total assets.

2 Loss of $18 000 (closing capital $37 000 less opening capital $45 000 less capital introduced $10 000).

3 False. Cash paid is debited to the adjustment account in order to calculate purchases for the year.

4 True.

5 Depreciation of $8000.

6 Based on a mark-up of 20%, the closing inventory should be $3250.

	$	$
Sales		36 000
Less cost of sales		
Opening inventory	750	
Purchases	32 500	
	33 250	
Closing inventory	(3 250)	(30 000)
Gross profit		6 000

The actual closing inventory, however, was $400. Therefore, the inventory destroyed in the fire is valued at $2850 ($3250 less $400).

Topic 8

1 First in first out (FIFO) and weighted cost average (AVCO).

2 The cost of purchase and cost of conversion, together with any other costs incurred in bringing the goods to their present location and condition.

3 The selling price less any expenses incurred in bringing the goods to a condition and location ready for sale.

4 Inventories should be valued at the lower of **cost** and **net realisable value**.

5 IAS 2.

6 Last in first out (LIFO).

7 LIFO.

8 Closing inventories shown in a statement of financial position are always based on a **physical count**.

9 The periodic method values inventory at one time, generally the financial year end, whereas the perpetual method values inventory after each transaction.

10 Advantages include it feels intuitively correct; issue prices are actual prices; closing inventory is based on recent prices; it is easy to calculate; it is an 'acceptable' method. Disadvantages include because it feels right it could be felt that this is the way goods are issued; issues are not based on the most recent prices, so care must be taken in pricing; it shows a higher profit than other methods in times of rising prices, which may be contrary to the concept of prudence.

11 False. The seller of fish can use whatever method they choose. However, it would seem sensible to sell first the fish that has been purchased first.

12 (a) Sales should be added to the valuation.
(b) Purchases should be deducted.
(c) Returns should be deducted.

13 (a) Inventory that has been overvalued will **overvalue** profit.
(b) Inventory that has been undervalued will **undervalue** profit.

Topic 9

1 Depreciation is the cost of a non-current asset spread over its useful life.

2 Freehold land.

3 Any two from straight-line method, reducing balance method and revaluation method.

4 $2500 ($20 000 less $17 500).

5 Enter instalments in each year's income statement and credit provision for depreciation account.

6 Carrying amount is cost of the non-current asset less the total depreciation charged to date.

7 $6000 per annum ($50 000 less $2000 ÷ 8).

8 Year 1 = $32 000 ($80 000 × 40%);
year 2 = $19 200 ($48 000 × 40%).

9 Carrying amount = $3500; sold for $3200.
Therefore, loss on disposal = $300.

10 Carrying amount = $38 000; sold for $40 000. Therefore, profit on disposal = $2000.

Topic 10

1 Ordinary shares and preference shares.

2 Non-current liabilities.

3 Debentures are loans made to the company from which the holder expects to receive the agreed interest together with the redemption of the debenture at the end of the period. The holder of convertible loan stock also receives interest at an agreed rate, but at the end of the term has the right to exchange their stock for ordinary shares at a previously agreed price.

4 The lessor is the owner of a non-current asset. The lessee has the use of the asset and pays the lessee for this facility.

5 Hire purchase is an agreement whereby the purchaser of an asset pays to the seller instalments consisting of partial repayment together with interest charges. The asset is not owned legally by the purchaser until the final instalment has been paid, but it may still be recorded as an asset in the purchaser's statement of financial position (an example of substance over form), together with a payable entry in the liabilities section to account for the outstanding balance.

Topic 11

1 Any two from business owners, managers, employees, trade unions, bank managers, customers, suppliers, investors, competitors, the government and tax authorities.

2 Ratios put the data into context and allow comparisons to be made between different businesses of differing sizes.

3 This figure in isolation has little value. The profit may be a tiny fraction of previous years' profits or it may be an improvement if previous results showed reported losses. Also, the profit may be excellent for a small general store but poor if the results were for a large banking corporation. The profit should be put into context.

4 (a) $\text{gross profit margin} = \dfrac{\text{gross profit}}{\text{net sales (revenue)}} \times 100$

(b) $\text{return on capital employed} = \dfrac{\text{net profit before interest and tax (operating profit)}}{\text{capital employed}} \times 100$

(c) $\text{current ratio} = \dfrac{\text{current assets}}{\text{current liabilities}} : 1$

(d) $\text{liquid ratio} = \dfrac{\text{current assets} - \text{inventory}}{\text{current liabilities}} : 1$

(e) $\text{trade receivables turnover} = \dfrac{\text{trade receivables}}{\text{credit sales}} \times 365$

(f) $\text{trade payables turnover} = \dfrac{\text{trade payables}}{\text{credit purchases}} \times 365$

(g) $\text{inventory turnover} = \dfrac{\text{average inventory}}{\text{cost of goods sold}} \times 365$

5 Answers include the historic nature of the figures used to calculate the ratios; published financial statements show an overall picture, which could mask inefficiencies in parts of the organisation; the results show only the monetary aspects of the business; there are difficulties in comparing like with like as businesses and the environment in which they exist are constantly changing.

Topic 12

1 Direct costs are those that can be definitively attributed to a cost unit, whereas indirect costs are attributable to general non-specific units.

2 Check your sketches against Figures 12.2 and 12.5 on pp. 81–2.

3 (a) Semi-variable costs contain a combination of both fixed and variable costs.

(b) Stepped costs are fixed costs up to a certain level, which then causes an increase (a step).

(c) Sunk costs are those that have arisen in the past and as they have been incurred are not relevant to the decision-making process.

4 The components of prime cost are direct materials, direct labour costs and direct expenses.

5 Variable costs change in direct relation to levels of business activity. Examples include direct materials, direct labour costs and royalties.

6 Semi-variable costs cannot be classified as either fixed costs or variable costs as they contain elements of both. Examples include charges for utilities, e.g. electricity, gas, water, telephone.

7 $27 500 (7500 × $3 + $5000).

8 Contribution is the difference between selling price and total variable costs.

9 $27 ($65 less $38).

10 Answers include costing special or one-off opportunities; deciding whether to make or buy in a product; choosing between alternative strategies; penetration/destroyer pricing; calculating break-even.

11 A key factor is a factor of production that limits the activity of the business.

12 The break-even point is the level of sales revenue or units sold at which there is neither a profit nor a loss. At this point, contribution equals total fixed costs. It may be calculated by using the unit contribution method or the contribution to sales ratio method, or by drawing a graph.

13 $$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution per unit}}$$

14 The first stage is to calculate the contribution to sales ratio:

$$\text{contribution to sales ratio} = \frac{\text{total contribution}}{\text{total sales revenue}} \times 100$$

The result is then divided into total fixed costs to give a break-even point:

$$\text{break-even point} = \frac{\text{total fixed costs}}{\text{contribution to sales ratio}}$$

15 (a) The unit contribution method.

(b) The contribution to sales ratio method.

16 Total costing.

17 Answers include costing a product and setting prices.

18 Answers include cost centre — each department; cost unit — each piece of furniture.

19 Rent, local taxes and insurance of premises should be apportioned according to the floor area occupied by each department. Supervisory wages should be apportioned according to the numbers of staff being supervised.

20 Direct materials and direct wages are allocated; electrical power and the cost of running a maintenance department are apportioned.

21 Overhead absorption rate.

22 Reciprocal service departments provide services for each other.

23 An over-absorption of $4000.

24 Absorption costing absorbs all of the costs into production, whereas marginal costing differentiates between the fixed and variable costs and includes only the variable ones.

Topic 13

1 True.

2 False. The statement shows cash movements into and out of a business.

3 False. It is a historic document and not a predictor of future events.

4 IAS 7.

5 Answers include that the statement shows internal and external sources of finance; it shows information not contained in an income statement or statement of financial position; it allows comparisons to be made if the IAS 7 format is used.

6 Operating activities, investing activities and financing activities.

7 Depreciation does not involve a movement in cash, but it has reduced reported profits so it needs to be added back to arrive at the cash generated by business activity.

8 It should be added to reported profit for the same reason outlined in answer to question 7 above.

9 There is no movement of cash so it is not entered in the statement of cash flows.

10 The dividends should be shown under financing activities. $46 000 should be included as only actual movements in cash are shown in the statement. The proposed dividend is a non-adjusting event.

11 Net debt is the borrowings of a company less cash and other liquid resources.

12 False. All large limited companies must prepare a statement regardless of their profitability or lack of it.

13 Answers include on the admission of a new partner; on the retirement or death of a current partner; if the partners decide to alter the profit-sharing ratios; if the partners decide to terminate the partnership.

14 The assets of the business may have changed in value since the last statement of financial position was prepared.

15 (a) Any two from the carrying amount of each non-current asset; any bad debts or discounts allowed to receivables; the profit on revaluation that is transferred to the individual partners' capital accounts.

(b) Any two from the amount for which each asset has been disposed of; any discounts received from payables; loss on the revaluation that is transferred to the partners' capital accounts.

16 (a) A loss.

(b) The corresponding double entry would be debits in the capital accounts of the partners, shared in their profit-sharing ratios.

17 60 000 shares with a value of $132 000. Each share has a value of $2.20.

Topic 14

1 A capital redemption reserve is set up by a transfer from a revenue reserve when a company redeems preference shares or buys back its own shares. It protects the company's payables by ensuring that the equity does not fall below the level prior to the transaction.

2 (a) A capital redemption reserve is needed.

(b) The value of the capital redemption reserve is $25 000 ($50 000 less capital of $25 000 raised from new issue).

(c) The amount is transferred from the retained earnings.

3 The premium should be debited to retained earnings since the redemption has not been funded by a new issue of shares.

4 A bonus issue is a distribution of shares to existing shareholders in the same proportion as their holding and is completed by transferring from the company's reserves. A rights issue is a share distribution to existing shareholders in the same proportion as their holding and usually at a price lower than market price. The company raises cash with such an issue. Reserves are not depleted.

5 A rights issue should be made as a bonus issue uses reserves and no cash is raised.

6 Revenue reserves are those that arise as a result of the profitability of the company's trading activities. Examples are retained earnings and general reserve. Capital reserves do not arise from trading activities; they arise from capital transactions. Examples are share premium (from the issue of shares at a premium), revaluation reserve (from the upward valuation of non-current assets) and capital redemption reserve (by the transfer from a revenue reserve).

Topic 15

1 $71 000 ($200 000 less $129 000). It should be shown as an intangible non-current asset.

2 Negative goodwill $60 000 ($500 000 less $560 000). It should be shown as a negative non-current asset.

3 Sukhdev would show a non-current asset valued at $50 000 in a financial statement. Rollo has no business therefore no goodwill. He has sold his business and made a capital gain (profit) of $50 000.

4 Answers include a positive return on investment resulting from synergy; integration; greater geographic or skill coverage; greater market share; economies of scale.

5 (a) A holding company is one that owns more than 50% of the ordinary shares of a subsidiary company.

(b) A subsidiary company is one that has more than 50% of its ordinary shares owned by a holding company.

(c) If all the ordinary shares are held by a holding company, the subsidiary company becomes a wholly owned subsidiary.

(d) An associated company is one that is partly owned (between 20% and 50%) by another company.

6 In both cases the shares held would be shown as a non-current asset.

Topic 16

1 Ordinary share capital, permanent preference share capital and reserves.

2 Only those dividends paid during the year are accounted for in the financial statements. The final dividend from the previous year and the current year's interim dividend are the usual entries. The proposed final dividend is shown as a note to the accounts.

3 A share premium account arises by the issue of shares at a price greater than the nominal value. It may be used to facilitate the issue of bonus shares, to write off preliminary expenses, to write off any expenses incurred in a share issue or to provide any premium payable on the redemption of shares or debentures.

4 Holders of participating preference shares receive an additional dividend above the normal percentage that they should receive when company profits are greater than a predetermined level.

5 (a) A document acknowledging a loan made to the company by an individual or another company at an agreed rate of interest and redeemable at an agreed future date.

(b) The interest paid is debited to the income statement as a finance cost below the profit from operations to give the profit before tax.

6 False. Debentures are not shares and they do not receive dividends. They signify a loan to the company and the holders must receive a fixed amount of interest each year.

7 (a) Revenue reserves are those which arise as a result of the profitability of the company's trading activities. Capital reserves arise not from trading activities but from capital transactions. They do not contain 'money'; they indicate past profits earned by a company.

(b) Revenue reserves are available for distribution to shareholders in the form of cash dividends. Capital reserves are not available for cash dividends and are generally used to fund bonus shares.

8 An income statement; a statement of financial position; a statement of cash flows; a statement of changes in equity; a statement of accounting policies and explanatory notes.

9 A statement of comprehensive income.

10 An income statement should include revenue; finance costs; tax expense; profit (or loss), which is transferred to the statement of changes in equity.

11 The statement shows the changes that have taken place in permanent share capital and reserves during a financial year.

12 (a) An intangible non-current asset is a non-monetary asset that can be identified clearly but is without physical substance.

(b) Amortisation is the writing-off of part (or all) of the cost of an intangible asset over its useful life.

13 An intangible asset is an identifiable non-monetary asset without physical substance.

Topic 17

1 Gearing is the ratio of fixed interest-bearing capital as a proportion of a company's total capital. It expresses as a percentage the value of fixed cost capital (long-term loans and preference shares) to the total capital. It is given by the following formula:

$$\text{gearing} = \frac{\text{fixed cost capital}}{\text{total capital}}$$

2 An investor would have concerns as the ratio would be above 50% and therefore the company may have a significant amount of finance costs before any dividends would be payable.

3 (a) $$\text{earnings per share} = \frac{\text{profit after tax} - \text{preference share dividends}}{\text{number of issued ordinary shares}}$$

(b) $$\text{price earnings ratio} = \frac{\text{market price per ordinary share}}{\text{earnings per ordinary share}}$$

(c) $$\text{dividend yield} = \frac{\text{dividend paid and proposed}}{\text{market price of ordinary shares}}$$

(d) $$\text{dividend cover} = \frac{\text{profit available to pay ordinary dividend}}{\text{ordinary dividend paid}}$$

4 The price earnings ratio compares the earnings per share and the current market price of the share. It shows the number of year's earnings that a person is prepared to pay to purchase the share. The higher the ratio, the greater the confidence investors show regarding the prospects of the company.

Topic 18

1 (a) Gearing is the relationship that exists between fixed cost capital and total capital. A highly geared company has more than 50% of its total capital provided using fixed cost capital.

(b) Advantages of being highly geared include that fixed interest payments can be budgeted for; if the loan can be used for a capital project that will yield more than the rate of interest being paid, this represents good business practice; as years go by inflation makes interest payments less onerous. Disadvantages include that interest has to be paid regardless of profitability; other lenders may be reluctant to lend further capital; the company may be seen in a negative light as potential investors may feel that ordinary shareholders should be prepared to finance their own company rather than placing reliance on outsiders.

2 There is an assumption that the financial statements will be prepared using the **accruals** concept and the **going concern** concept.

3 Financial statements must have the four characteristics of understandability, relevance, reliability and **comparability**.

4 Users of financial statements can rely on information that has been prepared and audited using the same ground rules.

5 An income statement; a statement of financial position; a statement of cash flows; a statement of changes in equity; a statement of accounting policies and explanatory notes.

6 IAS 2 Inventories.

7 Adjusting events are conditions that existed at the date of the statement of financial position that are material. The statement should be changed to reflect the event. A non-adjusting event arises when an event occurred after the date of the statement of financial position. No adjustment is made due to such an event, but if material it should be disclosed by way of a note to the financial statements.

8 Answers include expected use; wear and tear; obsolescence; legal restrictions to use.

9 Derecognition occurs when a non-current asset is disposed of. Carrying amount is the cost of a non-current asset less total depreciation and impairment costs.

10 The sale of an unused weaving machine.

11 Contingent describes is an event that might occur.

12 (a) Impairment occurs when the carrying amount of a non-current asset exceeds its recoverable amount.

(b) Impairment losses must be shown in the income statement and in the statement of financial position.

Topic 19

1 Work in progress is inventory made up of goods that are as yet in an unfinished state.

2 $2.37 ($3081 ÷ 1200 + (800 × 1/8)).

3 A normal loss is one that arises during processing, which has been expected and cannot be avoided. The units are credited to the process account and no value is attached to them so the cost is spread between the other units.

4 Joint products are produced in the same process as the primary product. They have a significant sales value. By-products are also produced in the same process as the primary product, but they only contribute a minor sales value.

5 A marginal cost statement groups all the variable costs together and deducts their total from sales revenue, giving the total contribution earned. The fixed costs are then deducted from total contribution giving profit for the year.

6 They are different names for the same scarce factor of production.

Topic 20

1 A budget is a short-term financial plan.

2 Budgets help in the planning process; co-ordinating departmental goals; communicating strategies; decision-making; controlling outcomes.

3 Budgetary control delegates financial planning to managers. Managers' performance is continuously evaluated by comparisons of actual departmental results and those set in budgets.

4 It is a summary of the plans of the business. It usually consists of a number of budgets leading to a budgeted

income statement, budgeted statement of financial position and a cash budget.

5 A master budget draws together individual budgets and is summarised by the preparation of an **income** statement and a statement showing the **financial position** of the business.

6 opening balance of trade payables + credit purchases – monies paid to suppliers = closing balance of trade payables

7 Cash is an essential ingredient in the short-term survival of a business. A cash budget It may forecast the need for any further necessary short-term finance and it can show if there is a predicted surplus of cash in the future that may be invested short-term.

8 Depreciation is not entered in a cash budget. It is a book entry that does not involve a movement of cash.

9 Answers include provision for depreciation; provision for doubtful debts; inventory valuations; all accruals and prepayments.

10 A factor whose shortage prevents the business from achieving its aim. An example is labour hours: if only 5000 are available, it would be pointless setting a budget requiring a greater number of hours.

11 Answers include shortages of: materials or components; skilled labour; factory or store space.

12 A flexed budget is one that is adjusted to reflect the actual level of activity, not the budgeted level.

Topic 21

1 Attainable standards, basic standards and ideal standards.

2 Adverse variances reduce profits from those forecast. Favourable variances improve profits from those forecast.

3 Sq × Sp
Aq × Sp
Aq × Ap

4 The material has been used inefficiently. Only ¾ of the hats have been produced, so only ¾ of the material should have been used, i.e. 12 000 m^2. In fact, 12 500 m^2 of material was used.

5 A favourable total sales variance of $1000. This has increased actual profit for the month compared to that budgeted by $1000.

6 (a) Answers include lower skilled staff wasting materials; inferior equipment spoiling material; poor quality material being used.

(b) Answers include less well qualified staff being employed; general deflation forcing wages down; specific wage deflation.

(c) Answers include losing custom to a competitor; general inflationary pressure causing an increase in price; poor performance by sales representatives.

Topic 22

1 Capital rationing applies when there is a shortage of funds available for investment purposes, meaning only certain projects can be undertaken.

2 Payback calculates cash flows using current cash values, whereas discounted payback takes into account the business's current cost of capital to discount future cash flows.

3 Payback measures the length of time that is required for a stream of cash received from an investment to recover the original cash outlay on the investment.

4 Answers include ease of calculation; cash flows are less subjective than the calculation of profit; a short payback period benefits a business's liquidity.

5 accounting rate of return $= \frac{\text{average profits}}{\text{average investment}} \times 100$

6 Average investment = $140 000 ($200 000 ÷ 2 + $40 000).

7 Answers include to keep a highly skilled workforce; to keep machinery in good working order if deterioration would occur through inactivity; in order to stimulate further more lucrative orders in the future; if the project was perceived to be a 'good thing' to do by management.

8 internal rate of return $= P + \left[(N - P) \times \frac{p}{p - n}\right]$

P = % rate giving positive NPV

N = % rate giving negative NPV

p = $ value of positive NPV

n = $ value of negative NPV

9 The internal rate of return represents the interest rate earned by the investment over its life time.