NATIONAL CURRICULUM STATEMENT
ACCOUNTING GUIDE GRADE 11 - 12



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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The purpose of this self study guide

The purpose of this guide is to assist teachers and learners in Grade 10 - 12 to manage and provide a detailed study of the Accounting processes. The self-study guide deals with the following topics:

1. Accounting Equation and Analysis of transactions
2. Bank Reconciliation
3. Control Accounts
4. Debtors Age analysis
5. Disposal of Tangible Assets
6. Cash flow
7. Analysis of Financial Statements
8. Calculations: Percentages
9. Value Added Tax (VAT)
10. Cash Budget Analysis and Variances

The information contained in this document is intended to familiarise teachers and learner with topics indicated above. The document is not intended to serve as a complete manual, but as a guide to assist teachers to cope and manage the new Accounting content. The document will form part of many other strategies and resources that will assist learners to understand Accounting.

How to use this document

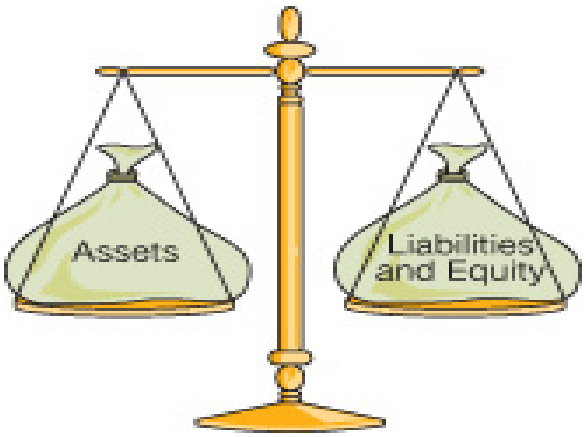
This guide should be used, as a resource for teachers and learners. Teachers should refer to the guide for clarity seeking issues in the subject. The guide should be used in conjunction with all other resources.

Accounting Equation

How To Teach Accounting Equation

Accounting Equation or Basic Accounting Model

Assets = Liabilities + Owners Equity (A = L + O)



1. In teaching the Accounting Equation (A = L + O) learners should first know the following:
    - What is an Asset
    - What is a liability
    - What is an expense
    - What is an income
    - What is owners equity

Assets: Include everything a corporation owns or everything that is due to it.

Liabilities: What your business owes creditors.

Owner's equity: The amount of money the shareholders have invested in the business.

Expense: an expense is an outflow of money to another person or group to pay for an item or service, or for a category of costs.

Income: refers to consumption opportunity gained by an entity within a specified time frame, which is generally expressed in monetary terms.

The following are examples of items classified as assets:

- Cash
- Stock / Inventory
- Investments
- Accounts Receivable / Debtors
- Prepaid Expenses
- Vehicles
- Land
- Buildings
- Equipment, Furniture and Fixtures
- Intangible assets are goodwill, copyrights, trademark, patents and computer programs.

The following are examples of items classified as liabilities:

- Bank overdraft
- Accounts Payable / Creditors
- Accrued expenses, e.g. insurance accrued.
- Prepaid income, e.g. rent (received) prepaid
- Bank loans
- Long-term liabilities (mortgage bonds)
- Debentures

The following are examples of items classified as expenses:

- Insurance paid
- Rent paid
- Water and lights paid
- Discount allowed
- Stationary paid
- Petrol and oil paid
- Purchases
- Telephone paid
- Interest paid
- Income tax
- VAT

The following are examples of items classified as incomes:

- Rent received
- Discount received
- Sales
- Interest received
- Retained income / Net profit

Owners' Equity is made up of:

- Paid-in capital or Share capital - The original money provided by the shareholders
- Retained income / Net profit

T-Account Basics

- Accounts are a summary device that record the changes that have occurred during a period.
    - Organizational system for businesses that allow them to analyse the cumulative effects of transactions.
    - Each account shows the effect of all of the increases and decreases during a period.
- Accounts are organized via the basic accounting equation (Assets = Liabilities + Owners' Equity.)
- Use a separate account for each particular:
    - Asset
    - Liability
    - Shareholders' Equity (Owners' Equity) that is involved in a transaction.
- Each transaction will affect at least *two* accounts. This is reflective of the double-entry system used in accounting, which keeps the accounting equation in balance.

Two notable characteristics of double entry systems are:

- Each transaction is recorded in two accounts and
- Each account has two sides, debit and credit.

Two entries are made for each transaction:

- One entry as debit in one account, and
- The other entry as credit in another account
- The two entries keep the Accounting Equation balanced.

Assets = Liabilities + Owners' Equity

Therefore, the combined debit balance of all accounts always equals the combined credit balance of all accounts.

Double entry system means that we record the dual effects of a business transaction. Therefore, each transaction affects at least two accounts.

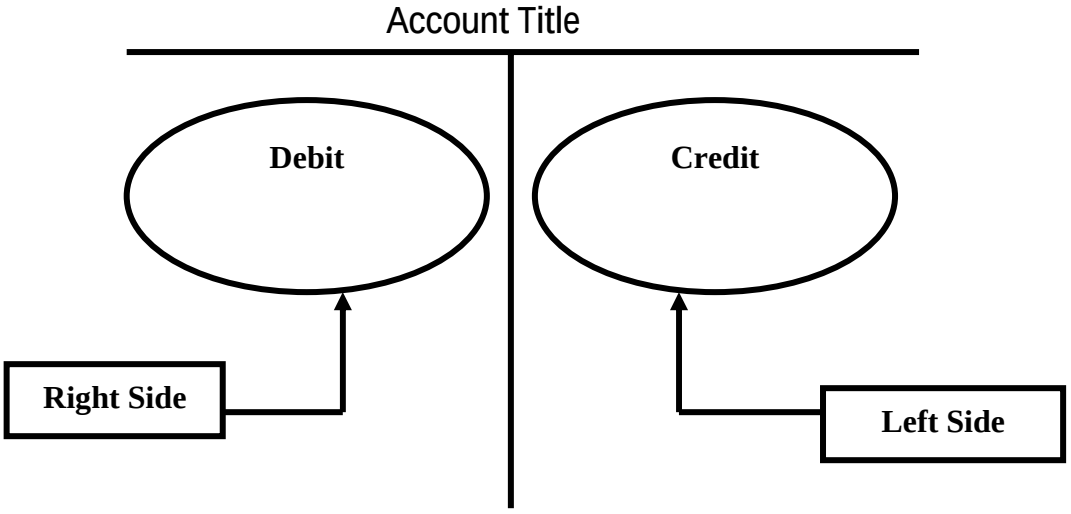
- In accounting, accounts can be represented by the letter "T" and referred to as T-accounts.
- Accountants designate:
    - Left side of account = Debits
    - Right side of account = Credits

Total Debits always equal total credits

Debit: An entry affecting the left side of a T-Account.

Credit: An entry affecting the right side of a T-Account

Visualization of the T-Account



- Rules for Assets – on the left-hand side of the accounting equation:
    - Assets have a normal debit balance.*
    - Increases in assets are recorded on the left (debit) side.
    - Decreases in assets are recorded on the right (credit) side.

Increases in assets are recorded on the left side (debit) of the account.

Decreases in assets are recorded on the right side (credit) of the account.

- Rules for Liabilities and Owners' Equity – on the right-hand side of the accounting equation:
  - Liabilities and Owners' Equity (L & OE) have a normal credit balance.*
  - Increases in L & OE are recorded on the right (credit) side.
  - Decreases in L & OE are recorded on the left (debit) side.

Increases in liabilities and owners equity are recorded as a (credit).

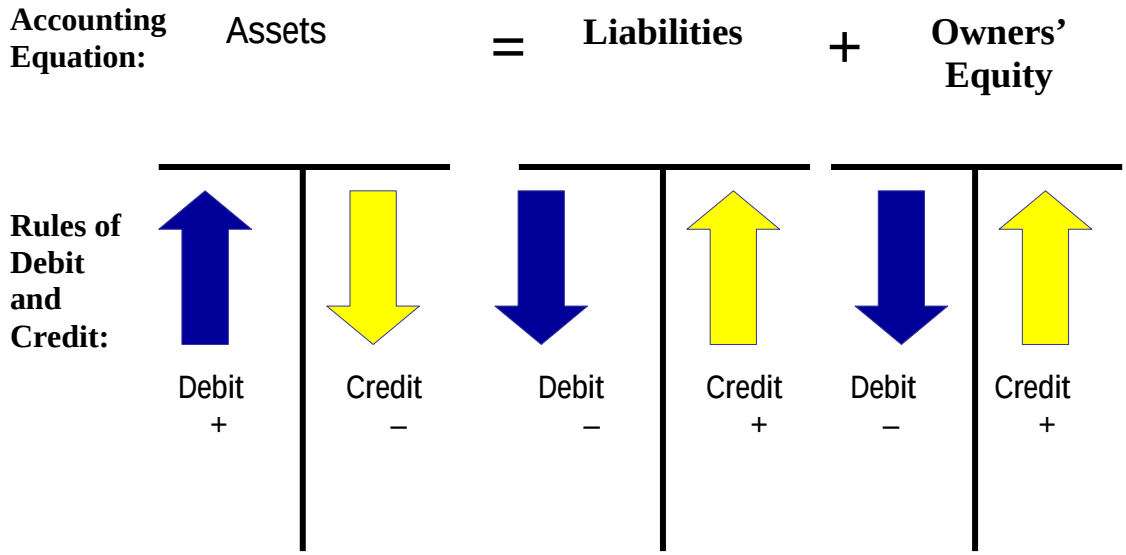
Decreases in liabilities and owners equity are recorded as a (debit).

Rules of Debit and Credit Summarized:

Assets	Assets =	Liabilities	Liabilities +	Owners Equity	Owners Equity
Debit +	Credit -	Debit -	Credit +	Debit -	Credit +

That is:

- Assets have Dr balance as positive (+) balances
- Liabilities have Cr balances as positive (+) balances
- Owners Equity has Cr balances as positive (+) balances



The effect of Accounting Equation

1 When an asset is brought into the business (Dr), it affects the assets positively (+ or increases the number of assets) and when it is reduced or removed from the business it affects the Assets Account negatively (Cr)(-).

2 When a Liability is brought into the business (Cr), it affects the Liabilities positively (+ or increases the number of Liabilities) and when it is reduced or removed it affects the Liabilities negatively (Dr)(-).

3 Owners Equity is affected by drawings (taking cash or goods for personal use) negatively (-) because money or goods are withdrawn for personal. Incomes and expenses also affect Owners equity. Incomes and additional investment into the business increase owners' equity (+) (Cr) and losses/expenses and drawings decreases owners' equity (-) (Dr).

The following types of accounts: (1) have a normal balance as a debit or credit and (2) increase with a debit or credit.

Normal Balance	
Assets	Liabilities
Expenses	Revenues
Dividends	Retained Earnings
	Common Shares
(*DEBIT*)	(*CREDIT*)

Remember: Debit Expenses Assets Dividends (DEAD)

All other accounts = Credit

Rules of debit and credit for Shareholders' Equity are slightly different, since shareholders' equity is affected by different types of accounts.

Common Shares		Retained Earnings		Dividends	
-	+	-	+	+	-
Debit	Credit	Debit	Credit	Debit	Credit

Expenses		Revenues	
+	-	-	+
Debit	Credit	Debit	Credit

Summary

- Read the transaction and understand.
- Establish two account affected (double entry).

- Establish whether those accounts are Assets, Liabilities, expenses/loss or incomes.
- Establish which account is debited and which one is credited.
- Establish the effect of the two accounts on the accounting equation.
- Remember that if you keep your Accounting Equation equal, your books will balance.

Transaction analysis

Example of lesson Activity

1. Understanding this part of accounting is critical. It helps to use as many visual cues as possible as this grounds the lesson and provides concreteness to an otherwise conceptual practice. Use the white/black or green board/overhead projector to draw relationships between the components of the accounting equation and also for solving example problems.
2. Introduce the Accounting equation – talk about keeping it balanced.
3. Introduce the three main components. Assets, Liabilities and Owners equity.
4. Have learners identify different asset categories. Discuss and give your own examples.
5. Have learners identify different liability categories. Discuss and give your own examples.
6. Discuss the concept of equity – it is the amount the business owes to the owners.
7. Talk about the numerical relationship between the components and how the equation can be rearranged in three ways. Have learners solve simple problems: when given two values of the equation, solve for the third.

   Assets = Liabilities + Owners' Equity A = L+ O
   Liability = Assets - Owners' Equity L = A - O
   Owners' Equity = Assets – Liabilities O = A - O

8. Discuss what a business transaction is. Recall the objectivity concept and the notion that transactions originate from a source document.
   - Business Transactions are events that have a *financial impact* on the business (assign an amount) and can be *measured* reliably.

- Transactions will impact the Assets, Liabilities, and Owners' Equity of a firm
- To analyse, determine how this impacts the accounting equation (Assets = Liabilities + Owners' Equity) of a firm

9. Provide many examples of business transactions and have learners identify the changes to the three main components.
10. Introduce the expanded accounting equation.
11. Talk about revenues – have learners discuss different forms of revenue.
12. Talk about expenses - have learners discuss different expense categories.
13. Using office supplies as an example, discuss the difference between an expense and an asset.
14. Discuss the difference between a drawing and a dividend but emphasize that the effect on Equity is the same.
15. Provide many examples of business transactions that involve revenue, expense, and drawing/dividends.

Assessment

Example of the effect of Accounting Equation

No.	Transaction / Scenario	Assets		Liabilities		Owners' / Shareholder's Equity	
1	Issue shares for cash or other assets R6 000	+	R6, 000			+	R6, 000
2	Buying assets by borrowing money (taking a loan from a bank or simply buying on credit)	+	R10, 000	+	R10, 000		
3	Selling assets for cash to pay off liabilities: both assets and liabilities are reduced	-	R900	-	R900		
4	Buying assets by paying cash: Shareholder's money (R600) and borrowed money (R400)	+	R1, 000	+	R400	+	R600
5	Earning revenues	+	R700			+	R700
6	Paying expenses (e.g. rent or professional fees) or dividends	-	R200			-	R200
7	Recording expenses, but not paying them at the moment			+	R100	-	R100
8	Paying a debt that you owe	-	R500	-	R500		

Activities and Solutions

ACTIVITY 1

Accounting Equations/Business Transactions

For each of the following items, give an example of a business transaction that has the described effect on the accounting equation:

1. Increase an asset and increase a liability.
2. Increase one asset and decrease another asset.
3. Decrease an asset and decrease owner's equity.
4. Decrease an asset and decrease a liability.
5. Increase an asset and increase owner's equity.

ACTIVITY 2

For each of the transactions indicate the accounts affected and the effects on the accounting equation.

No.	Transaction	A/C Debited	A/C Credited	Assets	Liabilities	Owners/ Equity
1.	The owner invests personal cash in the business.					
2.	The owner withdraws business assets for personal use					
3.	The company receives cash from a bank loan.					
4.	The company repays the bank that had lent money to the company.					
5.	The company purchases equipment with its cash.					
6.	The owner contributes her personal truck to the business.					
7.	The company purchases a significant amount of stock on credit.					
8.	The company purchases land by paying half in cash and signing a note payable for the other half.					
9.	X bills Q in May for the agreed upon amount of R5, 000 for service rendered.					

10	Company X receives the R5, 000.					
11	Paid cash for janitorial services					
12	Purchased equipment for cash					
13	Issued shares to investors in exchange for cash					
14	Paid an account payable in full					
15	Issued shares to investors and receive cheques					
16	Paid an account payable by cheque.					
17	Pay cleaning expenses by cheque					
18	Purchase equipment by cheque					

ACTIVITY 3

Complete the following table.

Adjustment	General ledger		Affect		
	Debit	Credit	A	L	OE
2. Depreciation on equipment					
3. Interest charged on debtors account					
5. Provision for bad debts to be increased					
6. Telephone account has not been paid at year-end					
7. Interest on overdraft has been wrongly classified as bank charges					
9. Packing materials on hand at the year-end per physical count					
10. Interest on loan owed at year-end					
11. Wages paid in advance at year-end					

SOLUTION

ACTIVITY 1

1. Buy vehicle on credit from Toyota Ltd.
2. Purchase furniture by cheque

3. The owner took cash from the bank for own use.
4. Pay Toyota Ltd by cheque.
5. Receive a cheque from J. Johnson for rent.

ACTIVITY 2

No.	Transaction	A/C Debited	A/C Credited	Assets	Liabilities	Owners/ Equity
1.	The owner invests personal cash in the business.	Bank	Capital	+	No effect	+
2.	The owner withdraws business assets for personal use	Capital	Assets	-	No effect	-
3.	The company receives cash from a bank loan.	Bank	Loan	+	+	No effect
4.	The company repays the bank that had lent money to the company.	Loan Payable	Bank	-	-	No effect
5.	The company purchases equipment with its cash.	Equipment	Bank	Equipment + Bank -	No effect	No effect
6.	The owner contributes her personal truck to the business.	Vehicle	Capital	+	No effect	+
7.	The company purchases a significant amount of stock on credit.	Stock	Account payable	+	+	No effect
8.	The company purchases land by paying half in cash and signing a note payable for the other half.	Land	Bank Account payable	Land + Bank -	+	No effect
9.	X bills Q in May for the agreed upon amount of R5, 000 for service rendered.	Account receivable	Service revenue	+	No effect	+
10	Company X receives the R5, 000.	Bank	Account receivable	Bank + A/C receivable or debtors -	No effect	No effect
11	Paid cash for janitorial services	Janitorial services	Bank	-	No effect	-
12	Purchased equipment for	Equipment	Bank	Equipment +	No effect	No effect

	cash			Bank -		
13	Issued shares to investors in exchange for cash	Shares	Owners Equity /Capital	+	No effect	+
14	Paid an account payable in full	Account payable	Bank			No effect
15	Issued shares to investors and receive cheques	Shares	Owners Equity /Capital	+	No effect	+
16	Paid an account payable by cheque.	Account payable	Bank	-	-	No effect
17	Pay cleaning expenses by cheque	Cleaning expenses	Bank	-	No effect	-
18	Purchase equipment by cheque	Equipment	Bank	Equipment + Bank -	No effect	No effect

ACTIVITY 3

No	Adjustment	General ledger		Effect		
		Debit	Credit	A	L	OE
2	Depreciation on equipment	Depreciation	Accumulated depreciation on equipment	-	0	-
3	Interest charged on debtors account	Debtors control	Interest on overdue account	+	0	+
5	Provision for bad debts to be increased	Provision for bad debts adjustment	Provision for bad debts	-	0	-
6	Telephone account has not been paid at year-end	Telephone	Accrued expense	0	+	-
7	Interest on overdraft has been wrongly classified as bank charges	Interest on bank overdraft	Bank charges	0	0	0
9	Packing materials on hand at the year-end per physical count	Consumable stores on hand	Packing material	+	0	+
10	Interest on loan owed at year-end	Interest on loan	Accrued expense	0	+	-
11	Wages paid in advance at year-end	Prepaid expenses	Wages	+	0	+

Bank Reconciliation

Introduction

Bank reconciliation is the process of comparing and matching entries from the accounting records against those shown on a bank statement. The result is that any transactions in the accounting records not found on the bank statement are said to be outstanding. When you prepare bank reconciliation, you check the sum of money available in your business Cash Receipt and Payment. The amount shown on the statement will rarely be the same as your business records. The bank reconciliation will find any delayed deposits and cheques, any automatic debits or credits not in your records and any mathematical errors. By taking the balance on the bank statement adding the total of outstanding receipts less the total of the outstanding payments this new value should (match) reconcile to the balance of the accounting records.

Steps

1. Make a list of any deposits still outstanding. This information can be found in your cash receipts journal. List on the bank reconciliation any deposits in your records that are not on the bank statement. Go over last month's bank reconciliation to see if there are deposits listed that have not shown up on your bank statement.
2. Make a list of every cheque still in transit. Compare the cheques listed on the bank statement with the ones you have listed in your cash payment journal. These cheques can be located in your cash payment journal. List on the bank reconciliation any cheques in your records that are not on the bank statement. Go over last month's bank reconciliation to see if there are any cheques listed that have not shown up on your bank statement.
3. Locate any bank credits or debits. Go over the bank statement to find any type of charges or credits that are not listed in your business records. If you locate any of them, be certain to add them to your records in the cash receipt and payment.
4. Make supplementary entries in the cash receipts journal and the cash payments journal using the differences from 1 to 3 above.
5. Calculate your balances. Total the sums in your cash and payment journals. This is the ending cash receipt and payment journal. Enter this figure on the bottom of the bank reconciliation. This is the sum you are trying to arrive at.
6. Prepare the bank reconciliation. Write the bank statement's ending balance on the top of the bank reconciliation. Total the deposits, and add this amount to the bank statement's ending balance. Do the same for the cheques in transit by subtracting them from the subtotal. This amount should match the balance listed in your journals. If it does not, you will have to locate the error(s) in your records.

Format of the bank Reconciliation Statement

BANK RECONCILIATION STATEMENT OF MBEKI STORES ON 30 NOVEMBER 20.1

		Dr	Cr
		R	R
	Debit/Credit balance as per bank statement	Overdrawn	Favourable
	Credit deposits not yet credited by bank		xx
	Debit cheques drawn but not yet presented for payment:		
	No. 100	xx	
	No. 200	xx	
	Debit amount incorrectly credited	xx	
	Credit amount incorrectly debited		xx
	Debit/Credit balance as per bank account	Favourable	Overdrawn
		xxx	xxx

Activities and Solutions

ACTIVITY 1

The information below was taken from the records of Tshabalala Traders.

INSTRUCTION

Compare the bank statement for July 20.1 with the bank reconciliation statement of June 20.1 and the cash journals for July 20.1. Make the additional entries in both journals and close them off.

2. Post to the bank account and balance the account on 31 July 20.1

Prepare the bank reconciliation statement on 31 July 20.1

0BANK RECONCILIATION STATEMENT ON 30 JUNE 20.1

		DR	CR
		R	R
	Credit balance according to bank statement		5 750
	Credit outstanding deposit		7 432
	Debit cheques not yet presented for payment:		
	No. 219	739	

	No. 225	1 210	
	No. 226	2 340	
	Debit balance according to bank account	8 893	
		13 182	13 182

TSHABALALA TRADERS

Cash receipts journal - July 20.1

									Sundry accounts		
Doc no	Day	Details	Fol	Analysis of Receipts	Bank	Debtors Control	Discount Allowed	Sales	Amou nt	Fol	Details
150	2	K. Kgoba		174		188	14				
151		M. Mokoe		240		250	10				
		Sales		5 370	5 784			5 370			
152	8	S. Spuru		330		344	14				
153		A. Ayitey		230		241	11				
		Sales		5 450	6 010			5 450			
154	15	J. Jali		270		283	13				
155		M. Malule		124		131	7				
		Sales		4 770	5 164			4 770			
	22	Sales		5 640	5 640			5 640			
156	31	T. Thenga		220		231	11				
		Sales		7 069	7 289			7 069			
					29 887	1 668	80	28 299			

Cash payment journal - 20.1

								Sundry accounts		
Doc no	Day	Name of Payee	Fol	Bank	Trading stock	Creditors control	Discount received	Amount	Fol	Detials
227	2	Telkom		240				240		Telephone
228	3	AB Traders		6 629	5 500			1 129		Stationery
230	10	EF Traders		3 899		4 000	101			
231	14	Cash		5 539				5 539		Wages
232	16	H Printers		1 289				1 289		Advertising
233	22	JK Traders		3 849		4 100	251			
234	26	MN Ltd		4 390	4 390					
235	29	W. Mandela		6 599				6 599		Salaries
236	30	XY Repairs		1 189				1 189		Repairs
				33 623	9 890	8 100	352	15 985		

STAR BANK
BANK STATEMENT OF TSHABALALA - JULY 20.1

Day	Description		Balance
		R	R
1	Balance brought forward		5 750
	Credit	7 432 +	13 182
	Cheque 226	2 340 -	10 842
2	Credit	5 784 +	16 626
3	Cheque 227	240 -	16 386
4	Cheque 225	1 210 -	15 176
5	Service fees	126 -	15 050
7	City Treasurer	310 -	14 740
	Cheque 228	6 629 -	8 111
	Cheque 229	1 089 -	7 022
8	Credit	1 320 +	8 342
	Credit	6 010 +	14 352
9	Unpaid cheque	240 -	14 112
10	Tax levy on debit transactions	21 -	14 091

11	Cheque 230	3 899 -	10 192
12	Top Insurers	110 -	10 082
14	Cheque 231	5 539 -	4 543
15	Credit	5 164 +	9 707
16	Cheque book	13 -	9 694
18	Cheque 232	1 289 -	8 405
22	Cheque 233	3 849 -	4 556
	Credit	5 640 +	10 196
29	Cheque 235	5 699 -	4 497
30	Interest	122 +	4 619

Notes

1. The unpaid cheque was received from M. Makoe on 2 July 20.1.

2. The correct amount of cheque no. 235 is R5 699.

3. On 8 July 20.1 Penpoint Stationers deposited their rent directly in the bank account of Tshabalala Traders.

4. The payment to the City Treasurer was a debit order for water and electricity.

5. The payment to Top Insurers was a stop order for the insurance premium.

6. The accountant neglected to enter cheque 229 drawn by the owner, N. Nkosi, to pay his sons= rent.

ACTIVITY 2

The given information was taken form the books of Thabo Traders

INSTRUCTION

1. Complete the cash receipts journal and the cash payments journal for March 20.2

2. Prepare the bank reconciliation statement on 31 March 20.2

INFORMATION

Information from the bank reconciliation statement for February 20.2, received from RSA Bank:

	R
Favourable balance according to the bank statement	10 100
Outstanding deposits	4 300
Outstanding cheques No. 240	800
No. 631	6 900
No. 632	2 400
No. 633	1 700
Credit amount wrongly debited	2 800
Favourable balance according to the bank account	5 500

B. Sub-totals of the analysis cash journals on 31 March 20.2

Receipts:

	R
Bank	37 400
Sales	25 300
Cost of sales	12 000
Debtors control	10 250
Discount allowed	650
Sundry accounts	?

Payments:

	R
Bank	41 000
Trading stock	17 400
Stationery	3 250
Debtors control	450
Creditors control	17 400
Discount received	1 900
Sundry accounts	?

A. After comparing the bank reconciliation statement of February with the cash journals and bank reconciliation statement for March 20.2, the following was noted:

1. The outstanding deposit appeared in the bank statement for March 20.2.
2. Cheque no. 240 was issued on 1 September 20.1 to Mandela Children Fund as a donation.
3. The error was corrected by the bank.
4. Cheques no. 632 and 633 appeared on the bank statement for March 20.2.

5. Cheque no. 658 for R136 is correct according to the bank statement and was wrongly recorded in the cash payments journal as R226. It was issued to SNA Stationers for stationery bought.

6. The following entries appeared only on the bank statement:

   6.1 A deposit of R2 000 by our tenant LA Jeans.

   6.2 A debit order for R1 200 representing the part payment on the mortgage loan to Pepe Investments.

   6.3 Service fees R73
   Levy R12
   Cash deposit fee R15
   Interest on credit balance R150
   Commission on credit card sales R20

7. An unpaid cheque, R250, was received from M. Mokoena in settlement of his account of R320, was dishonoured because of insufficient funds.

8. According to the analysis cash book the outstanding deposit amounts to R23 500. It does not appear on the bank statement for March 20.2.

9. The following entries did not appear on the bank statement for March:
   Cheque No. 665 R3 600 (dated 28 March 20.2)
   Cheque No. 666 R2 000 (dated 30 March 20.2)
   Cheque No. 667 R1 000 (dated 5 April 20.2)

10. Cheque no. 660, R2 100, issued to PE Promotions for advertising was lost. Payment of the cheque was stopped and the cheque was replaced with cheque no. 668 on 31 March 20.2.

11. A cheque received from C. Cele, a debtor, for R600 was post dated to 10 April 20.2.

12. The bank had incorrectly recorded a deposit made by the owner, T. Thabo, into his personal bank account, in the business= account, R800.

13. A dishonoured cheque of S. Sorry, a debtor, was received together with the bank statement. This cheque, R650, was received as payment for a cash sale and was deposited on 12 March 20.2. The reason for the dishonouring was that a second signature was required.

14. The bank statement for March 20.2 was received on 31 March 20.2 and showed an unfavourable balance of R4 380.

ACTIVITY 3

INSTRUCTION

Use the given information to do the following in the books of Atlantis Stores:

1. Complete the bank account in the general ledger by making any entries that you may seem necessary directly in the bank account. Your entry must show the correct contra account. Balance the account.

2. Prepare the bank reconciliation statement on 31 August 20.1

Atlantis Stores compared their bank statement, received from GAAP Bank, for August with the cash journals for August and found the following differences:

1. The bank account in the general ledger had a favourable balance of R700 on August 20.1. The bank statement had a debit balance of R5 666 on the same date.

2. The following cheques posted to the relevant creditors during July 20.1 and not posted, appear on the bank statement:
    a. No 497 for R420
    b. 499 for R2 960
    c. 503 for R5 648

3. M Haze's cheque for R600 which was deposited on 10 August 20.1, was returned marked R/D. No entry has been made for this returned cheque.

4. A deposit of R6 520 on 31 August 20.1 does not appear on the bank statement.

5. A deposit of R2 190 was entered in the cash receipts journal as R2 910. It had been received for sales.

6. Debtor A. Jacobs paid his cheque for R1 000 in settlement of his debt of R1 100 directly into the bank account at Atlantis Stores.

7. The annual insurance premium of R1 440 was paid by the bank by means of a debit order.

8. The following cheques have not been presented for payment to the bank:

    537 No 239 R640 (dated 10 February 20.1 and issued to Judo Club as a donation)
    538 R158 (dated 10 August 20.1)
    539 R1 420 (dated 28 August 20.1)

9. Service fees, R48, cash handling fee, R32 and interest on overdraft, R60 appear on the bank statement.

10. Cheque no 540 issued for R60, appears on the bank statement as R6.

11. A cheque in payment of purchases of R5 820 (cheque 538) was entered in the cash payments journals a R5 280.

12. A deposit of R4 290 was cast in the deposit book as R4 190, but the bank showed the correct amount on the bank statement on 24 August 20.1.

ACTIVITY 4

The following items appeared in the Bank reconciliation statement of Ndi-Ndo Stores at their year end, 30 June 20.4:

	R
Debit balance as per Bank statement	3 215
Deposit not credited by the bank	5 308
Outstanding cheques	
No. 515 (dated 15 December 20.3)	500
No. 891 (dated 9 April 20.4)	240
No. 945 (dated 20 July 20.4)	2 225
No. 946 (dated 30 June 20.4)	493
Incorrect credit on Bank statement	1 131
Balance as per Bank account	?

INSTRUCTION

Answer the following questions:

Prepare a correct Bank reconciliation statement at 30 June 20.4. 2.

1. One of the listed cheques not presented to the bank has been treated incorrectly. Which cheque is it, give a reason for your choice and explain the correct course of action.

2. Does Ndi-Ndu Stores have a favourable bank balance or an overdraft according to the bank's records? Give the amount and a reason for your answer.

3. A cheque received by Ndi-Ndu Stores on 25 June 20.4 but dated 14 August 20.4, does not appear in the Bank reconciliation statement. Give an explanation.

4. Explain how cheque no. 945 should be treated when preparing the financial statements.

5. What action would Ndi-Ndu Stores take if a cheque issued by another business, appears on their Bank statement?

6. Explain why cheque no. 945 is not treated in the same way as cheque no. 946 when preparing the financial statements.

7. What would the procedure be if cheque no. 891 does not appear on the Bank statement for July 20.4?

8. Give two possible reasons for a dishonoured cheque received by Ndi-Ndu Stores.

9. Give an explanation why the stop orders of a business do not appear in their Bank reconciliation statement.

Bank Reconciliation - Solution

ACTIVITY 1

TSHABALALA TRADERS

Cash receipts journal - 20.1

									Sundry accounts		
Doc no	Day	Details	Fol	Analysis of receipts	Bank	Debtors control	Discount allowed	Sales	Amount	Fol	Details
	31	Totals			29 887	1 668	80	28 299			
B/S		W. Mandela (cheque 235)			900				900		Salaries
B/S		Penpoint Stationers			1 320				1 320		Rent income
B/S		Star Bank			122				122		Interest received on current account
					32 229	1 668	80	28 299	2 342		

Cash payments journal - 20.1

								Sundry accounts		
Doc no	Day	Name of payee	Fol	Bank	Trading stock	Payments	Discount received	Amount	Fol	Details
	31	Totals		33 623	9 890	8 100	352	15 985		
B/S		M. Makoe (Cheque R/D)		240				240		Debtors control
B/S		City Treasurer		310				310		Water and electricity
B/S		Top Insurers		110				110		Insurance
229		N. Nkosi		1 089				1 089		Drawings
B/S		Star Bank		160				160		Bank charges
				35 532	9 890	8 100	352	17 894		

GENERAL LEDGER OF TSHABALALA TRADERS

Dr **Bank** B Cr

Jul	1	Balance	b/d	8 893	Jul	31	Total payments		35 532
	31	Total receipts		32 229			Balance	c/d	5 590
				41 122					41 122
Aug	1	Balance	b/d	5 590					

BANK RECONCILIATION STATEMENT ON 31 JULY 20.1

		Dr	Cr
		R	R
	Credit balance according to bank statement		4 619
	Credit outstanding deposits		7 289
	Debit outstanding cheques		
	No. 219	739	
	No. 234	4 390	
	No. 236	1 189	
	Debit balance according to bank account	5 590	
		11 908	11 908

ACTIVITY 2

Cash receipts journal of Thabo Traders for March 20.2

										Sundry accounts		
Doc no	Date	Details	Fol	Analysis of receipts	Bank	Sales	Cost of sales	Debtors control	Discount allowed	Amount	Fol	Details
	29	Totals	b/d		37 400	25 300	12 000	10 250	650	2 500		
	31	Mandela Children Fund (cheque cancelled)			800					800		Donations
		SNA Stationers (cheque 658 corrected)			90					90		Stationery
B/S		LA Jeans			2 000					2 000		Rent income
B/S		RSA Bank			150					150		Interest on current account
		PE Promotions (cheque 660 cancelled)			2 100					2 100		Advertising
					42 450	25 300	12 000	10 250	650	7 640		

Cash payments journal of Thabo Traders for March 20.2

										Sundry accounts		
Doc no	Date	Details	Fol	Bank	Trading stock	Stationery	Debtors control	Creditors control	Discount received	Amount	Fol	Details
	29	Totals	b/d	41 000	17 400	3 250	450	17 400	1 900	4 400		
B/S	31	Pepe Investments		1 200						1 200		Mortgage loan
B/S		RSA Bank		120						120		Bank charges
		M. Mokoena (R/D insufficient funds)		250			250					
668		PE Promotions		2 100						2 100		Advertising
		S. Sorry (R/D signature)		650			650					
				45 320	17 400	3 250	1 350	17 400	1 900	7 820		

GENERAL LEDGER OF THABO TRADERS

Dr Bank Cr

Mar	1	Balance	b/d	5 500	Mar	31	Total payments	CPJ	45 320
	31	Total receipts	CRJ	42 540			Balance	c/d	2 720
				48 040					48 040
Apr	1	Balance	b/d	2 720					

BANK RECONCILIATION STATEMENT OF THABO TRADERS FOR MARCH 20.2

		Dr	Cr
		R	R
	Debit balance according to bank statement	4 380	
	Credit outstanding deposits		23 500
	Debit outstanding cheques		
	No. 631	6 900	
	No. 665	3 600	
	No. 666	2 000	
	No. 667	1 000	
	No. 668	2 100	
	Debit amount wrongly credited	800	
	Debit balance according to bank account	2 720	
		23 500	23 500

ACTIVITY 3

GENERAL LEDGER OF ATLANTIS STORES

Dr Bank Cr

Aug	1	Balance	b/d	700	Aug	31	Debtors control		600
		Debtors control		1 000			(M Haze cheque R/D)		
		(A. Jacobs)					Sales		720
		Donation		640			(Correction of error)		
		(cheque cancelled)					Insurance		1 440
		Deposit		100			Bank charges		80
		(correction of error)					Interest on overdraft		60
		Balance	c/d	1 000			Trading stock		540
							(Correction of cheque 538)		
					Sept	1	Balance	b/d	1 000

BANK RECONCILIATION STATEMENT OF ATLANTIS STORES ON 31 AUGUST 20.1

	Debit	Credit
	R	R
Debit balance according to bank statement	5 888	
Credit outstanding deposit		6 520
Debit outstanding cheques: No 537	158	
549	1 420	
Debit correction of error on cheque 540	54	
Credit balance according to bank account		1 000
	7 520	7 520

ACTIVITY 4

BANK RECONCILIATION STATEMENT OF NDI-NDU STORES ON 30 JUNE 20.4

	Debit	Credit
	R	R
Debit balance according to Bank statement	3 215	
Credit outstanding deposits		5 308
Debit outstanding cheques		
No. 891	240	
No. 945	2 225	
No. 946	493	
Debit incorrect entry on Bank statement	1 131	
Credit balance according to bank account		1 996
	7 304	7 304

1. Cheque 515. The cheque is stale (older than 6 months) and must be cancelled by means of an entry on 16 June 20.4 in the CRJ.
2. Overdraft of R3 215. A debit balance according to the bank statement means an overdraft.

3. The cheque received on 25 June 20.4 is a post-dated cheque and should be kept in a safe place. The receipt will only be issued on 14 August 20.4. On that day the cheque will be receipted and thereafter recorded into the CRJ.
4. All post-dated cheques must be shown in the balance sheet as creditors. The post-dated cheque amounts will be added to the bank balance (or deducted from the bank overdraft) and creditors increased accordingly.
5. Show the amount as a credit on the bank reconciliation statement in anticipation of the correction by the bank.
6. The payee of cheque 945 may not present the cheque for payment before 14 August 20.4 (the next accounting period). The payee of cheque 946 may present the cheque for payment as from 30 June 20.4 (the current accounting period).
7. The cheque has not been presented for payment yet and will have to be shown as an outstanding cheque in the bank reconciliation statement.
8. The payment of a cheque can be refused because of various reasons:
    - insufficient funds in the drawer's account
    - the signature of the drawer is queried or omitted
    - the amount in words and the amount in figures differ
    - the cheque is older than six months (stale)
    - the cheque is post-dated.
9. The entry in the CPJ is done after the stop order payment has appeared on the bank statement. The stop orders will not appear in the bank reconciliation statement.

Control Accounts

Introduction

The debtors control and creditors control accounts facilitates accounting control over the debtors' and creditors' accounts. The debtors control and creditors control accounts are a summary of all the entries in the debtors ledger and creditors ledger. The balance of the debtors control account in the general ledger, at the end of the month, should be the same as the list/schedule of debtors (the total of the debtors' balances) in the debtors' ledger. In the same way the balance of the creditors control account in the general ledger should be the same as the list/schedule of creditors in the creditors' ledger. Control accounts belong to the General Ledger (GL). Individual Debtors and creditors belong in their respective subsidiary ledgers (debtors ledger/creditors ledger).

Posting Rules

SUBSIDIARY JOURNAL	SOURCE DOCUMENT	POSTING RULE		
CRJ	Duplicate receipt Cash register roll	Dr Bank Cr Contra accounts	Cost of sales column Dr Cost of sales Cr Trading stock	Discount allowed column Dr Discount allowed Cr Debtors control
CPJ	Cheque counterfoil	Dr Contra accounts Cr Bank	Discount received column Dr Creditors control Cr Discount received	
DJ	Duplicate invoice	Selling price: Dr Debtors control Cr Sales	Cost price: Dr Cost of sales Cr Trading stock	
DAJ	Duplicate credit note	Selling price: Dr Debtors allowances Cr Debtors control	Cost price: Dr Trading stock Cr Cost of sales	
CJ	Original invoice	Dr Contra accounts Cr Creditors control		
CAJ	Duplicate debit note	Dr Creditors control Cr Contra accounts		
GJ	Journal voucher	Dr Individual accounts Cr Individual accounts	Debtors control totals Dr Debtors control (Journal debits) Cr Debtors control (Journal credits)	Creditors control totals Dr Creditors control (Journal debits) Cr Creditors control (Journal credits)

Format Of The Debtors And Control Accounts

GENERAL LEDGER

Dr Debtors control B Cr

Jan		Balance	b/d	xx	Jan	31	Debtors allowances	DAJ	xx
	31	Sales	DJ	xx			Bank and discount allowed	CRJ	xx
		Bank (R/D cheque)	CPJ	xx			Journal credits	GJ	xx
		Petty cash *	PCJ	xx			Balance	c/d	xx
		Bank +	CPJ	xx					
		Journal debits	GJ	xx					
				xxx					xxx
Feb		Balance	b/d	xx					

* Payments made on behalf of debtors out of petty cash
\+ Pay a debtor with a credit balance

Dr Creditors control B Cr

an	1	ank and discount eceived	CPJ	xx	Jan		Balance	b/d	xx
		reditors llowances + / undry accounts +	CAJ	xx		31	Sundry purchases/ sundry accounts	CJ	xx
		Journal debits	GJ	xx			Bank*	CRJ	xx
		Balance	c/d	xx			Journal credits	GJ	xx
				xxx					xxx
					Feb	1	Balance	b/d	xx

* Receive money from a creditor with a debit balance or cheque cancelled
\+ Only when the periodic inventory system is used
++ Only when the perpetual inventory system is used

Dr Trading stock B Cr

Jan	1	Balance	b/d	xx	Jan	31	Creditors control (Allowances)	CAJ	xx
	31	Bank (Cash purchases)	CPJ	xx			Cost of sales (Credit sales)	DJ	xx
		Creditors control (Credit purchases)	CJ	xx			Cost of sales (Cash sales)	CRJ	xx

		Cost of sales (Returns)	DAJ	xx			Drawings	GJ	xx
		Expenses +	GJ	xx			Trading stock deficit	GJ	xx
							Expenses*	GJ	xx
							Balance	c/d	xx
				xxx					xxx
Feb	1	Balance	b/d	xx					

\+ Trading stock incorrectly posted to expenses (correction)
* Expenses incorrectly posted to trading stock (correction)

DEBTORS LEDGER

The Debtors ledger shows all the information/transactions of individual debtors

Name of debtor D1

Date		Details	Fol	Debit (+)	Credit (-)	Balance
				R	R	R
Jan	1	Account rendered				xx
	5	Invoice no. xx	DJ	xx		xx
	8	Credit note no. xx	DAJ		xx	xx
	15	Receipt no. xx (payment)	CRJ		xx	xx
	15	Receipt no. xx (discount allowed)	CRJ		xx	xx
	18	Journal voucher no. xx (Interest charged)	GJ	xx		xx
	21	Cheque R/D	CPJ	xx		xx
	21	Journal voucher no. xx (Discount cancelled)	GJ	xx		xx
	25	Journal voucher no. xx (Bad debts)	GJ		xx	xx
	28	Cheque no. xx (Refund made to debtor)	CPJ	xx		xx

CREDITORS LEDGER

The Creditors ledger shows all the information/transactions of individual creditors

Name of creditor C1

Date		Details	Fol	Debit (-)	Credit (+)	Balance
				R	R	R

Jan	1	Account rendered				x x
	8	Invoice no. xx	CJ		xx	x x
	12	Credit note no. xx	CAJ	xx		x x
	19	Cheque no. xx (payment)	CPJ	xx		x x
	19	Cheque no. xx (discount received)	CPJ	xx		x x
	24	Journal voucher no. xx (Interest charged)	GJ		xx	x x
	26	Receipt no. xx (Refund made by creditor)	CRJ		xx	x x

Activities and Solutions

ACTIVITY 1

The general ledger of Jim Traders was destroyed in fire. Hereafter is the complete debtors= ledger for June 20.1.

INSTRUCTION

You are required to use the information given and prepare the debtors= control account as it would have appeared in the general ledger of Jim Traders for June 20.1.

DEBTORS LEDGER OF JIM TRADERS

D. DELOITTE					D1	
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
June 1		Account rendered				660
3	01	Invoice 11	DJ 8	260		920
6	05	Credit note 18	DAJ 1		40	880
18	02	Receipt 24	CRJ 4		400	480
18	03	Receipt 24 (discount allowed)	CRJ 4		20	460
20	06	Cheque dishonoured (unpaid)	CPJ 9	400		860
20	07	Journal (discount cancelled)	GJ 3	20		880

E. ERNEST						D2
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
June 1		Account rendered				1 420
5	02	Receipt 20	CRJ 4		600	820
5	03	Receipt 20 (discount allowed)	CRJ 4		30	790
14	01	Invoice 114	DJ 8	1 040		1 830
20	07	Journal (interest)	GJ 3	30		1 860
22	05	Credit note 27	DAJ 1		65	1 795

Y. YOUNG						D3
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
June 1		Account rendered				80 (cr)
10	01	Invoice 113	DJ 8	280		200 (dr)
24	02	Receipt 26	CRJ 4		280	80 (cr)
28	07	Journal (account transferred)	GJ 3	80		0

DEBTORS LIST ON 30 JUNE 20.1	
	R
D. Deloitte	880 (dr)
E. Ernest	1 795 (dr)
Y. Young	0
Total	2 675 (dr)

CODES	
01	Credit sales
02	Payments
03	Discount
04	Petty cash
05	Returns
06	Cheque dishonoured/refunds
07	Journals

ACTIVITY 2

INSTRUCTION

From the information taken from the complete creditors ledger given below, you are required to prepare the creditors control account in the general ledger. Balance the account.

CREDITORS LEDGER OF KPMG LTD

LEVUBU WHOLESALERS					C1	
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
Feb 1		Account rendered				5 180 (cr)
3	02	Cheque 422	CPJ	5 180		0
	03	Cheque 422	CPJ	150		150 (cr)
8	02	Receipt 340 (refund)	CRJ		150	0
13	01	Invoice 277	CJ		9 190	9 190 (cr)
24	01	Invoice 279	CJ		1 810	11 000 (cr)

LONSDALE SUPPLIERS					C2	
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
Feb 1		Account rendered				20 (dr)
3	01	Invoice 274	CJ		660	640 (cr)
6	06	Credit note 83	CAJ	65		575 (cr)
7	01	Invoice 275	CJ		115	690 (cr)
8	01	Invoice 276	CJ		450	1 140 (cr)
11	02	Cheque 445	CPJ	835		305 (cr)
	03	Cheque 445	CPJ	22		283 (cr)
15	07	Journal (correction of error)	GJ	115		168 (cr)

LONGDALE WHOLESALERS					C3	
Date	Code	Details	Folio	Debit	Credit	Balance
20.1				R	R	R
Feb 1		Account rendered				5 690 (cr)
3	07	Journal (interest)	GJ		80	5 770 (cr)
7	02	Cheque 430	CPJ	4 450		1 320 (cr)
14	05	Credit note 84	CAJ	65		1 255 (cr)
15	07	Journal (correction of error)	GJ		115	1 370 (cr)
20	01	Invoice 278	CJ		3 760	5 130(cr)
22	05	Credit note 85	CAJ	230		4 900 (cr)

CREDITORS LIST ON 28 FEBRUARY 20.1	
	R
Levubu Wholesalers	11 000 (cr)
E. Ernest	168 (cr)
Y. Young	4 900 (cr)
Total	16 068 (cr)

CODES	
01	Purchases
02	Payments
03	Discount
04	Petty cash
05	Returns
06	Cheque dishonoured/refunds
07	Journals

ACTIVITY 3

INSTRUCTION

1. Draw up the debtors control account in the general ledger of Selai Distributors after taking the totals and information given into account.

2. From the information given below, calculate the profit margin on cost price.

3. During the month, discount was allowed on goods damaged but not returned by debtors. Determine the discount, which was allowed.

Balances on 1 March 20.2

Debtors with debit balances, R2 300
Debtors with credit balances, R60

Totals for March 20.2

Cash receipts journal (CRJ 3)	R
Bank	26 780
Sales	14 800
Cost of sales	11 840
Debtors control	10 500
Discount allowed	820
Sundry accounts	2 300

Cash payments journal (CPJ 3)	R
Bank	25 000
Trading stock	9 200
Wages	4 200

Creditors control	10 200
Discount received	600
Debtors control	400
Sundry accounts	1 600

Debtors journal (DJ 3)	R
Sales	15 800
Cost of sales	12 640

Creditors journal (CJ 3)	R
Trading stock	4 500
Equipment	6 200
Stationery	230
Sundry accounts	770

Debtors allowances journal (DAJ 3) (Including discount on damaged merchandise not returned)	R
Debtors allowances	2 800
Cost of sales	1 680

Creditors allowances journal (CAJ 3)	R
Trading stock	700
Equipment	380
Stationery	-
Sundry accounts	30

General journal (GJ 3)	R
General ledger:	
Debits	1 300
Credits	1 420
Debtors ledger:	
Debits	400
Credits	20
Creditors ledger:	
Debits	40
Credits	300

Additional information

1. On 31 March 20.2 the account of Z. Tsabalala still has a credit balance of R60.

ACTIVITY 4

The following information applies to Zwane Traders on 30 June 20.3

GENERAL LEDGER OF ZWANE TRADERS

Debtors control

Dr (Prepared by an inexperienced bookkeeper) Cr

Jun	1	Balance	b/d	20 610	Jun	30	Credit sales	DJ	105 000
	30	Creditors allowances	CAJ	1 400			Bank (R/D cheques)	CPJ	160
		Bank (debtors column)	CRJ	94 000			Bank (refund to debtor)	CPJ	80
		Cash sales	CRJ	40 000			Balance	c/d	51 170
		Bad debts	GJ	400					
				156 410					156 410
Jul	1	Balance	b/d	51 170					

Creditors control

Dr (Prepared by an inexperienced bookkeeper) Cr

Jun	30	Purchases	CJ	84 400	Jun	1	Balance	b/d	20 200
		Cash purchases	CPJ	13 000		30	Sales returns	DAJ	1 800
		Journal debits	GJ	200			Discount column	CPJ	800
		Balance	b/d	7 800			Bank (creditors column)	CPJ	82 600
				105 400					105 400
					Jul	1	Balance	b/d	7 800

Additional information

1. On 30 June 20.3, the total of the list of debtors was R29 930 and the total of the list of creditors R20 100. Accept that the opening balances of both the control accounts were correct.

2. In addition to the obvious errors made by the bookkeeper in the control accounts above, an investigation brought the following to light:

   2.1 An amount of R172 in the creditors journal was incorrectly posted to the account of creditor Umtata Suppliers as R72.

2.2 The creditors journal was overcast by R200.

2.3 Transfer a credit balance of R60 on the account of L. Leshaba in the debtors ledger to his account in the creditors ledger. (The bookkeeper had not done this yet.)

3. A credit note for R100 was issued to N. Ngema in respect of merchandise returned by him, but no entry had yet been made.

3.1 Debtor M. Molotsi, still had to be charged R50 interest on his overdue account.

3.2 An entry in respect of sales returns of R120 was correctly entered in the debtors allowances journal but inadvertently posted to the debit side of debtor C. Cele=s account.

3.3 The receipts from debtors, R94 000, included an amount of R40 recovered from S. Singo, a debtor, whose account had been written off in the previous financial year. The mistake did not however affect the debtors ledger.

INSTRUCTION

1. Draw up the debtors control account and creditors control account for June 20.3, as they should have been prepared in the first place.

3. Show the reconciliation of the totals of the list of debtors and list of creditors with the correct closing balances of the control accounts as calculated in no. 1.

ACTIVITY 5

INSTRUCTION

Study the given ledger account and answer the questions that follow. Use the additional information to assist you.

GENERAL LEDGER OF LESHABA STORES

Dr Debtors control Cr

Aug	1	Balance	b/d	14 700	Aug	31	(2)	CRJ	11 230
	31	Sales	DJ	12 640			Debtors allowances	DAJ	120
		Bank	(1)	1 000			Journal credits	GJ	740
		Petty cash	PCJ	80			Balance	c/d	18 080
		Journal debits	GJ	1 750					
				30 170					30 170
Sept	1	Balance	b/d	18 080					

Additional information

The percentage mark-up is 60 % on cost price.

Questions

1. Name the missing folio number.
2. Name the missing details.
3. Why might Leshaba Stores consider giving their debtors a discount on settlements?
4. Give two possible reasons for the R740 on the credit side of the debtors control account.
5. Give one transaction that could possibly give rise to the entry of R80 on the debit side of the debtors control account.
6. Which source document would support the entry of R120 on the credit side of the debtors control account?
7. Which source document would support the entry of R1 000 on the debit side of the debtors control account?
8. Calculate the cost price of credit sales during August.
9. How will the accountant verify the balance of the debtors control account?
10. List three points for good internal control over debtors.

ACTIVITY 6

On the 30 August 20.2, the accountant of Mabunda Stores compared the balances of the debtors control account and the creditors control account in the general ledger with the total of the debtors' and creditors' lists in the debtors ledger and creditors ledger.

INSTRUCTION

Rule columns as follows and indicate how the errors and omissions must be corrected in order to reconcile the control accounts with debtors and creditors lists.

No	Debtors control		Debtors list		Creditors control		Creditors list	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr

1. A credit invoice for goods sold to T. Tanli was recorded twice in the subsidiary book, and also posted twice, R200.
2. The total of the debtors journal was undercast by R240 and the creditors journal was overcast by R180.
3. A credit note for R544 was recorded in the creditors allowances journal as R54 and posted accordingly.
4. The amount received from C. Maduna was posted to the credit side of the account of Maduma, R144.
5. An amount of R87 in the debtors allowances journal was incorrectly posted to debtor N. Zungu's account as R187.

CONTROL ACCOUNTS – SOLUTION

ACTIVITY 1

GENERAL LEDGER OF JIM TRADERS

BALANCE SHEET SECTION

Dr **Debtors control** Cr

Jun	1	Balance	b/d	2 000	Jun	30	Debtors allowance	DAJ	105
		(R660 + R1 420 - R80)					(R40 + R65)		
	30	Sales	DJ	1 580			Bank and discount allowed*	CRJ	1 330
		(R260 + R1 040 + R280)					(R400 + R20 + R600 + R30 +R280)		
		Bank (R/D)	CPJ	400			Balance	c/d	2 675
		Journal debits		180			(R880 + R1 795 + R0)		
		(R20 + R30 + R80)							
				4 110					4 110
Jul	1	Balance	b/d	2 675					

*Alternative:	R
Bank	1 280
(R400 + R600 + R280)	
Discount allowed	50
(R20 + R30)	

ACTIVITY 2

GENERAL LEDGER OF KPMG LIMITED

BALANCE SHEET SECTION

Dr Creditors control B Cr

Feb	28	Bank and discount received*	CPJ	10 637	Feb	1	Balance	b/d	10 850
		(R5 180 + R150 + R835 + R22 + R4 450)					(5 180 - R20 + R5 690)		
		Sundry allowances	CAJ	360		28	Sundry purchases	CJ	15 985
		(R65 + R65 + R230)					(R9 190 + R1 810 + R660 + R115 + R450 + R3 760)		
		Journal debits	GJ	115			Bank	CRJ	150
		Balance	c/d	16 068			Journal credits	GJ	195
		(R11 000 + R168 + R4 900)					(R80 + R115)		
				27 180					27 180
					Mar	1	Balance	b/d	16 068

*Alternative:	R
Bank	10 465
(5 180 + R835 + R4 450)	
Discount received	172
(R150 + R22)	

ACTIVITY 3

SELAI DISTRIBUTORS

GENERAL LEDGER

Dr Debtors control B Cr

Mar	1	Balance	b/d	2 240	Mar	31	Bank and discount allowed	CRJ3	10 500
	31	Bank	CPJ3	400			Debtors allowances	DAJ3	2 800
		Sales	DJ3	15 800			Journal credits	GJ3	20
		Journal debits	GJ3	400			Balance	c/d	5 520
				18 840					18 840
Apr	1	Balance	b/d	5 520					

4. Profit margin on cost price:

$$\frac{(R14\,800 - R11\,840)}{R11\,840} \times \frac{100}{1} \quad \text{Or} \quad \frac{(R15\,800 - R12\,640)}{R12\,640} \times \frac{100}{1}$$

$$= \frac{R2\,960}{R11\,840} \times \frac{100}{1} \qquad = \frac{R3\,160}{R12\,640} \times \frac{100}{1}$$

$$= 25\,\% \qquad = 25\,\%$$

5. Selling price of goods returned by debtors:

$$\frac{R1\,680}{1} \times \frac{125}{100} = R2\,100$$

Allowances on goods not returned by debtors:

R2 800 - R2 100 = R700

ACTIVITY 4

GENERAL LEDGER OF ZWANE TRADERS

Dr Debtors control B Cr

Jun	1	Balance	b/d	20 610	Jun	30	Bank and discount allowed (94 000 - 40)	CRJ	93 960
	30	Bank (R/D cheques)	CPJ	160			Debtors allowances (1 800 + 100)	DAJ	1 900
		Bank (refund to debtors)	CPJ	80			Journal credits	GJ	400
		Sales	DJ	105 000			Balance	c/d	29 700
		Journal debits (50 + 60)	GJ	110					
				125 960					125 960
Jul	1	Balance	b/d	29 700					

List of debtors

	R
Total on 30 June 20.3	29 930
Returns - N. Ngema	(100)
Interest - M. Molotsi	50
Error corrected - C. Cele	(240)
Transfer - L. Leshaba	60
	29 700

Dr Creditors control B Cr

Jun	30	Sundry allowances	CAJ	1 400	Jun	1	Balance	b/d	20 200
		Bank and discount received	CPJ	82 600		30	Sundry purchases (84 400 - 200)	CJ	84 200
		Journal debits	GJ	200			Journal credits	GJ	60
		Balance	c/d	20 260					
				104 460					104 460
					Jul	1	Balance	b/d	20 260

List of creditors

	R
Total on 30 June 20.3	20 100
Error corrected - Umtata Suppliers	100
Transfer - L. Leshaba	60
	20 260

ACTIVITY 5

1. CPJ

2. Bank and discount allowed

3. Debtors are encouraged to pay there accounts promptly by allowing discount.

   4.1 Bad debts
   4.2 Transfer of a debit balance on a debtors account to his account in the creditors ledger.

5. Payments made on behalf of a debtor out of petty cash for example carriage on purchases.

6. Duplicate credit note

7. Bank statement or cheque counterfoil

8. $\frac{R12\,640}{160} \times \frac{100}{} = R7\,900$

9. Compare the balance with the debtors list.

   Issue invoices for all credit sales
   Issue credit notes for all allowances allowed
   Issue receipts for all amounts received
   Keep an account for each debtor in the debtors ledger up to date

Reconcile the accounts of the debtors ledger with the debtors control account in the general ledger every month

Distribution of duties

ACTIVITY 6

No	Debtors control		Debtors list		Creditors control		Creditors list	
	Dr	Cr	Dr	Cr	Dr	Cr	Dr	Cr
	R	R	R	R	R	R	R	R
1		200		200				
2	240				180			
3					490		490	
4			144	144				
5			100					
6	300							
7						198		198
8				180				
9				40			40	
10	322		322					

Disposal Of Tangible Assets

WHAT TO REMEMBER!

Cost price	XXX
Less: Accumulated depreciation	(XXX)
Book value of asset / Carrying value	XXX
Proceeds on sale of asset	(XXX)
Profit OR loss on sale of asset	
	XXX

Proceeds = Cash sale (Bank)
= Credit sale (Debtors control)
= Trade-in (Creditors control)
= Taken by owner (Drawings)
= Insurance company (Debtors control or Bank)

1. Features Of Depreciation

1.1 The fixed amount method / percentage on cost price /straight line method

Example:

A motor vehicle bought for R100 000 is expected to have a useful lifespan of 5 years.

$$\frac{R100\,000}{5} \quad \text{OR} \quad \frac{R20\,000}{R100\,000} \times \frac{100}{1}$$

= R20 000 pa = 20% pa

1.2 The diminishing balance / book value / carrying value method / declining balance

Example:

Cost price of equipment R90 000 on 1 March 20.1
Depreciation rate on the equipment is 10% pa on the diminishing balance.

Depreciation on 28 February each year:

Year 1:

$$\frac{R90\,000}{1} \times \frac{10}{100} = R9\,000$$

Year 2:

R90 000 - R9 000 = R81 000

$$\frac{R81\,000}{1} \times \frac{10}{100} = R8\,100$$

(Accumulated depreciation R9 000 + R8 100 = R17 100)

Year 3:

R90 000 - R17 100 = R72 900

$\frac{R72\,900}{1} \times \frac{10}{100} = R7\,290$

(Accumulated depreciation R9 000 + R8 100 + R7 290 = R24 390)

**REMEMBER:

When an asset is bought during the course of the financial year, depreciation must be provided on that item of the asset on a pro rata basis for the period in use.

E.g. Time line

1 March 20.2 Financial year (12 months) 28 February 20.3
|----------|----------|
Date purchased
1 July 20.2
|≠----------(8 months)----------÷|

Cost price: R25 000 Depreciation: 15 % pa.

Calculation:

$\frac{R25\,000}{1} \times \frac{15}{100} \times \frac{8}{12}$

= R2 500

2. Disposal Of Non-Current Assets (Tangible Assets)

Note: The disposal of tangible assets can take place at:

The beginning of the year / accounting period

The end of the year / accounting period

During the year / accounting period

2.1 Sale of asset at the beginning of the year

Time line

1 March 20.2 (financial year) 28 February 20.3
|----------|
(12 months)

Find your date on the time line = 1 March 20.2

Steps to be taken:

1. Calculate depreciation (current)
   NO DEPRECIATION IS CALCULATED
   (Depreciation was provided fully at the end of last accounting period)

2. Transfer the cost price to the asset disposal
   Debit: Asset disposal
   Credit: Asset (Vehicles or equipment)

3. Transfer accumulated depreciation to asset disposal
   Debit: Accumulate depreciation (Vehicles or equipment)
   Credit: Asset disposal

4. Sell / Trade-in / Insurance claim / Drawings
   Debit: Bank / Debtors control / Creditors control / Insurance company / Drawings
   Credit: Asset disposal

5. Calculate profit / (loss) on sale of asset
   Debit: Loss on sale of asset
   Credit: Asset disposal

   OR

   Debit: Asset disposal
   Credit: Profit on sale of asset

To remember!

6. Closing transfer at end of the financial year
   Debit: Profit on sale of asset
   Credit: Profit and loss

   OR

   Debit: Profit and loss
   Credit: Loss on sale of asset.

2.2 Sale of asset at the end of the year

Time line

1 March 20.1 Financial year (12 months) 28 February 20.2
|----------|

Find your date on the time line = 28 February 20.2

Steps to be taken:

1. Calculate depreciation (Current year)
   Debit: Depreciation

Credit: Accumulated depreciation (Vehicle or equipment)

How to calculate depreciation:

Cost / Fixed installment method / Straight line method

$$\frac{\text{Cost of asset}}{1} \times \frac{\text{Rate}}{100} \times \frac{\text{Period}}{12} = R$$

Book value / Diminishing balance / Carrying value method

$$\frac{\text{Book value (Cost - Accumulated depreciation)}}{1} \times \frac{\text{Rate}}{100} \times \frac{\text{Period}}{12} = R$$

2. Transfer the cost price to asset disposal
   Debit: Asset disposal
   Credit: Asset (Vehicles or Equipment)

3. Transfer Accumulated depreciation to asset disposal
   Debit: Accumulated depreciation on asset (Vehicles or Equipment)
   Credit: Asset disposal

4. Selling price / Trade-In value / Insurance claim / Drawings
   Debit: Bank/Debtors control / Creditors control / Insurance company/ Drawings
   Credit: Asset disposal

5. Calculate Profit / Loss on sale of asset
   Debit: Loss on sale of asset
   Credit: Asset disposal

   OR

   Debit: Asset disposal
   Credit: Profit on sale of asset

6. Remember: The closing transfer
   Debit: Profit on sale of asset
   Credit: Profit and loss

   OR

   Debit: Profit and loss
   Credit: Loss on sale of asset

2.3 Note for tangible assets to the balance sheet

FORMAT

Tangible assets	Vehicles R	Equipment R	Total R
Cost price	xxx	xxx	xxx
Accumulated depreciation	(xx)	(xx)	(xx)
Carrying value (Last day of previous year)	xxx	xxx	xxx
Movements			
Additions at cost	xxx	xxx	xxx
Disposals at carrying value	(xx)	(xx)	(xx)
Depreciation for the year	(xx)	(xx)	(xx)
Carrying value (Last day of current year)	xxx	xxx	xxx
Cost price	xxx	xxx	xxx
Accumulated depreciation	(xx)	(xx)	(xx)

Activities and Solutions

ACTIVITY 1

The following balances appeared in the books of Rhodes Stores on 1 March 20.3:

Vehicles R128 400.
Accumulated Depreciation R43 000.

Depreciation to be provided at 20% pa according to the diminishing balance method.

On 28 February 20.4 a vehicle was sold on credit to C. Van a debtor, for R11 000.

The cost price of the vehicle was R30 000 and the accumulated depreciation on 1 March 20.3 was R10 800.

Instructions:

1.1 Show the following ledger accounts:
- Vehicles
- Accumulated depreciation on vehicle
- Depreciation
- Asset disposal

1.2 Show the necessary calculations for:
- Depreciation for the year on all vehicles
- Depreciation of asset sold

Note:

Calculation of profit (loss) on sale of asset

Cost price of vehicle sold
Accumulated depreciation

Carrying / Book value
Selling price / Proceeds

Profit on sale of asset

Sale of assets during the year:

Time line

1 March 20.3 31 Aug. 20.3 28 February 20.4

|----------|----------|

START SALE END

APPLY THE STEPS PREVIOUSLY MENTIONED

ACTIVITY 2

On 1 March 20.1 the following balances appeared, amongst others, in the books of Rhodes Stores:

Vehicles (cost) R253 000
Accumulated Depreciation on vehicles R99 250

The asset register shows the following information on 1 March 20.1

VEHICLE	COST	ACCUMULATED DEPRECIATION	CARRYING VALUE
1	R80 000	R46 000	R34 000
2	R84 500	R44 700	R39 800
3	R88 500	R8 550	R79 950
	R253 000	R99 250	R153 750

Depreciation is provided at 10% pa on cost price.

On 31 August 20.1 vehicle no.1 was sold on credit to A. Lotto for R33 500.

Instructions:

2.1 Show the following ledger accounts:
Vehicles
Accumulated depreciation on vehicles

Depreciation
Asset disposal

2.2 Show the calculation for:

Pro-rata depreciation on asset sold
Depreciation for remainder of vehicles

Note:

Calculation of profit (loss) on sale of asset

Cost price of vehicle sold
Accumulated depreciation

Carrying / Book value
Selling price / Proceeds

Profit on sale of asset

To remember!

1. Asset disposal account is shown as an intermediary account.
2. Must be closed off after the sale of asset to profit or loss on sale of asset.

ACTIVITY 3

Use the following information obtained from the books of Alice Cold Storage Ltd. On 30 June 20.4, the end of their financial year, to

1. Draw up the accumulated depreciation and asset disposal account in the general ledger of Alice Cold Storage Ltd. for the financial year ending 30 June 20.4. The accounts should be balanced and/or closed off.
2. Show all calculations that clearly indicates the following:
    a. Depreciation on the new vehicle
    b. Depreciation for the remainder of the vehicles after the disposal
    c. Accumulated depreciation for the vehicle traded in
    d. Profit (Loss) on trade-in of asset
    e. Amount owing for new vehicle
    f. Show the tangible asset note to the Balance sheet at 30 June 20.4

Information:

1. Pre-adjustment trial balance of Alice Cold Storage Ltd. on 30 June 20.3

Balance sheet section:	Debit	Credit
Vehicles	R462 500	
Accumulated depreciation on vehicles		R135 000

2. Adjustments not yet entered:

On 31 March 20.4 a used vehicle was traded in at Alice Motors with the purchase of a new vehicle. The purchase price of the new vehicle is R100 000. The trade-in price given by Alice Motors for the used vehicle is R27 500. The details of the cost price and depreciation of the used vehicle are recorded in the tangible asset register below:

TANGIBLE ASSET REGISTER

Description:		Delivery vehicle
Registration number:	DKW 678 E	
Date purchased:	1 July 20.1	
Cost price:		R75 000
Percentage depreciation:	20 % p.a. according to the carrying value method	
Date Sold:		31 March 20.4

Depreciation written off:

01/07/20.1 to 30/06/20.2	R15 000
01/07/20.2 to 30/06/20.3	R ?
01/07/20.3 to 31/03/20.4	R ?

No entries have been made for this year=s depreciation, the sale of the used vehicle or the purchase price of the new vehicle. The purchase price will be paid to Alice Motors during July 20.4. Depreciation must be written off at 20 % p.a. on diminishing balance on all vehicles.

3.2 Calculation of depreciation

3.2.1 Depreciation on the new vehicle:

3.2.2 Depreciation for the remainder of vehicles:

3.2.3 Accumulated depreciation on vehicle traded in:

3.2.4 Profit (Loss) on trade-in of asset:

	R
Cost price	
Less: Accumulated depreciation	(_____)
Book value (carrying value)	
Trade-in value	(_____)
Profit (Loss) on trade-in	

3.2.5 Amount owing for new vehicle:

	R
Cost price of new vehicle	
Trade-in value of old vehicle	_____
Amount owing for new vehicle	_____

3.2.6 Note to the balance sheet at 30 June 20.4

Tangible assets	Vehicles R
Cost price	
Accumulated depreciation	
Carrying value (30 June 20.3)	
Movements	
Additions at cost	
Disposals at carrying value	
Depreciation for the year	
Carrying value (30 June 20.4)	
Cost price	
Accumulated depreciation	

ACTIVITY 4

The information relates to plant and machinery of Dickinson Ltd and was taken from the balance sheet at 31 December 20.0.

REQUIRED

Calculate the following:

1. The accumulated depreciation on 1 January 20.1 on the plant and machinery sold on 31 March 20.1.

2. The amount received for the plant and machinery sold on 31 March 20.1.

3. The current year's depreciation on plant and machinery.

4. Show the tangible asset note to the balance sheet at 31 December 20.1.

TRANSACTIONS

The following information relates to transactions for the period 1 January 20.1 to 31 December 20.1.

1. On 31 March 20.1 the firm sold plant and machinery for a loss of R500. The cost price of the plant and machinery was R9 000 and the depreciation for the current year amounted to R250.

2. On 1 July 20.1 a new plant and machinery was bought for R48 000 from Master Plant Ltd. Depreciation is provided at 20 % p.a. on carrying value.

INFORMATION

Balances taken from the balance sheet at 31 December 20.0:

Tangible assets	Plant and machinery
	R
Carrying value on 31 December 20.0	46 000
Cost	64 000
Accumulated depreciation	(18 000)

ACTIVITY 4

ANSWER SHEET

1. Accumulated depreciation on plant and machinery sold on 1 January 20.1
2. Selling price of plant and machinery
3. Current year's depreciation

4. Notes to the balance sheet at 31 December 20.1

Tangible assets	Plant and machinery
	R

Disposal Of Tangible Asset - Solution

ACTIVITY 1:

1.1 GENERAL LEDGER OF RHODES STORE

Balance sheet accounts section

Dr Vehicles B9 Cr

20.3 Mar.	1	Balance	b/d	128 400	-	20.4 Feb.	28	Asset disposal	GJ	30 000	-
								Balance	c/d	98 400	-
				128 400	-					128 400	-
Mar	1	Balance	b/d	98 400	-						

Dr Accumulated depreciation on vehicles B10 Cr

20.4 Feb.	28	Asset disposal	GJ	14 640	-	20.3 Mar.	1	Balance	b/d	43 000	-
		Balance	c/d	45 440	-	Feb.	28	Depreciation	GJ	17 080	-
				60 080	-					60 080	-
						Mar	1	Balance	b/d	45 440	-

Nominal accounts section

Dr Depreciation N13 Cr

20.4 Feb	28	Accumulated depreciation on vehicles	GJ	17 080	-	20.4 Feb	28	Profit & loss	GJ	17 080	-

Dr Asset disposal N16 Cr

20.4 Feb	28	Vehicles	GJ	30 000	-	20.4 Feb	28	Accumulated depreciation on vehicles	GJ	14 640	-
								Debtors control	GJ	11 000	-
								Loss on sale of asset	GJ	4 360	-
				30 000	-					30 000	-

1.2 Calculation of depreciation:

All vehicles:

R128 400 - R43 000 = R85 400

$\frac{R85\ 400}{1} \times \frac{20}{100}$ = R17 080

Vehicle sold:

R30 000 - R10 800 = R19 200

$\frac{R19\ 200}{1} \times \frac{20}{100}$ = R3 840

Accumulated depreciation for vehicle sold on date of sale (20 February 20.4)

R3 840 + R10 800 = R14 640

Calculation of profit (loss) on sale of asset:

	R
Cost price vehicles sold	30 000
Accumulated depreciation	(14 640)
Carrying / Book value	15 360
Selling price / Proceeds	(11 000)
Loss on sale of asset	4 360

ACTIVITY 2

2.1 GENERAL LEDGER OF RHODES STORES

Balance sheet accounts section

Dr Vehicles B9 Cr

20.1 Mar.	1	Balance	b/d	253 000	-	20.1 Aug.	31	Asset disposal	GJ	80 000	-
						20.2 Feb	28	Balance	c/d	173 000	-
				253 000	-					253 000	-
Mar	1	Balance	b/d	173 000	-						

Dr Accumulated depreciation on vehicles B10 Cr

20.1 Aug	31	Asset disposal	GJ	50 000	-	20.1 Mar	1	Balance	b/d	99 250	-
20.2 Feb	28	Balance	c/d	70 550	-	Aug	31	Depreciation	GJ	4 000	-
						20.2 Feb	28	Depreciation	GJ	17 300	-
				120 550	-					120 550	-
						20.2 Mar	1	Balance	b/d	70 550	-

Nominal accounts section

Dr Depreciation N15 Cr

20.1 Aug	31	Accumulated depreciation on vehicles	GJ	4 000	-	20.2 Feb	28	Profit & loss	GJ	21 300	-
20.2 Feb	28	Accumulated depreciation on vehicles	GJ	17 300	-						
				21 300	-					21 300	-

Dr Asset disposal N16 Cr

20.1 Aug	31	Vehicles	GJ	80 000	-	20.1 Aug	31	Accumulated depreciation	GJ	50 000	-
		Profit on sale of asset	GJ	3 500	-			Debtors control	GJ	33 500	-
				83 500	-					83 500	-

2.2 Calculation of depreciation

Pro-rata depreciation on vehicle sold:

$$\frac{R80\,000}{1} \times \frac{10}{100} \times \frac{6}{12} = R4\,000$$

Calculation of depreciation on remainder of vehicles:

Cost: (R253 000 - R80 000) = R173 000

$$\frac{R173\,000}{1} \times \frac{10}{100} \times \frac{12}{12} = R17\,300$$

Calculation of profit (loss) on sale of asset:

	R
Cost price of vehicle sold	80 000
Accumulated depreciation	(50 000)
Carrying / Book value	30 000
Selling price / Proceeds	(33 500)
Profit on sale of asset	3 500

ACTIVITY 3

GENERAL LEDGER OF ALICE COLD STORAGE LTD.

Balance sheet accounts section

Dr Accumulated depreciation on vehicles B16 Cr

20.4 Mar	31	Asset disposal	GJ	34 200	20.3 Jul	1	Balance	b/d	13 500
Jun	30	Balance	c/d	168 900	20.4 Mar	31	Depreciation	GJ	7 200
					Jun	30	Depreciation	GJ	60 900
				203 100					203 100
					20.4 Jul	1	Balance	b/d	168 900

Nominal accounts section

Dr Asset disposal N16 Cr

20.4 Mar	31	Vehicles	GJ	75 000	20.4 Mar	31	Accumulated depreciation on vehicles	GJ	34 200
							Creditors control	GJ	27 500
							Loss on sale of asset	GJ	13 300
				75 000					75 000

CALCULATIONS:

3.2.1 Depreciation on the new vehicle:

$$\frac{R100\,000}{1} \times \frac{20}{100} \times \frac{3}{12} = R5\,000$$

3.2.2 Depreciation for the remainder of vehicles:

(R462 500 - R75 000) – (R135 000 – R27 000) x 20 %

= R55 900

Depreciation at end of the year: R60 900 (R5 000 + R55 900)

3.2.3 Accumulated depreciation on vehicle traded in:

1. 1 July 20.1 – 30 June 20.2

$$\frac{R75\,000}{1} \times \frac{20}{100} = R15\,000$$

2. 1 July 20.2 – 30 June 20.3

$$\frac{(R75\,000 - R15\,000)}{1} \times \frac{20}{100} = R12\,000$$

3. 1 July 20.3 – 31 March 20.4

$$\frac{(R75\,000 - R27\,000)}{1} \times \frac{20}{100} \times \frac{9}{12} = R11\,250$$

R41 250

3.2.4 Profit/(Loss) on trade-in of asset:

	R
Cost price of vehicle traded in	75 000
Accumulated depreciation	(34 200)
Book value (carrying value)	40 500
Trade-in	(27 500)
Loss on trade-in of asset	(13 500)

3.2.5 Amount owing for new vehicle:

	R
Cost price of new vehicle	100 000
Trade-in value of old vehicle	(27 500)
Amount owing for new vehicle	72 500

3.2.6 Note to the balance sheet 30 June 20.4

Tangible assets	Vehicles R
Cost price	462 500
Accumulated depreciation	(135 000)
Carrying value (30 June 20.3)	327 500
Movements	
Additions at cost	100 000
Disposals at carrying value	(40 800)
Depreciation for the year	(68 100)
Carrying value (30 June 20.4)	318 600
Cost price	487 500
Accumulated depreciation	(168 900)

ACTIVITY 4

1. Accumulated depreciation on plant and machinery sold on 1 January 20.1 = R4 000

2. Selling price of plant and machinery sold = R4 250

3. Current year's depreciation = R13 250

4. Notes to the balance sheet at 31 December 20.1

Tangible assets	Plant and machinery
	R
Cost	64 000
Accumulated depreciation	(18 000)
Carrying value on 31 December 20.1	46 000
Movements	
Additions at cost	48 000
Disposals at carrying value	(4 750)
Depreciation for the year	(13 250)
Carrying value on 31 December 20.2	76 000
Cost	103 000
Accumulated depreciation	(27 000)

CALCULATIONS

1. Accumulated depreciation

Carrying value = cost price – accumulated depreciation

The depreciation on the plant and machinery sold for the current year, 1 January 20.1 – 31 March 20.1 (date of sale), is given. It is possible to calculate the carrying value on the plant and machinery sold on 1 January 20.1.

$$\text{Carrying value on 1 January 20.1} \times \frac{20}{100} \times \frac{3}{12} = R250$$

Now the carrying value on 1 January 20.1 is known, it is possible to calculate the accumulated depreciation of the plant and machinery sold on 1 January 20.1.

Cost price – accumulated depreciation = carrying value
9 000 – 5 000 = R4 000

2. Selling price of machinery sold

Asset disposal

Machinery (CP)	9 000	Acc depreciation	4 250
		(R4 000 + R250)	
		Selling price	4 250*
		Loss	500
	9 000		9 000

* Selling price: R9 000 – R4 250 – R500 = R4 250

3. Current year's depreciation on plant and machinery

Old plant and machinery: 1 January 20.1 – 31 December 20.1

The cost price of the plant and machinery not sold on 1 January 20.1:
R64 000 – R9 000 = R55 000

The accumulated depreciation on the plant and machinery no sold on 1 January 20.1:
R18 000 + R250 – R 4 250 = R14 000

(Cost price – accumulated depreciation) x 20 % = carrying value x 20% = depreciation
(R55 000 – R14 000) x 20 % = R41 000 x 20 % = R8 200

New plant and machinery: 1 January 20.1 – 31 December 20.1

Depreciation on new plant and machinery purchased:
Cost price = R48 000
R48 000 x 20 % x 6/12 = R4 800

Current year's depreciation is equal to:

	R
Pro-rata depreciation on plant and machinery sold	250 (amount given)
Depreciation on old plant and machinery	8 200 (see calculation)
Depreciation on new plant and machinery	4 800 (see calculation)
	13 250

Debtors Age Analysis

The Debtor Age Analysis is a useful tool to manage your outstanding debts and to see which debtors are not performing according to your credit agreements. It displays a breakdown of your debtor account balances for each of the specified periods for a selected debtor account, or a range of selected debtor accounts.

You need to analyse the outstanding amounts your debtors owe you in periods such as current, 30, 60 and more than 90 days. The debtors age analysis is essential for credit control. If you allow your debtors to pay you when they wish you might develop some serious cash flow problems.

If you are registered for VAT on the invoice basis large outstanding amounts that include VAT may have an impact on your cash flow as you may have to pay the VAT to SARS irrespective of whether the money has been received or not.

How to prepare the debtors age analysis

Balances

- Always commence the calculation with the closing balance of the previous month.

- For example: If the information provided is as from the month of May then commence the calculation with the closing balance in April instead of the opening balance in May in order to determine the age analysis accurately.

Total Debits

- Total Debits figures for each month must be recorded horizontally in the respective columns. The figures are represented in the same row as the balance from the previous month.
- Total Debits for a particular month would include the following:
  - Total credit sales for a particular month.
  - Interest charged for a particular month.
  - Cancellation of cheques during a particular month.

- Cancellation of discounts during a particular month.
- Any other debits to the debtor during a particular month.

[These amounts can be added to the Credit sales for that month. See examples provided].

Payments

- Itemise each transaction vertically in the month column ensuring that each transaction is recorded separately and independently of the other transactions.
- The oldest invoices / accounts are paid / offset first.
- The more recent invoices / accounts are paid / offset progressively.
- Payments received could include discounts OR
- Discounts could be separated.

Returns

- Show the returns and allowances in the month in which the returns or allowances was made and NOT in the month in which the sales was done. See example 1.

Reason

- In order to avoid showing negative balances in those months where the accounts had probably been settled already.

Purpose of preparing debtors age analysis

Decision Making:

Note that with Credit Sales additional costs are incurred i.r.o:

- Administration costs in keeping records of Debtors outstanding accounts.
- Costs of sending monthly statements and reminders [Postage, Telephone, etc.].
- Interest is forfeited on money owed to the business.
- The risk of bad debts.

Therefore, develop a credit policy that incorporates control procedures to:

- Investigate the creditworthiness of new customer.
- Investigate the creditworthiness of existing customers on a continuous basis.
- Specify credit terms.
- Specify settlements discounts to encourage prompt payment of accounts.
- Increase the odds of selling only to those who will settle their debts on time.

Ensure that:

- That the debt collection policy is effectively managed.
- That debtors paying within the prescribed period [What % of debtors are overdue].
- That the necessary steps are taken against delinquent debtors [Reminder, Final Notices, Summonses must be issued or even hand over debtors to debt collectors]

Every receivable account is examined carefully on the basis of the available information, e.g. period outstanding, dispute in connections with the account, insolvency of the debtor and so forth. Although there is no accurate indication of which debts will be irrecoverable at year-end, a provision for bad debts should nevertheless be made.

Example 1:

Required:

(a) Prepare the debtors' age analysis statement
(b) A summary of aging statement.
(c) A step-by-step illustration of the month number and balance per month.

Information:

T Selepe has the following credit agreements with C. Selborn:

- Credit limit: R5 000
- Credit terms 60 days

Transactions:

- 1 May 2004: Outstanding balance of R1 800 at the beginning of the month.
- 5 May 2004: Receive a cheque from C. Selborn for R1 000 as payment on the amount owing for April 2004. C. Selborn received R50 discount. Issued a receipt 491.
- 15 May 2004: Issued invoice 1564 for goods sold on credit to C. Selborn, R1 600.

- 25 May 2004: C. Selborn returned merchandise for R200. Issued a credit note 184.
- 6 June 2004: Sold goods on credit to C. Selborn for R2 100 and issue invoice 1589.
- 30 June 2004: Interest charged on C. Selborn's overdue account to R50 (journal voucher).

- 10 July 2004: Received a cheque for R1 500 from C. Selborn as payment of his debt. Issued receipt 601.
- 26 July 2004: Issued invoice to C. Selborn as payment for merchandise sold to him for R1 900.
- 31 July 2004: Charge C. Selborn's overdue account with R60 interest (journal voucher).

SOLUTION 1

C. SELBORN									
DATE	RECEIPT / DISCOUNTS / RETURNS	AMTS	CLOS BAL.	TOTAL DEBITS [Cr Sales and other Debits]					
				May	June	July			
	Balance and Sales		1 800	1 600	2 150	1960			
May	Payment Received	1 050	(1 050)						
	Cr Note – Returns	200		(200)					
July	Payment Received	1 500	(750)	(750)					
			Nil	650	2 150	1 960			
				60 days	30 days	Current			

NOTE:

The figures in the first row of the entries represent the Opening balance and Credit Sales for May, June and July.

Payment received in May includes a discount of R50, i.e. R1 000 + R50 = R1 050. Alternatively, the discount can be separated from the payment.

The goods were returned in May and these goods are subtracted from credit sales for May.

1. Credit sales for June includes Interest charged on overdue account, i.e. R2 100 + R50 = R2 150.
2. Credit sales for July includes Interest charged on overdue account, i.e. R1 900 + R60 = R1 960.
3. At the end a total is displayed for the balance and each ageing period.

Name of debtor	Balance	Current amount	1 month 30 days	2 month 60 days	3 month 90 days	More than 3 months
C. Selborn	4 760	1 960	2 150	650	Nil	Nil
% of Total		41.1%	45.2%	13.7%		

1. C. Selborn's account is within the credit limit of R5000 and the credit term of 60 days.
2. C. Selborn meets his credit and there is no problem about his account.
3. T Selepe does not envisage any danger of bad debts because C Selborn pays his account regularly.

Example 2:

INFORMATION

The following information of two debtors taken from the books of "*Mokone and Sons"*. Answer the questions after completing the debtors' age analysis statement.

"*Mokone and Sons"* has the following credit agreements with P.K Hlophe and B Botha:

- Credit limit: R15 000
- Credit terms 60 days

Transaction with P.K Hlophe from 01 February 2009 to 31 July 2009

Date	Description	Debit	Credit	Balance
01/02/09	Balance	3 400		
28/02/09	Sales	1 600		5 000
11/03/09	Payment received		5 000	0
15/03/09	Sales	6 200		6 200
20/03/09	Sales	2 400		8 600
31/03/09	Payment received		5 000	3 600
06/04/09	Sales	3 700		7 300
30/04/09	Payment received		2 000	5 300
11/05/09	Sales	7 900		13 200
27/05/09	Payment received		6 000	7 200
05/06/09	Sales	2 900		10 100
12/06/09	Sales	3 300		13 400
29/06/09	Payment received		7 400	6 000
10/07/09	Sales	8 600		14 600

Transaction with B Botha from 01 February 2009 to 31 July 2009

Date	Description	Debit	Credit	Balance
01/02/09	Balance	2 400		
28/02/09	Sales	3 600		6 000
01/03/09	Payment received		5 000	1 000
18/03/09	Sales	4 200		5 200
22/03/09	Sales	12 400		17 600
31/03/09	Payment received		9 700	7 900
06/04/09	Sales	6 700		14 600
28/04/09	Payment received		12 000	2 600
13/05/09	Sales	7 800		10 400
25/05/09	Sales	3 500		13 900
29/05/09	Payment received		12 000	1 900
04/06/09	Sales	9 400		11 300
10/06/09	Sales	2 300		13 600
19/07/09	Sales	4 600		18 200

Required:

1. Use the information and complete the debtors age analysis. (24)
2. Explain the following terms:
   - Credit terms (2)
   - Credit limit (2)
   - Amount due (2)
3. What conclusion can you make when looking at the percentage of outstanding debtors? (2)
4. Do you think that credit arrangement policy of "*Mokone and Sons"* is effective? (6)
5. In which months did B. Botha purchase goods from "*Mokone and Sons"* and for how much? (5)
6. You have been asked to give advice to "*Mokone and Sons"*how they could handle the two accounts. What will be your recommendation? (6)
7. Which % owing needs to be paid by B. Botha end of July? (1)

Solution 2

1.

P.K HLOPHE									
DATE	RECEIPT / DISCOUNTS / RETURNS	AMTS	CLOS BAL.	TOTAL DEBITS [Cr Sales and other Debits]					
					Feb.	March	April	May	June	July
	Balance and Sales		3 400	1 600	8 600	3 700	7 900	6 200	8 600
March	Payment Received	10 000	(3 400)	(1 600)	(5 000)				
Apr	Payment Received	2 000			(2 000)				
May	Payment Received	6 000			(1 600)	(3 700)	(700)		
June	Payment Received	7 400					(7 200)	(200)	
			Nil	Nil	Nil	Nil	Nil	6 000	8 600
								30 days	Current

B. BOTHA									
DATE	RECEIPT / DISCOUNTS / RETURNS	AMTS	CLOS BAL.	TOTAL DEBITS [Cr Sales and other Debits]					
					Feb.	March	April	May	June	July
	Balance and Sales		2 400	3 600	16 600	6 700	11 300	11 700	4 600
March	Payment Received	14 700	(2 400)	(3 600)	(8 700)				
Apr	Payment Received	12 000			(7 900)	(4 100)			
May	Payment Received	12 000				(2 600)	(9 400)		
			Nil	Nil	Nil	Nil	1 900	11 700	4 600
							60 days	30 days	Current

Name of debtor	Balance	Current amount	1 month 30 days	2 month 60 days	3 month 90 days	More than 3 months
P.K Hlophe	14 600	8 600	6 000	Nil	Nil	Nil
B Botha	18 200	4 600	11 700	1 900	Nil	Nil
Total	32 800	13 200	17 700	1 900	Nil	Nil
% of Total		40.2%	53.9%	5.7%		

1. Explain the following terms:

- Credit terms - the conditions under which credit will be extended to a customer, i.e. the length of time for which a firm's customer is granted credit.
- Credit limit - the maximum amount of credit granted to the debtor by supplier.
- Amount due - the total amount owing to date by debtor.

2. What conclusion can you make when looking at the percentage of outstanding debtors?

Debtors pay their account regularly and they are within their agreed credit term, i.e. 60 days.

3. Do you think that credit arrangement policy of "*Mokone and Sons"* is effective?

A credit policy is working effectively. A credit policy incorporates control procedures to:

- Investigate the creditworthiness of new customer.
- Investigate the creditworthiness of existing customers on a continuous basis.
- Specify credit terms.
- Specify settlements discounts to encourage prompt payment of accounts.
- Increase the odds of selling only to those who will settle their debts on time.

4. You have been asked to give advice to "*Mokone and Sons"* how they could handle the two accounts. What will be your recommendation?

    a. Although debtors pay their accounts well, a provision for bad debts should nevertheless be made, for in case one debtor falls behind. For instant, the last payment for B Botha was in May and there was no payment in June and July and we are not sure whether he will pay. Already his account is in 60 days credit term.

5. You have been asked to give advice to "*Mokone and Sons"*how they could handle the two accounts. What will be your recommendation?

Months	Amount
February	3 600
March	16 600
April	6 700
May	11 300
June	11 700
July	4 600

7. Which % owing needs to be paid by B. Botha end of July?

According to the credit terms agreement 5.7% of the debts need to be paid before it is overdue.

Activities and Solutions

Activity 1 (a) and (b)

(a) Required:

(d) Prepare the debtors' age analysis statement and

(e) A summary of aging statement.

Information:

Thabo has the following credit agreements with Bongani who is a new customer:

- Credit limit: R12 500
- Credit terms 60 days

Transactions:

Date	Detail	Amount
February 17	Thabo sold goods to Bongani	R9 800.00
February 18	Thabo sold additional goods to Bongani	R2 300.00
March 12	Payment received	R4 500.00
March 16	Thabo sold goods to Bongani	R1 800.00
March 22	Balance	?

(b) Required:

6. Study a debtors age analysis statement given below and give your opinion.

	More than 60 days	31 – 60 days	30 days Current	Total
ABC	R560.00	R0.00	R780.00	R1340.00
XYZ	R0.00	R450.00	R120.00	R 570.00
Total	R560.00	R450.00	R900.00	R1910.00
%	29.3%	23.6%	47.1%	100%

SOLUTION 1

(a)

BONGANI									
DATE	RECEIPT / DISCOUNTS / RETURNS	AMTS	CLOS BAL.	TOTAL DEBITS [Cr Sales and other Debits]					
				Feb.	March				
Feb	Sales			12 100	1 800				
May	Payment Received	4 500		(4 500)					
			9 400	7 600	1 800				
				30 - 60 days	Current				

Name of debtor	Balance	Current amount	31 – 60 days	More than 60 days
Bongani	9 400	1 800	7 600	Nil
% of Total	100%	19.1%	80.9%	

(b)

1. The bottom line is that you are owed R1910.00, of which R900 is current, R450 is over a month old and R560.00 is over 2 months old.
2. Nearly 30% of all debtors are over 2 months old. (R560 of R1910 = 29.3%).

Activity 2

INFORMATION

The following information of five debtors are taken from the books of *"Robinson Ltd".* Answer the questions from a given summary of the debtors' age analysis statement.

"*Robinson Ltd"* has the following credit agreements with debtors:

- Credit limit: R2 000
- Credit terms 30 days

Age analysis of debtors as at 30 September 2008

Customer name	*Balance*	*Up to 30 days*	*60 days*	*90 days*	*Over 90 days*
Bareng Pty	294.35	220.15	65.40	8.80	0.00
Magora Ltd	949.50	853.00	0.00	96.50	0.00
Taylor Pty	371.26	340.66	30.60	0.00	0.00
Thorpe Ltd	1,438.93	0.00	0.00	567.98	870.95
Themba Ltd	423.48	312.71	110.77	0.00	0.00
Totals	3,477.52	1,726.52	206.77	673.28	870.95
Percentage	100%	49.6%	6%	19.4%	25%

Answer the following questions:

1. What percentage of debtors is not meeting the credit terms?
2. What percentage of debtors should be a great concern to Robinson Ltd?
3. What percentage of debtors still falls within the agreed credit terms?
4. Is the credit policy in Robinson Ltd effective?
5. What will your recommendation be in this situation?

Solution 2

1. What percentage of debtors is not meeting the credit terms?

Debtors overdue for 60 and more than 90 days.

= R1 771 of R3 477.52 = 50.9%

2. What percentage of debtors should be a great concern to Robinson Ltd?

While the debtors of over 30 days are of concern, the greatest concern will be those debtors taking 60days and more to pay. 25% of Robinson Ltd's outstanding debtor balance is due to Thorpe Ltd and this is of great concern.

3. What percentage of debtors still falls within the agreed credit terms?

1,726.52 of 3,477.52 = 49.6%

4. Is the credit policy in Robinson Ltd effective?

Robinson Ltd's credit policy is not effective because the company collected only 49.6% in 30 days and 50.9% is still outstanding.

5. What will your recommendation be in this situation?

Robinson Ltd needs to ensure that:

- Every receivable account is examined carefully on the basis of the available information, e.g. period outstanding, dispute in connections with the account, insolvency of the debtor, etc.
- The necessary steps are taken against delinquent debtors
- Reminders, Final Notices, Summonses must be issued or even hand over debtors to debt collectors.

Age analysis of creditors

As an aid to effective management, an age analysis of creditors may be produced. This is similar to the age analysis of debtors. It is simply a list of the suppliers to whom we currently owe money, showing the total amount owed and the period of time for which the money has been owed.

Activity 3

INFORMATION

The following information of five creditors taken from the books of "Anglo-Ltd".

Required:

Answer the questions from a given summary of the creditors' age analysis statement.

"*Anglo Ltd"* has the following credit agreements with creditors:

- Credit limit: R2 000
- Credit terms 60 days

Age analysis of creditors as at 30 September 2008

Customer name	Balance	Up to 30 days	60 days	90 days	Over 90 days
N Basetsana	294.35	220.15	65.40	8.80	0.00
B Dalen	949.50	853.00	0.00	96.50	0.00
B Danisa	371.26	340.66	30.60	0.00	0.00
N Hlophe	1,438.93	0.00	0.00	567.98	870.95
V Khoza	423.48	312.71	110.77	0.00	0.00
Totals	3,477.52	1,726.52	206.77	673.28	870.95
Percentage	100%	49.6%	6%	19.4%	25%

Answer the following questions:

1. What are creditors age analysis?
2. Identify the amount owed for more than three months.
3. What percentage overdue to creditors is not meeting the credit terms?
4. What percentage overdue to creditors is of a great concern to Anglo Ltd?
5. What conclusion can you make when looking at the percentage of overdue accounts?

Solution 3

1. What is a creditors age analysis?

The age analysis of creditors highlights any supplier accounts that are overdue. It is a list of the suppliers to whom we currently owe money, showing the total amount owed and the period of time for which the money has been owed.

2. Identify the amount owed for more than three months

In the table above, R870.95 owed to N Hlophe has been outstanding for more than three months.

3. What percentage overdue to creditors is not meeting the credit terms?

Overdue to creditors for 60 – more than 90 days.

= R1 771 of R3 477.52 = 50.9%

4. What percentage overdue to creditors is of a great concern to Anglo Ltd?

While the creditors of over 30 days are of concern, the greatest concern will be those overdue accounts taking 60days and more to pay. 25% of Anglo Ltd's outstanding creditors balance is due to N. Hlophe and this of great concern

5. What conclusion can you make when looking at the percentage of overdue accounts?

The age profile shows that of the debts outstanding at 30 September 2008, nearly 45% have been outstanding for more than 60 days with the majority of those being outstanding payments due to N Hlophe.

Cash Flow Statement

The financial statements of a company consists of the following:

a. Income Statement
b. Balance Sheet
c. Cash Flow Statement

CASH FLOW STATEMENT

1. Cash Flow Statement shows what the Company does with their cash
2. Reconciles cash basis to accrual basis

   Used to determine:

   - the company's ability to generate future cash flows
   - the company's ability to repay debt
   - how much cash was spent investing in assets
   - how much cash was received from borrowing
3. The Cash flow statement gives details of:
   a. cash generated by operating activities.
   b. cash generated from investing activities.
   c. cash generated from financing activities.
4. The Cash flow statement indicates the movement of cash; whether the bank balance has increased or decreased during an accounting period.
5. Information comes from the Income Statement and Balance Sheet of the current year, and together with the Balance Sheet of the previous year, the cash flow for the current year is determined.

Cash Equivalents

Short term, highly liquid, e.g. CDs, 3-month treasury, money market – they are treated the same as cash on the cash flow statement

Sections of Cash Flow Statement

The cash flow statement is separated into three sections:

Cash Flow from Operating Activities

Cash generated from operations

Interest paid

Dividends paid

Interest Income

Income tax paid

Cash Flow from Investing Activities

Purchase of fixed / tangible assets / Non-current assets

Proceeds from sale (disposable) of fixed / tangible assets / non- current assets

Cash Flow from Financing Activities:

Proceeds from shares issued (new shares)

Proceeds from long term loans / non-current liabilities

Payment of long term loans / non-current liabilities

Net change in cash and cash equivalents

Cash and cash equivalents at beginning of year

Cash and cash equivalents at end of year

Format of the Cash Flow Statement

	Notes	R	R
Cash Flow from Operating Activities			
Cash generated from operations	1	xxxxx	XXXX
Interest paid		(xxx)	
Dividends paid	3	(xxx)	
Interest Income	4	(xxx)	
Income tax paid			
Cash Flow from Investing Activities			(XXX)
Purchase of fixed / tangible assets / Non-current assets	5	(xxxx)	
Proceeds from sale (disposable) of fixed / tangible assets / non- current assets		xxxx	
Cash Flow from Financing Activities:			XXXX
Proceeds from shares issued (new shares)		xxxx	
Proceeds from long term loans / non-current liabilities		xxxx	
Payment of long term loans / non-current liabilities		(xxx)	

Net change in cash and cash equivalents	2		XXXX
Cash and cash equivalents at beginning of year	2		XXX
Cash and cash equivalents at end of year	2		XXXXX

NOTES TO THE CASH FLOW STATEMENT			
1. Cash generated by operations			
Profit before taxation		xxxx	
Adjustment for:			
Depreciation		xxxx	
Interest paid		xxxx	
Interest received		(xxx)	
Operating profit before changes in working capital			XXXX
Changes in working capital			xxxx
Decrease (increase) in inventory		xxx	
Decrease (increase) in Trade and other receivables		xxx	
Increase (decrease) in Trade and other payables		xxx	xxxx
Cash Generated from operations			XXXX
2. Net changes in cash and cash Current			
Cash and Cash Equivalent	Net Change	Current	Previous
Bank/Bank overdraft	xx	xxx	xxx
Cash float		xxx	xxx
Petty cash		xxx	xxx
	XX	XXXX	XXXX
3. Dividends paid*			
Amount owing at beginning of year			xxx
Amount in the notes to the balance sheet			xxx
Amount owing at the end of the year			xxx
			XXXX
4. Taxation Paid**			
Amount owing at the beginning of the year			xxx
Amount in the Income Statement			xxx
Amount owing at the end of the year			xxx
			XXXX
5. Tangible Assets			
Land and Building			xxxx
Vehicles			xxxx
Equipment			xxxx
			XXXX

Activity and Solution

Activity 1

Use the information provided to prepare:

1. Cash Flow Statement
2. Note for Cash generated from operations.

Selaelo Company's Balance Sheet and Income Statement

Comparative Balance Sheet as at 31 December 2009

	31/12/2009	31/12/2008	Net Change
ASSETS	R	R	R
Fixed Assets			
Land	10 000	30 000	-20 000
Buildings	150 000	150 000	0
Accumulated depreciation on buildings	(40 000)	(20 000)	20 000
Equipment	101 000	89 000	12 000
Accumulated depreciation on equipment	(20 000)	(12 000)	8 000
	201 000	237 000	
Current Assets			
Bank	44 000	22 000	22 000
Accounts receivable	26 000	28 000	-2 000
Inventories (Stock on hand)	60 000	0	60 000
Prepaid expenses	4 200	6 200	-2 000
TOTAL ASSETS	335 200	293 200	
EQUITY & LIABILITIES			
Shareholder' Equity			
Ordinary share	170 000	100 000	70 000
Retain Income	32 200	23 200	3 000
	202 200	123 200	
Non-current Liabilities			
Loan payable	100 000	140 000	-40 000
Current Liabilities			
Accounts payable	33 000	30 000	3 000
	335,200	293,200	

Selaelo Company's Income Statement 31 December 2009

Revenue		800 000
Cost of goods sold	475 000	
Operating expenses	220 000	
Interest expenses	8 000	
Loss on sale of equipment	2 000	
Income from operation		95 000
Income Tax expenses	38 000	
Net Income		57 000

Additional information:

(a) Operating expenses include depreciation expense of R34 000 and amortization of pre-paid expenses of R2 000

(b) Land was sold at its book value for cash.

(c) Cash dividend of R48 000 was paid in 2009.

(d) Interest expense of R8 000 was paid in cash.

(e) Equipment with a cost of R36 000 was purchased for cash. Equipment with a cost of R24 000 and a book value of R18 000 was sold for R16 000 for cash.

(f) Loans were redeemed at their book value for cash.

(g) Ordinary shares were issued for cash.

Solution

Activity 1

1.

Selaelo Company's Cash Flow Statement 31 December 2009

	Notes	R	R
Cash Flow from Operating Activities			(8 000)
Cash generated from operations	1	86 000	
Interest paid		(8 000)	
Dividends paid		(48 000)	
Income tax paid		(38 000)	
Cash Flow from Investing Activities			- 0
Purchase of fixed / tangible assets / Non-current assets		(36 000)	
Proceeds from sale (disposable) of fixed / tangible assets / non- current assets		36 000	
Cash Flow from Financing Activities:			30 000
Proceeds from shares issued (new shares)		70 000	
Payment of long term loans / non-current liabilities		(40 000)	
Net change in cash and cash equivalents			22 000
Cash and cash equivalents at beginning of year			22 000
Cash and cash equivalents at end of year			44 000

2.

NOTES TO THE CASH FLOW STATEMENT			
1. Cash generated by operations			
Net Profit before taxation		95 000	
Adjustment for:			
Depreciation: is (24 000 – 18 000) + 20 000 – 12 000 = R14 000+ R20 000 + R34 000		34 000	
Interest paid		8 000	
Loss on sale of equipment		2 000	
Operating profit before changes in working capital			139000
Changes in working capital			(53 000)
Increase in inventory		(60 000)	
Decrease in prepaid expenses		2 000	
Decrease in accounts receivables		2 000	
Increase in accounts payable		3 000	
Cash Generated from operations			86 000

Explanation on the adjustments to net profit before tax of R95 000:

a. Accounts receivable: The decrease of R2 000 should be added to net profit before tax to convert from the accrual basis to the cash basis.

b. Inventories: The increase of R60 000 represents an operating use of cash for which an expense was not incurred. This amount is therefore deducted from net profit before tax to arrive at cash flow from operations.

c. Pre-paid expense: The decrease of R2 000 represents a charge to the income statement for which there was no cash outflow in the current period. The decrease should be added back to profit before tax.

d. Accounts payable: When it increases, cost of goods sold and expense on a cash basis are lower than they are on an accrual basis. The increase of R3 000 should be added to net profit before tax.

e. Depreciation expense: The depreciation expense for the building is R20 000. Due to the sale of equipment the depreciation for equipment is (24 000 – 18 000) + 20 000 – 12 000 = R14 000. This amount plus R20 000 should be added to net profit before tax to determine net cash flow from operating activities.

f. Loss on sale of equipment: The loss of R2 000 on sale of equipment should be added to net profit before tax since the loss did not reduce cash but it did reduce profit before tax.

Cash flows from investing and financing activities

a. Land: The sale of land for R20 000 is an investing cash inflow.
b. Equipment: The purchase of equipment for R36 000 is an investing cash outflow, and the sale for R16 000 is an investing cash inflow.
c. Loans payable: This financing activity used cash of R40 000.
d. Ordinary shares: Ordinary shares of R80 000 were issued as a financing cash inflow.
e. Retained earnings: The increase of R9 000 is the result of net income of R57 000 from operations and the financing activity of paying cash dividends of R48 000.

Summary

- A cash flow is a statement, which shows the flow of cash into and out of the business.
- It is not the same as a profit and loss account / Income Statement.
- The cash flow statement only records movements of cash and, for example, does not include credit sales or purchases until such time as cash actually flows.
- This statement became mandatory because of some high profile business failures of the 1980s/90s - these were companies that, in terms of the Income statement, were profitable but were short of cash to pay their debts.
- The cash flow statement should not be confused with a Cash Flow forecast.
- The former is historical whereas the latter is a forecast about the future.

Cash Flow Analysis

How to analyze a cash flow statement

Once you have constructed a cash flow statement, you will be much closer to understanding the financial position of your company. While a balance sheet and income statement are tools for management, without a cash flow statement they are limited barometers and may even be misleading.

Operating Activities

The cash flow statement will tell you where money came from and how it was used. When analyzing cash flow, the first place to look is the cash flow from operating activities. It tells you whether the firm generated cash or whether it needs a cash infusion.

A few periods of negative cash from operating activities is not by itself a reason for alarm if it is based on plans for company growth or due to a planned increase in receivables or inventories. However, if a negative cash flow from operating activities is a surprise to managers and owners, it may be undesirable. Over time, if uncorrected, it can foretell business failure.

Managers and owners should pay particular attention to increases in accounts receivable. The cash flow statement gives the true picture of the account. A large increase in accounts receivables may warrant new billing or collection procedures.

Investing Activities

The cash flow statement puts investing activities into perspective. At one glance, you can see whether or not a surplus in operations is being used to grow the company.

A lack of investing activities, which is few purchases of new equipment or other assets, may indicate stagnant growth or a diversion of funds away from the company.

Financing Activities

The financing activities section of the cash flow statement will show repayments of debt, borrowing of funds, as well as injections of capital. As a company expands, this area of the cash flow statement will become increasingly important. It will tell outsiders how the company has grown and the financial strategies of management.

Together, the three sections of the cash flow statement show the net change in cash during the period being examined. A comparison between past periods will give owners and managers a good idea of the trend of their business. Positive trends in cash flow may encourage owners to consider long-term financing as an aid to growth and increase their comfort level concerning the company's ability to generate cash for repayment.

Strong cash flow will also make it easier to acquire financing and to negotiate with lenders from a position of strength. Preparation of a cash flow statement is the first step toward financial management for long-term success.

Summary

- What is the trend in cash flow from operating activities for your company?
- Is there a reason for any large increase in accounts receivable?
- How do you expect the financing activities of your company to change in the next year and the next two years?

Value Added Tax (VAT)

What is VAT?

VAT stands for *Value Added Tax*. Value Added Tax (VAT) is levied on the supply of goods and services by vendors or it is a tax businesses charge when they supply their goods and services. This tax is collected at each stage of the production and distribution chain. We have to pay VAT on most of the things that we buy. Currently the Standard rate of VAT in South Africa is 14% and this is the rate to be used when calculating VAT.

Vat Concepts

Zero-rated items	Zero-rated items are goods or services which are taxed at a rate of 0%, e.g. milk, brown bread, maize, fruit, etc.
VAT-exempted items	These items involve services that are not subject to VAT at either the standard rate or zero rate, e.g. childcare services, educational services, etc.
Standard rate	In South Africa Standard-rated supplies are taxed at the rate of 14%.
VAT-able items	These items are goods or services that are subject to VAT.
VAT Output	VAT paid on items purchased and can be claimed back from SARS. It is VAT, which your company would charge on items, which it, sells. Thus a company could wish to sell an item and added to the amount a standard rate tax would be charged.
VAT Input	VAT on Sales and income and must be paid over to SARS. It is VAT that you pay on all your business expenses and for which you have a tax invoice. It also relate to VAT that is paid on other goods and services bought or rented for the business.
VAT Control	Is a summary of the VAT Input and Output and shows whether the business owes SARS money or whether SARS owes the business money.

VAT Calculation

How to add VAT (Value Added Tax) to a price (14%)

This is the calculation you need to use when you know a PRICE *BEFORE TAX* (THE NET PRICE) but want to find out the PRICE *AFTER TAX* (THE GROSS PRICE).

VAT rate of 14%.			
Net price	Multiplied by	1.14	= Gross price
Price before tax	Multiplied by	1.14	= Price after tax

Calculations:

The VAT standard rate is rate of 14% First, get the multiplier: 14÷ 100% = 0.14 0.14 + 1 = 1.14 The multiplier is 1.14 So...			
Net price	Multiplied by	1.14	= Gross price
Price before tax (Net price)	Multiplied by	1.14	= Price after tax (Gross price)
E.g.:			
R100	Multiplied by	1.14	= R114
R100 + Tax			= R114 inc Tax

How to deduct VAT from a price - (14%)

People can often add VAT to a figure, but when it comes to taking it off it is a problem.

So here it is...

Taking-off VAT (Tax) from a price

This is the calculation you need to use when you know a PRICE *AFTER TAX* (THE GROSS PRICE) but want to find out the PRICE *BEFORE TAX* (THE NET PRICE).

VAT rate of 14%.			
Gross price (price after tax)	Divided by	1.14	= Net price
Price after tax	Divided by	1.14	= Price before tax (Net price)

Calculations:

The VAT standard rate is rate of 14% First, get the divisor: 14□100% = 0.14 0.14 + 1 = 1.14 The divisor is 1.14 So the back calculation for 14% VAT is ...			
Gross price	Divided by	1.14	= Net price
Price after tax	Divided by	1.14	= Price before tax
E.g.:			
R114.00	Divided by	1.14	= R100
R114.00 inc Tax			= R100 + Tax

Three Bookkeeping Accounts

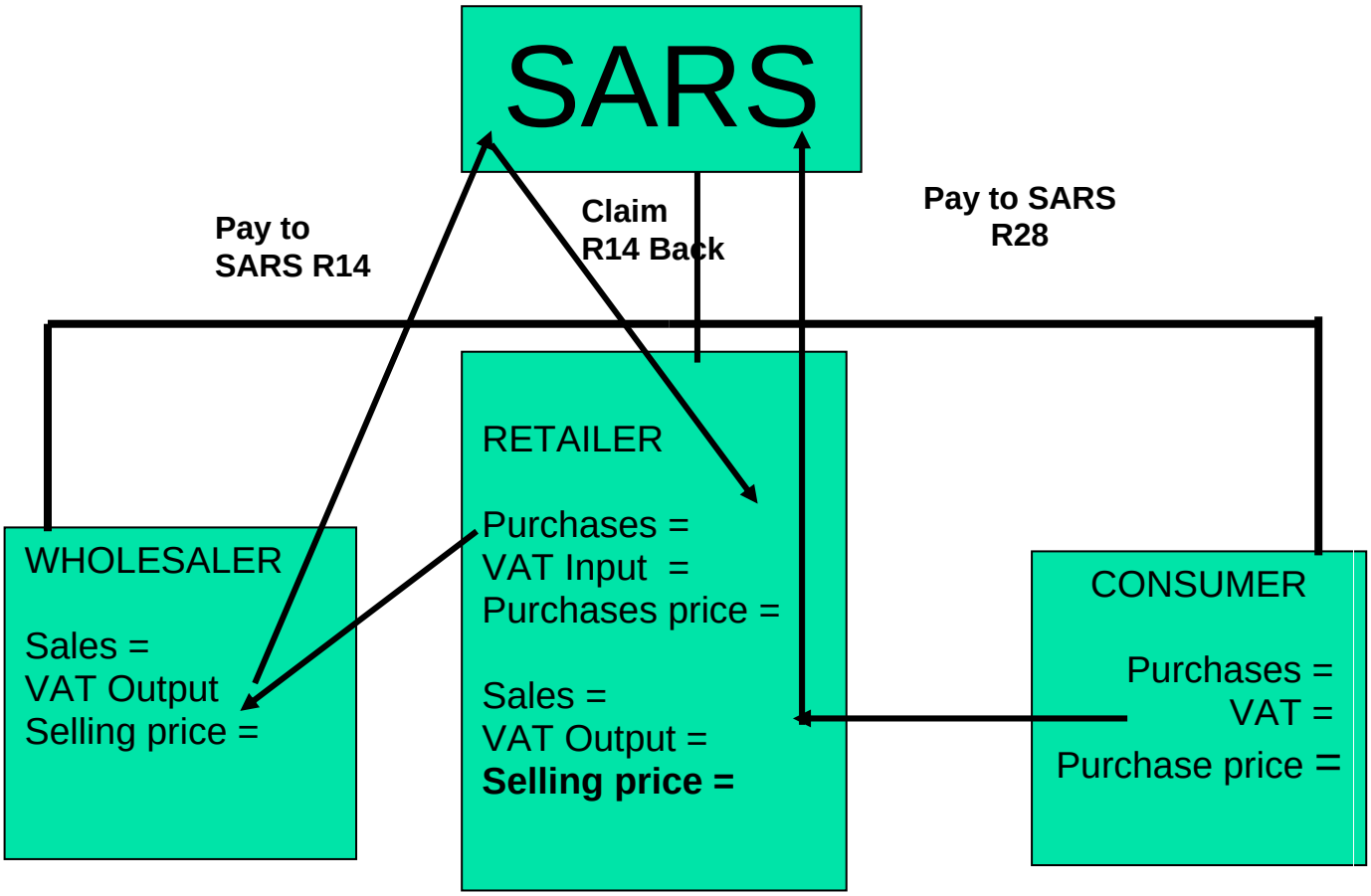
For the purposes of Value Added Tax (VAT) records, three bookkeeping accounts must be kept.

1. The VAT on inputs account.
2. The VAT on output (transactions) account.

3. VAT Control (Debit and Credit) account.

The VAT on Inputs Account –This account will usually show a debit (the VAT SARS "owe" you money for the VAT you have paid and you are entitled to receive from them).

- The VAT on Output (Transactions) Account –This account will usually show a credit (the VAT SARS are "entitled" to receive the VAT from you that you have collected on their behalf. The money is not yours and it is only temporarily in your possession until the due date for the payment of VAT.
- The VAT Control (Debit and Credit) Account. This is the account to which the 2 first accounts are posted. The account balance may show a credit, when the periodic report to the VAT is for a payment to be made, or it may show a debit when the periodic report shows that that money is to be returned.



1. The wholesaler sell the product to the retailer at R100 + 14% VAT = R114.00

2. The wholesaler collect VAT of R14.00 from the retailer and pays it over to SARS, thus taking the VAT out of the business (VAT Output)
3. The retailer claims back the VAT (R14) from SARS, thus put it back into the business (VAT Input)
4. The retailer adds a mark-up of 100% to the product and sell it to the consumer for R200 + VAT of R28.00.
5. The retailer collects the VAT (R28) from the consumer and pays it over to SARS, thus taking the VAT out of the business (VAT Output).
6. The consumer cannot register for VAT and cannot claim back the VAT.
7. SARS collected VAT to the amount of R28 instead of only R14 due to value being added to the product in the form of a mark-up percentage.

Example 1:

1) Purchase goods on credit from R. Adams, R22 800 (ISP).

+	INVENTORY (A)	-
Creditors 20 000		

-	CREDITORS (L)	+
	Inventory	20 000
	Input VAT	2 800

+	INPUT VAT (A)	-
Creditors 2 800		

22 800 x 14/114 = 2 800

2) Paid R. Adams R22 000 in full settlement of our account.

+	BANK (A)	-
	Creditors	22 000

-	CREDITORS (L)	+
Bank 22 000		
Discount received & 800		
Output VAT		

-	DISCOUNT RECEIVED (I)	+
	Creditors	701-75

-	OUTPUT VAT (L)	+
	Creditors	98-25

800 x 14/114 = 98-25

3) Sold merchandise on credit to T. Tax, R22 914 (ISP). The mark- up is 20% on cost price.

+	DEBTORS (A)	-
Sales 20 100		
Output VAT 2 814		

-	SALES (I)	+
	Debtors 20 100	

-	OUTPUT VAT (L)	+
	Debtors 2 814	

+	INVENTORY (A)	-
	Cost of Sales 16 750	

+	COST OF SALES (E)	-
Inventory 16 750		

22 914 x 14/114 = 2 814
22 914 – 2 814 = 20 100
20 100 x 100/120 = 16 750

4) T. Tax paid us R22 014 in full settlement of his account.

+	DEBTORS (A)	-
	Bank 22 014 Discount allowed & Input VAT 900	

+	BANK (A)	-
Debtors 22 014		

+	DISCOUNT ALLOWED (E)	-
Debtors 789-47		

+	INPUT VAT (A)	-
Debtors 110-53		

900 x 14/114 = 110-53
900 – 110-53 = 789-47

5) A debtor S. Sunny's debt of R11 400 must be written off as irrecoverable.

+	DEBTORS (A)	-
	Bad debts & Input VAT 11 400	

+	BAD DEBTS (E)		-
Debtors	10 000		

+	INPUT VAT (A)		-
Debtors	1 400		

11 400 X 14/114 = 1 400

6) The owner takes stock for his own use, R1 140.

-	DRAWINGS (OE)		+
Inventory & Input VAT	1 140		

+	INVENTORY (A)		-
		Drawings	1 000

+	INPUT VAT (A)		-
		Drawings	140

1 140 x 14/114 = 140

7) Issue a credit note to a debtor for damaged goods, R75.

+	DEBTORS (A)		-
		Debtors allowance & Output VAT	75

+	DEBTORS ALLOWANCE (E)		-
Debtors	65.79		

-	OUTPUT VAT (L)		+
Debtors	9.21		

74 x 14/114 = 9.21

8) Receive a credit note from a creditor for damaged goods returned, R114.

-	CREDITORS (L)		+
Inventory & Input VAT	114		

+	INVENTORY (A)		-
		Creditors	100

+	INPUT VAT (A)		-
		Creditors	14

114 x 14/114 = 14

NOTE

Issue a credit note: debtor returned goods.

Received a credit note: business returned goods

NB.

Although learners are not required to draw up journals, in this example journal entries are provided for better understanding of the ledger account.

Example 2:

30.1.09 - The total purchases that you made amount to R 1,000 by cheque plus R 150 VAT on inputs.

30.1.09 - The total cash sales you made amount to R 4,000 plus R600 VAT on outputs.

15.2.09 - You paid the balance that was owing to SARS.

The bookkeeping records will look as follows:

1.	Debit	Credit
Purchases / Inventory	1,000	
VAT on Input	150	
Bank		1,500
(30.1.09) Purchases recorded for January		
2.		
Bank	4,600	
Sales		4,000
VAT on Output		600
(30.1.09) Sales recorded for January		
3.		
VAT on Output	600	
VAT on inputs		150
VAT Control Account		450
(30.1.09) Transfer of surplus to Control Account		
4.		
VAT Control Account	450	
Bank		450
(15.2.09) Payment of VAT reported for January		

Dr		VAT Input Account			Cr
Aug. 31	Bank	150	Aug. 31	VAT Control	150

Dr		VAT Output Account			Cr
Aug. 31	VAT Control	600	Aug. 31	Bank	600

Dr		VAT Control Account			Cr
Aug. 31	VAT input	150	Aug. 31	VAT Output	600
	Bank	450			

Value Added Tax: Calculations

The Standard rate of VAT, 14% and is the rate to be used when answering all VAT questions.

QUESTION 1

On 17 March, Tilly sells goods to the four customers shown in the table. The value of the goods is also shown. VAT has not yet been included in the invoice price of the goods.

Calculate the value of VAT in each case and the total value of the invoice to be sent to each customer.

CUSTOMER	VALUE OF GOODS SOLD	VAT	INVOICE TOTAL
Nina	R 54.67		
Khentsane	R 132.91		
Phuti	R 17.54		
Bongi	R2 381.92		

QUESTION 2

On 4 September, Harry receives invoices for goods that he purchased. The invoices show the total price of the goods including VAT.

Calculate the value of goods that Harry received and the amount of VAT added to this to produce the invoice total.

SELLER	INVOICE TOTAL	VALUE OF GOODS PURCHASED	VAT
Cindi	R 325.76		
Xolani	R 54.22		
Tenyeko	R4 571.09		
Azwindini	R 72.77		

NB. The most difficult calculation involving VAT is encountered when cash discount is involved.

QUESTION 3

Fill in the gaps.

Two types of discount are used in the business world:

a. _____ is a reduction in price when goods are supplied to other businesses (usually in the same line of business). This reduced price is not available to the general public.

This type of discount is generally shown on the invoice (source document), but is not included in the double-entry records.

b. _____ is an allowance that can be deducted from the total amount charged for goods if the debt is settled within a time specified by the supplier.

This type of discount is only recorded when advantage is taken of the reduction.

QUESTION 4

Bernard sells goods valued at R2 760 to Aileen. Aileen is allowed a 25% trade discount.

Calculate:

a) The amount that Bernard will show on his sales invoice for the goods sold and the amount that he will enter in his sales journal
b) The amount that Aileen will enter in her purchases journal
Notes:

CASH DISCOUNT

One of the trickiest calculations that you will come across during your accounting studies involves the calculation of VAT on goods that are subject to both trade and cash discount. Learn it and practice it several times.

VAT is always calculated *after* deducting cash discount. If the customer does not pay before the date stipulated on the purchase invoice, they lose the benefit of the cash discount.

Example

Corinne sells goods on 3 March valued at R1, 276.84 to Dolly. The terms are a trade discount of 25% and a cash discount of 5% if Dolly settles her account within 30 days.

Calculate the total value of the sales invoice sent to Dolly.

Answer

Price of goods	R1, 276.84	
Less trade discount	319.21	
Selling price to Dolly	957.63	R 957.63
Less cash discount		47.88
		909.75
VAT	159.21	159.21
Total value of invoice	R 1,116.84	

The total value shown on the copy sales invoice (source document) is entered in the seller's (Corinne's) sales journal.

The invoice will be received by the purchaser (Dolly) as a purchases invoice (source document) and will be entered in his purchases journal.

All the subsidiary books must record any VAT included in the source documents.

QUESTION 5

On 3 October Maleka sells goods to Pierre with a catalogue value of R7, 500. The goods are subject to a trade discount of 33⅓% and if Pierre settles the outstanding amount before the end of the month he may deduct a 2½% cash discount (invoice no. 1234). On 4 October Maleka sells goods to Mapule with a catalogue price of R376. He allows Mapule 25% trade discount and 3% cash discount for settlement within 30 days (invoice no. 1,235). Also, on 4 October Maleka sells goods to Bongani with a catalogue price of R518. Bongani's order is subject to 50% trade discount and a cash discount of 1% if the debt is settled by the end of the month (invoice no. 1,236).

Calculate:

a the total of the sales invoice sent to Pierre

b the total of the sales invoice sent to Mapule

c the total of the sales invoice sent to Bongani

d Prepare the entries in Maleka sales journal.

Maleka: sales Journal					
Date	Particulars	Invoice no.	Sales	Vat	Invoice total
3 October	Pierre	1 234	R	R	R
4 October	Mapule	1 235			
4October	Bongani	1 236			

SOLUTIONS

QUESTION 1

Calculate the value of VAT in each case and the total value of the invoice to be sent to each customer.

CUSTOMER	VALUE OF GOODS SOLD	VAT	INVOICE TOTAL
Nina	R 54.67	R 7.65	R 62.32
Khentsane	R 132.91	R 18.61	R 151.52
Phuti	R 17.54	R 2.46	R 20.00
Bongi	R2 381.92	R333.47	R2 715.39

QUESTION 2

Calculate the value of goods that Harry received and the amount of VAT added to this to produce the invoice total.

SELLER	INVOICE TOTAL	VALUE OF GOODS PURCHASED	VAT
Cindi	R 325.76	R 280.15	R 45.61
Xolani	R 54.22	R 46.63	R 7.59
Tenyeko	R4 571.09	R3931.14	R639.95
Azwindini	R 72.77	R 62.58	R 10.19

QUESTION 3

Fill in the gaps.

A. Trade discount

B. Cash discount

QUESTION 4

Bernard sells goods valued at R2 760 to Aileen. Aileen is allowed a 25% trade discount.

a) R2 060

b) R R2060

QUESTION 5

(a) (b) (c)

A. Pierre	B. Mapule	C. Bongani
R7 500.00	R376.00	R 518.00
Less Trade discount 2 500.00	Less Trade discount 94.00	Less Trade discount 259.00
5 000.00	282.00	259.00
Less discount 125.00	Less Cash discount 8.46	Less Cash discount 2.59
4875.00	273.54	256.41
Add VAT 682.50	Add VAT 38.30	Add VAT 35.90
Total value of invoice R 5557.50	Total value of invoice R 311.84	Total value of invoice R292.31

(d) Prepare the entries in Maleka sales journal for 3 and 4 October.

Maleka: sales Journal					
Date	Particulars	Invoice no.	Sales	VAT	Inv. Total
3 October	Pierre	1 234	R 4875.00	R 682.50	R 5557.50
4 October	Mapule	1 235	273.54	38.30	311.84
4October	Bongani	1 236	256.41	35.90	292.31

Cash Budget – Variance Analysis

Budget - Managerial Accounting

What is a Cash Budget?

Cash Budget is a detailed budget of cash inflows and outflows incorporating both revenue and capital items. It is thus a statement in which estimated future cash receipts and payments are tabulated in such a way as to show the forecasted cash balance of a business at defined intervals.

The cash budget is one of the most important planning tools that an organization can use. It shows the cash effect of all plans made within the budgetary process and hence its preparation can lead to a modification of budgets if it shows that there are insufficient cash resources to finance the planned operations.

It can also give management an indication of the potential problems that could arise and allows them the opportunity to take action to avoid such problems.

Why Budget?

- Many potential funders will require you to provide a budget statement in addition to a business plan, particularly if you are a new business starter
- They help you manage your money
- They help you plan for the future
- They help meet objectives
- Gives you the confidence that your business will make a profit (in some cases)
- They can identify problems before they occur (such as the need for finance, etc)
- Improves decision making
- Increases staff motivation, as they have to meet targets
- Monitors performance (are you capable of meeting targets - recognized from previous budgets)

A Cash Budget can show four positions. Management will need to take appropriate action depending on the financial position.

Cash Position	Appropriate management action
Short term surplus	Pay creditors early to obtain discount. Attempt to increase sales by increasing debtors and stocks. Make short-term investments.
Short term deficits	Increase creditors. Reduce debtors. Arrange an overdraft.
Long term surplus	Make long-term investments. Expand operations Diversify. Replace / update fixed assets
Long term deficit	Raise long-term finance, i.e. issue shares Consider shut down or disinvestments opportunities.

Note:

- The preparation of a cash budget is only the first step toward good financial management.
- The next step is to analyse to see how close the company is performing to expectations.
- The question is: Have any unexpected cash outflows occurred? If so, is the company's financial position seriously affected? These are the questions that need to be answered.

Cash budget analysis

Let us look at this example of Cash Budget

James Banda has been working as a Transport Manager for GDE Ltd and has retired. He intends to start up in business on his own account, using R150, 000, which he has invested at First National Bank. James maintains an account with First National Bank with a minimal balance but intends to approach the bank for the necessary additional finance.
You are asked for advice and the following additional information provided.

1. Arrangements have been made to purchase fixed assets costing R80, 000. These will be paid for at the end of September 2009 and are expected to have a five-year life, at the end of which they will possess a nil residual value.
2. Stocks costing R50, 000 will be acquired on 28 September and subsequently monthly purchases will be at a level sufficient to replace forecast sales for the month.
3. Forecast monthly sales are R30, 000 for October, R60, 000 for November and December, and R105, 000 from January 2010 on wards.
4. Selling price is fixed at the cost of stocks plus 50%.
5. Two month's credit will be allowed to customers but one month's credit will be received from suppliers of stock.
6. Running expenses, including rent but excluding depreciation of fixed assets are estimated at R16, 000 per month.
7. James intends to make monthly cash drawings of R10, 000.

Prepare a cash budget for six months to 31 March 2010.

SOLUTION

Explanation:

The opening cash balance at 1 October will consist of James initial R150, 000 less the R80, 000 expended on fixed assets purchased in September. In other words, the opening balance is R70, 000. Cash receipts from credit customers arise in two months after the relevant sales. Payments to suppliers are a little trickier. We are told that cost of sales is 100/150* sales. Thus for October cost of sales is 100/150* R30, 000 = R20, 000. These goods will be purchased in October but not paid until November. Similar calculations can be made for the later months. The initial stocks of R50, 000 is purchased in September and consequently paid for in October.

** Depreciation is not a cash flow and so is not included in a cash budget.*

The cash budget can now be prepared as follows:

Cash budget for the six-month ending 31 March 2010

	Oct	Nov	Dec	Jan	Feb	Mar
	R'000	R'000	R'000	R'000	R'000	R'000
Payments						
Suppliers	50	20	40	40	70	70
Expenses	16	16	16	16	16	16
Drawings	10	10	10	10	10	10
	76	46	66	66	96	96
Receipts						
Debtors	--	--	30	60	60	105
Surplus / Deficit	(76)	(46)	(36)	(6)	(36)	9
Cash at the beginning	70	(6)	(52)	(88)	(94)	(130)
Cash at the end	(6)	(52)	(88)	(94)	(130)	(121)

As stated above Cash budget assist the managers to forecast their future cash requirements and therefore make necessary arrangements before hand. As in the above case it shows that the maximum cash deficit, which the business is going to face, is R121, 000.

Cash Budget Analysis and decision making

In analysing the above Cash Budget here are some of the remedies or management actions:

- Postponing purchase of fixed assets or use finance lease to acquire the assets thereby releasing cash.
- Negotiate a quicker payment period for customers or negotiate for more credit days with the suppliers.
- Obtain a bank short loan, or negotiate a bank overdraft.
- Reduce the level of monthly drawings if possible.

Cash Budget Variances

When putting budgets into practice, it is more than likely that your budgeted figures will not be the same as the actual figures that you obtain.
This may be due to calculation errors, changes in plan, or purely down to external factors out of your control such as interest rates and fluctuations in demand. These differences are known as VARIANCES.

The cash budget will be analysed each month to see that it accumulates to what is stated on the other budgets (sales budget, staff budget, etc). The variances will be calculated and appropriate action should be taken where necessary.

When following the budget it is important that you keep it in your control at all times, therefore these variances are not to be ignored but acted upon straight away, even if they are favourable.

A simple method for monitoring the cash budget is to prepare a budget versus actual report of actual and budgeted expenses every month. This type of report consists of four columns. The first column shows the items, the second column shows the budgeted amounts, the third column shows actual company performance, the third and fourth columns show the difference (variance) in terms of rands and percent (sometimes only one column for rands or for percentages can be shown) and the fifth column are results (whether is favourable (FAV) or unfavourable / adverse (ADV).

Example 1:

Budget Versus Actual Report For May 2009					
Item	Budget figure	Actual figure	Variance		Results
Cash balance	R5, 000	R5, 000	0	0%	FAV – actual balance as expected
Cash Receipts:					
Cash sales	20,000	22,000	2, 200	110%	FAV – Received more than budgeted for. Efficient and well controlled
Collection of accounts receivable	15,000	13,500	1,500	90%	ADV – Over budgeted, did not collect from debtors as expected. An intensive control needed
Other income	0	0	-	-	-
Total cash	40,000	40,500	500	101%	FAV – Received more than budgeted for. Efficient and well controlled

Cash payments					
Raw materials (or inventory)	15,000	15,000	0	100%	FAV - Fully spent as expected – can just assess whether this is a valid expenditure.
Payroll	7,200	9,400	2,200	130%	ADV – Significantly overspent, intensive control needed
Other direct expenses	500	500	0	100%	FAV - Fully spent as expected – can just assess whether this is a valid expenditure.
Advertising	500	1,000	500	200%	ADV – Significantly overspent, intensive control needed. An intensive investigation needs to be done.
Selling expense	1,500	1,400	100	93%	FAV – spent less than budgeted for. Efficient and well controlled
Administrative expense	500	500	0	100%	FAV - Fully spent as expected – can just assess whether this is a valid expenditure
Plant and equipment expenditures	5,000	7,500		150%	ADV – Significantly overspent, intensive control needed.
Other payments	0	0	-	-	-
Total cash expenses	30,200	35,300		116%	ADV – Significantly overspent, intensive control needed. An intensive investigation needs to be done.
Cash surplus (or deficit)	9,800	5,200	4600	53%	ADV – Significantly overspent, intensive control needed

As you can see, cash expenses for payroll, advertising and plant and equipment exceeded the budgeted amounts. But because the company analyses these figures monthly, changes can be made before the increased expenses become unmanageable. The use of a budget vs. actual report allows owners to pinpoint how actual cash inflows and outflows vary from expectations and to make adjustments.

NB:

- Do not forget- income figures will be favourable when the actual figure is HIGHER than the budgeted figure: expenditure figures are more favourable when the actual figure is LOWER than the budgeted figure.

- For variances that are extremely small (causing no real affect to cash flow), these issues can be overlooked: you can expect some degree of variance in most figures.

- For those variances that are significant, having some negative impact on cash flow, it is important that an investigation be carried out straight away.

- It may be too late to recover the difference but if you figure out the cause of the issue, it will help prevent the problem from occurring again in the future.

- It may be that demand has fallen creating fewer sales than expected and therefore a step up in marketing could be the solution or a change in pricing strategy. You may have to re-write the budget to compensate for any immediate changes.

- If the variance is significantly favourable, investigate why this has happened. Is there anything you can do to make these figures even more favourable?

- The moral of this section is that the budget should never be put to one side once written: it will need to be closely followed and maintained. Any issues need to be acted upon as soon as possible, whether favourable or adverse (unfavourable).

Example 2

Pick Up Trucks Company Budget Report For the Second Quarter 20X1

	Actual	Budget	Variance—Favourable / (Unfavourable)
Sales Units	17 500	17 000	
Sales	R259 000	R255 000	RR4 000
Cost of Goods Sold	196 875	191 250	(5 625)
Gross Profit	62 125	63 750	(1 625)
Selling Expenses	24 610	24 400	(210)
General and Administrative Expenses	20 250	20 250	0
Operating Income	17 265	19 100	(1 835)
Interest Expense	0	0	0
Income before	17 265	19 100	(1 835) Income Taxes
Income Taxes	6 906	7 640	734
Net Income	R 10 359	R 11 460	(R1 101)

Actual net income is unfavorable compared to the budget. What is not known from looking at it is why the variances occurred. For example, were more units sold? Was the selling price different than expected? Were costs higher? Or was it all of the above? These are the kinds of questions management needs answers to. In fact, an analysis of this budget report shows sales were actually 17,500 pickup trucks instead of the 17 000 pickup trucks planned; the average selling price was R14.80 per truck instead of the expected R15.00 per truck; and the cost per truck was R11.25 as budgeted.

Learners should complete the following activities:

ACTIVITY 1– CASH BUDGET

It is March, and you are the record keeper for Tom's Lawn Service. Tom wants to plan for the second quarter of the year. Estimations are as presented below. Complete the budget.

Requirements:

Complete the budget and answer the following questions about the completed cash budget.

1. Which cash payments are fixed cash payments?
2. Which cash payments are variable cash payments?
3. What are the total estimated cash receipts from interior sales for the quarter?
4. What are the total estimated cash payments for repairs for the quarter?
5. In what month (s) is there a positive cash flow?
6. In what month (s) is there a negative cash flow?
7. Is the cash flow for the entire quarter positive or negative?

Tom's Lawn Service Cash Budget For Second Quarter, 20___				
DESCRIPTION	April	May	June	Total
Receipts:				
Interior Sales	R3, 600.00	R3, 500.00	R4, 500.00	
Exterior Sales	7,000.00	7,400.00	9,300.00	
Total Receipt	10,600.00	10,900.00	13,800.00	
Payments:				
Wages	6,500.00	6,500.00	7,000.00	
Rent	1,200.00	1,200.00	1,200.00	
Utilities	100.00	100.00	100.00	
Supplies	500.00	500.00	550.00	
Office Expenses	90.00	90.00	90.00	
Repairs	200.00	150.00	150.00	
Insurance	375.00	375.00	375.00	
Taxes	1,300.00	1,300.00	1,500.00	
Equipment		1,100.00		
Total Payment				
Balance				

ACTIVITY 2 – CASH BUDGET

You are the record keeper for Bill's Computer Services, a business that installs and services computer systems for businesses and government agencies. The owner, Bill Turner, has estimated the cash receipts and cash payments for the company for the first quarter of next year. He has asked you to complete the cash budget.

Requirement:

Complete the cash budget below and answer the questions below:

1. Which cash payments are fixed cash payments?
2. Which cash payments are variable cash payments?
3. What are the total estimated cash receipts from business sales for the quarter?
4. What are the total estimated cash payments for taxes for the quarter?
5. In what month (s) is there a positive cash flow?
6. In what month (s) is there a negative cash flow?
7. Is the cash flow for the entire quarter positive or negative?

Bill's Computer Services Cash Budget For First Quarter, 2008				
DESCRIPTION	Jan	Feb	Mar	Total
Receipts:				
Business Sales	R6, 500.00	R6, 500.00	R6, 700.00	
Government Sales	3,900.00	4,200.00	3,800.00	
Total Receipts				
Payments:				
Wages	6,200.00	6,200.00	6,200.00	
Rent	1,000.00	1,000.00	1,000.00	
Insurance	400.00	400.00	400.00	
Telephone	250.00	250.00	250.00	
Utilities	170.00	170.00	130.00	
Taxes	1,100.00	1,100.00	1,350.00	
Equipment	100.00	300.00	300.00	
Supplies	600.00	600.00	600.00	
Other		1,100.00		
Total Payments				
Balance				

ACTIVITY 3 -BUDGET VARIANCE

Requirements:

Complete the budget variance report below and answer each question.

Answer the questions below:

1. Which cash receipts had a positive variance?
2. Which cash payments had no variance?
3. Which cash payments had a negative variance?
4. Which cash payment had the largest positive variance?
5. Was the actual cash balance greater or less than the budgeted cash balance?

Thato's Roofing Company Budget Variance Report For March 2008			
DESCRIPTION	Budgeted	Actual	Variance
Receipts:			
Business Sales	R66, 800.00	R66, 280.00	
Home Sales	22,000.00	23,540.00	
Total Receipts	88,800.00		
Payments:			
Wages	54,500.00	54,500.00	
Mortgage Payment	2,390.00	2,390.00	
Gas and Electric	750.00	680.00	
Roofing Supplies	12,500.00	11,900.00	
Office Expenses	790.00	860.00	
Equipment	1,500.00	1,020.00	
Insurance	2,300.00	2,300.00	
Taxes	12,750.00	12,750.00	
Telephone	350.00	350.00	
Total Payments	87,830.00		
Balance	970.00		

ACTIVITY 4 - BUDGET VARIANCE

Requirement:

Complete the budget variance report below and answer the questions.

Questions:

1. Which cash receipts had no variance?
2. Which cash payments had no variance?
3. Which cash payments had a negative variance?
4. Which cash payment had the largest negative variance?
5. Was the actual cash balance greater or less than the budgeted cash balance?

Thobile's Paper Company Budget Variance Report For November, 2008			
DESCRIPTION	Budgeted	Actual	Variance
Receipts:			
Sales of Pulp	R148, 350.00	R148, 350.00	
Sales of Boxes	69,200.00	72,250.00	
Total Receipts	217,550.00		
Payments:			
Wages	110,000.00	115,000.00	
Rent	15,800.00	15,800.00	
Gas and Electric	3,250.00	3,380.00	
Paper Supplies	45,700.00	46,400.00	
Office Expenses	4,850.00	4,550.00	
Equipment Repairs	2,500.00	2,145.00	
Insurance	5,760.00	5,760.00	
Taxes	23,750.00	22,480.00	
Telephone	1,490.00	1,560.00	
Total Payments	213,100.00		
Balance	4,450.00		

Analysis and Interpretation of Financial Statement

Introduction

Financial information is always prepared to satisfy in some way the needs of various interested parties (the "users of accounts"). Stakeholders in the business (whether they are internal or external) seek information to find out three fundamental questions:

(1) How is the business doing?
(2) How is the business placed at present?
(3) What are the future prospects of the business?

For outsiders, published financial accounts are an important source of information to enable them to answer the above questions.

The Key Questions

To some degree or other, all interested parties will want to ask questions about financial information which are likely to fall into one or other of the following categories, and be about:

Performance Area	Key Issues
Profitability	▪ Is the business making a profit? Is it enough?
Efficiency	▪ Is the business making best use of its resources? Is it generating adequate sales from its investment in equipment and people? ▪ Is it managing its working capital properly?
Liquidity	▪ Is the business able to meet its short-term obligations as they fall due from cash resources immediately available to it?
Stability	▪ What about the long-term prospects of the business? Is the business generating sufficient resources to repay long-term liabilities and re-invest in required new technology? ▪ What is the overall structure of the businesses' finance - does it

	place a burden on the business?
Investment Return	▪ What return can investors or lender expect to get out of the business? ▪ How does this compare with similar, alternative investments in other businesses?

The Main Tools of Review

The answers to the questions above (and others) will come from a careful, analytical review of financial information:

Area for Review	Comments
Review of the Business; Chairman's and CEO's Review	The accounts of all quoted companies (and many private companies) include some commentary from senior management on the strategy and performance of the business. This is often the most useful place to start. The statements (usually one each from the Chairman, CEO and Finance Director) will reveal many "qualitative" things about the business. These include a description of the business activities, objectives, developments and competitive environment. Political, environmental and macro-economic issues may also be raised.
Cash flow statement	The cash flow statement will reveal where the company's resources have come from and how they have been applied during the year.
Calculation of significant ratios between figures in the accounts	Ratio analysis is an important tool for understanding and comparing business performance. However, ratios and other financial calculations are rarely useful when looked at in isolation. It is important to carry out calculations of ratios and other significant financial figures with previous years (many companies publish five or ten year summaries as part of their annual reports) in order to identify positive or adverse trends). Comparison with other, relevant competitors and industry "norms" is also important.

Decision Making

The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions.

Illustration of using financial information for decision-making:

Example:

Pinky started "Pinky's Enterprise" on January 1, 2008 with a R25, 000 cash investment into the business. Her receipts and payments show that for the first three months, she made cash sales of R26, 000, bought inventory using cash for R26, 000 (one-half was sold), paid R5, 000 for rent, R800 for power, R200 for insurance and R3, 000 for Equipment and Furniture.

Pinky wants to expand this business and is exploring building her own store rather than paying rent.

To identify the growth potential of this business, we need to know how Pinky's Enterprise has performed over the 3-month period?

Financial statements need to be prepared to help Pinky with her decision-making.

Pinky's Enterprises
Income Statement
For the three months ending March 31 2008

Sales		R26, 000
Less Cost of Goods Sold		13,000
▪ Gross Profit		13,000
Less Expenses:		
Rent	R5, 000	
Power	800	
Insurance	200	
Total Expenses		6,000
Net Profit		R7, 000

Pinky's Enterprises
Statement of Changes in Equity
For the three months ending March 31 2008

Capital at start of period	R25, 000
+ Net Profit	7,000
Capital at end of period	32,000

Pinky's Enterprises
Balance Sheet as at March 31 2008

Assets:	
–Cash	R16, 000
–Inventory	13,000
–Equipment & Furniture	3,000
	R32, 000
Liabilities:	R0
Equity:	
–Capital at 31 March 2008	R32, 000
Total Liabilities + Equity	R32, 000

Pinky's Enterprises
Statement of Cash Flow
For the three months ending March 31 2008

Operating Activities:		(R6, 000)	Notes:
Cash generated from operation	20 000		
Decrease in inventory	(26 000)		
Investing Activities:		(R3, 000)	
Purchase of Fixed Assets	(R, 3000)		
Financing Activities:		R25 000	
Proceeds from share issued	R25, 000		
Net Changes in cash and cash equivalents		R16, 000	
Cash and cash equivalents at the beginning		0	
Cash and cash equivalents at the end		R16,000	

Decision-making

- Pinky has made R7, 000 in Net Profit for the three-month period.
- Cash has decreased from R25, 000 to R16, 000
    - Initial set up cost – Equipment and Furniture
    - Significant amount of inventory purchased. Only half was sold.
    - Negative operating activities shown in cash flows statement

- There might be concerns about cash flows if she continues to generate negative operating cash flows.
- To build her own store, Pinky will probably need to borrow money, and this will increase the risk of her business.
- She might not achieve the profitability and solvency objectives of running the business if she expands too quickly. She might get into financial difficulties and be unable to service her debt and interest obligations.
- Note however that this is a very short financial period to be evaluating properly how well her business will do in the future. Possibly more information and a longer period of operation would provide a better evaluation and assessment for this expansion decision.

Financial Ratios

What are financial ratios?

Financial ratios are one of the most common tools of managerial decision-making. A ratio is a mathematical comparison of one number to another. Financial ratios involve the comparison of various figures from the financial statements in order to gain information about a company's performance.

It is the interpretation, rather than the calculation, that makes financial ratios a useful tool for business managers. Ratios may serve as indicators, clues, or red flags regarding noteworthy relationships between variables used to measure the firm's performance in terms of profitability, asset utilization, liquidity, leverage, or market valuation.

What are the uses of financial ratio analysis?

There are basically two uses of financial ratio analysis:

- to track individual firm performance over time, and
- to make comparative judgments regarding firm performance.

Firm performance is evaluated using trend analysis, calculating individual ratios on a per-period basis, and tracking their values over time. This analysis can be used to spot trends that may be cause for concern, such as an increasing average collection period for outstanding receivables or a decline in the firm's liquidity status. In this role, ratios serve as red flags for troublesome issues, or as benchmarks for performance measurement.

Another common usage of ratios is to make relative performance comparisons. For example, comparing a firm's profitability to that of a major competitor or observing how the firm stacks up versus industry averages enables the user to form judgments concerning key areas such as profitability or management effectiveness.

Who are the users of financial ratio analysis?

Users of financial ratios include parties both internal and external to the firm. External users include security analysts, current and potential investors, creditors, competitors, and other industry observers. Internally, managers use ratio analysis to monitor performance and pinpoint strengths and weaknesses from which specific goals, objectives, and policy initiatives may be formed.

How to teach financial ratio analysis?

At the end of this session you will understand some basic principles of ratio analysis and know how to analyse business performance using simple profitability, liquidity and efficiency ratios.

Introduction

It is often necessary for decisions to be made based on the perceived performance of a business. For instance we are often required to comment on a business's profitability:

- How does it look?
- Is it looking good?
- Is it looking bad?
- Is it getting better or worse?
- Is it better than expected under the circumstances?

We might be tempted to answer these questions by selecting the figure for net profit. But then what? If one business has a net profit of R 10,000 (let's call this A) and another has a net profit of R 5,000 (let's call this B) we can say that A is reporting a higher net profit than B. But can we say A is more profitable than B?

What if A made sales of R 50,000 and B's sales were R 12,000.

Clearly B is making 42c profit for every R1 of sales. Whereas A is only making 20c in every R1 of sales. This comparing of one figure with another (in this case we have compared the net profit of R 5,000 with the sales figure of R12, 000 in business B) is known as ratio analysis. To improve our decision-making we need to use ratio analysis to compare business performance rather than using the absolute figures.

There are many ratios e.g. profitability, liquidity, efficiently, investors and stability ratios, etc. which can be used to help us to compare business performance. Moreover for each one there can be many ways of calculating it. However for the purposes of this module you need only focus on a few of them.

It is often useful to think in terms of comparing businesses in three ways:

- Profitability ratio
- Liquidity ratio
- Efficiency ratio

1. Profitability ratios

There are three useful ratios, which help us to compare business profitability:

- GP ratio = $\frac{\text{Gross profit}}{\text{Sales}} \times 100\ \%$

- NP ratio = $\frac{\text{Net profit}}{\text{Sales}} \times 100\ \%$

- ROCE = return on capital employed = $\frac{\text{NP}}{\text{Capital employed}} \times 100\ \%$

For our purposes we will consider capital employed to be equal to capital + profits - drawings.

	Branch A	Branch B	Total
Sales	12,000	50,000	62,000
Less cost of sales	(6,000)	(25,000)	(31,000)
Gross profit	6,000	25,000	31,000
Expenses	(1,000)	(15,000)	(16,000)
Net profit	5,000	10,000	15,000
Capital	50,000	200,000	250,000
GP ratio	50%	50%	50%
NP ratio	42%	20%	24%
ROCE	10%	5%	6%

Which branch is the most profitable?

The gross profit ratios are the same, which tells us that the two branches of the business are achieving the same gross profit of 50c in every R1 of sales.

The net profit ratios are very different.

On the face of it appears that Branch A is controlling expenses to a greater extent. Expenses for the year in Branch B were R15, 000 for achieving R50, 000 of sales. In other words for every R1 of sales made, 30c is spent on expenses. Whereas for Branch A only R1000 of expenses were incurred or in other words 8c in every R1 of sales.

- If the owners had to decide on where to plan for expansion, either in Branch A or B, Branch A would return a much higher net profit on the extra sales made.

- ROCE shows us that Branch A is returning a much higher return on capital invested in the business than B and would therefore confirm that further investment should be in Branch A and not B. Branch A is said to be more profitable than B.

Ratio analysis has therefore allowed a decision on further investment to be made which will maximize profits. A decision based solely on the comparative net profits of R5, 000 for A and R 10,000 for B would have been a mistake.

2. Liquidity

The liquidity of a business tells us something about its ability to pay its debts as they fall due. If a business is not in a position to do this then it can fail, even if it is achieving excellent sales and huge profits. This is because, every month, it must be able to find enough cash to pay it's employees, any bank interest, the VAT and the PAYE and its suppliers or else it becomes insolvent and has to cease trading. Even the most successful businesses can become insolvent when they fail to manage their cash floe situation appropriately.

To be able to understand this concept we need to refresh our understanding of net current assets. Net current assets is the difference between total current assets and total current liabilities. Total current assets reflects the amount of cash the business might confidently expect to realize in a relatively short period of time. It is composed of:

- Stocks - which are some way away from being turned into cash
- Debtors - amounts due from credit customers which are expected soon
- Cash - already in the bank!

Total current liabilities represents the amounts the business has to pay out within a short period of time. The Liquidity ratio compares total current assets and total liabilities.

- ❖ A ratio of 2 to 1 tells us that the business should be able to pay its debts as they fall due. i.e. the business can cover its short term debts.

There is one component of current assets which it is recognized can commonly not be relied upon to realize cash quickly and that is stocks. This is because it takes time for sales representatives to persuade customers to buy the stock. It then takes time for the customers to pay up. There is therefore another ratio which is used which takes out stocks. This is called the quick ratio or acid test and is found by comparing:

- Current assets less stocks to current liabilities

❖ A ratio of 1 to 1 is said to be respectable and indicates that the business should be able to pay its short-term debts as they fall due. Whereas a ratio of say 0.5 to 1 indicates a weak liquidity position.

3. Efficiency ratios

Efficiency can be determined by establishing:

- how quickly stocks turnover which means how quickly stocks move through the warehouse from being received into stores and out again to customers
- how long debtors take to pay the business
- how long the business takes to pay its creditors

(i) Stock turnover

There are two ways of calculating this ratio. One gives an answer of the type 6 times. The other gives the answer of the type 2 months. You need to be able to convert one type to the other quickly. The following should help you:

- A turnover of 12 times a year is the same as saying that stocks sit in the stores for one month.
- A turnover of 4 times a year = 3 months
- A turnover of 3 times a year = 4 months
- A turnover of twice a times a year = 6 months
- A turnover of once a year = 12 months

❖ A business with a stock turnover of twice a year is said to be less efficient than one of 4 months.

(ii) Debtors payment/collection period

This tells us how long debtors take to pay up and the answer can be in days, weeks or months. It is found by using the following equations:

$$\frac{\text{Average debtors}}{\text{Sales}} \times 365 \text{ for number of days}$$

Average debtors x 52 for number of weeks
Sales

Average debtors x 12 for number of months
Sales

Average debtors = debtors for year one + debtors for year two divided by 2. If you do not have the balance sheet figures for two successive years then you must use the debtors figure given to you without averaging it out.

It is necessary to compare the debtors payment period over a number of years.

- ❖ If it is getting longer then drastic action might be needed to encourage customers to pay more quickly such as:
  - offering them a settlement discount to be deducted if they pay up quickly
  - phoning them and sending out reminder letters. This is only possible if the accounting system produces a monthly age analysis which analyses the age of each customers debt
  - setting up a credit control system where each customer is vetted and a credit limit is set and monitored

It is also necessary to compare this period to the length of time the business takes to pay its suppliers. It is important that the customers pay up before the suppliers are paid. This is called the suppliers or creditors payment period.

(3) Creditors payment / collection period

This tells us how long the business takes to pay its suppliers and the answer can be in days, weeks or months. It is found by using the following equations:

Average trade creditors x 365 for number of days
Purchases/cost of sales

Average trade creditors x 52 for number of weeks
Purchases/cost of sales

Average trade creditors x 12 for number of months

Purchases/cost of sales

Average creditors = creditors for year one + creditors for year two divided by 2. If you do not have the balance sheet figures for two successive years then you must use the creditors figure given to you without averaging it out.

Often the key to success is to delay paying creditors for as long as possible. This is because this delay is a very valuable source of finance for businesses.

- ❖ It is also necessary to compare trends over time. If the debtor period gets longer and the creditors period gets shorter then urgent action might be required to redress the balance. Without this corrective action the business is in danger of going into "liquidation" which means it will cease trading because it is short of cash.

Comparisons of Financial Statements

Ratios make no sense to us unless we use them to compare:

- a business with itself over a number of years
- a business with it's industry standard or a world class business in the same sector
- a business with it's budgets i.e. with what was expected

A net profit ratio of 10% tells us much more when we know that for the last five years it has been 15%.
A stock turnover of 3 months looks not very impressive if the industry standard is 14 days.
A debtor payment period of 40 days might indicate urgent action is required, if over the last five years it has increased gradually from 20 days.

Assumptions

All interpretation of accounts, which is based on ratio analysis, benefits from a number of points being explicitly made:

- If the information provided is only for one year and one business, it is often necessary to make the point that more information is often required to be able to compare results

either over a number of years, to world class businesses or to budgets. This is required in order lend credibility to any decisions made.

- More information is often required about the accounting treatments adopted in the production of the accounts. Two companies reporting different net profits may do so not because one is more profitable than the other but because they have adopted different accounting treatments for valuing closing stock or depreciation

Test Your Understanding

ACTIVITY 1

	Company A	Company B
Profitability ratios		
GP ratio (Gross Profit ratio)	50	60
NP ratio	20	15
ROCE (Return on Capital Employed)	10	5
Liquidity ratios		
Liquidity ratio	1 to 1	2 to 1
Quick ratio	0.5 to 1	1 to 1
Efficiency ratios		
Stock turnover	6 months	6 times
Debtors payment	63 days	30 days
Creditors payment	96 days	33 days

Comment on the **comparative profitability, liquidity and efficiency** of companies A and B.

SOLUTION

Profitability

Although company B is making a higher gross profit on sales than A, it is not controlling expenses as well as company A (it has a lower net profit ratio). Moreover company A is providing owners with a higher **return on capital employed** (ROCE).

Liquidity

The liquidity and quick ratios of company A are cause for concern. Although current assets cover short term liabilities, if you remove the figure for stocks which can not always be relied upon to realize cash quickly, then the rest of the current assets only cover half of the short term debt. On the face of it would seem that this company is in danger of being unable to pay it's debts as they fall due. Urgent credit control action is required.

Efficiency

The stock turnover ratios are 6 months for A and 2 months for B (6 times a year is the same as 2 months). Company B is therefore more efficient in the way it turns around it's stock. However even though company B's customers pay up more quickly than A's there is cause for concern because the customer payment period is so close to the length of time the business takes to pay it's suppliers - 30 days and 33 days. There only needs to be a slight shift in pattern for the business to be in danger of closing down due to a shortage of cash.

ACTIVITY 2

	Year 1	Year 2	Year 3
GP ratio	50	50	40
NP ratio	15	15	15
ROCE	10	8	10
Liquidity ratio	1.6 to 1	1.4 to 1	1.2 to 1
Quick ratio	1.1 to 1	1.1 to 1	1.1 to 1
Debtors payment / collection period	93 days	99 days	119 days
Creditors payment/ collection period	126 days	126 days	126 days
Stock turnover	9 months	12 months	15 months

Comment on the profitability, liquidity and efficiency of the above business making specific reference to implications and recommendations for any corrective action that might be required.

SOLUTION

Profitability

Net Profit is steady over the years, which tells us that there has been continued control over expenses.

ROCE shows a temporary dip in year 2. However the position has returned to normal in year 3.

The Gross Profit ratio has declined in the third year and therefore needs investigating. The reasons for this decline might include any of the following:

- More of the less profitable goods have been sold. Action required depends on whether this was expected. A legitimate cause for the decline might be a change in marketing strategy which has involved a promotions campaign where lots of goods have been given away free of charge.
- Some sales invoices have not been processed. Action required is to update the accounting records for the missing invoices.
- Some cash from sales has been misappropriated and therefore not accounted for. Action required is to investigate the theft and to improve the systems of internal control operating within the sales system.
- Closing stock has been reduced in value because it is damaged or obsolete.
- Stock has been misappropriated.
- The purchase price has increased and it has not been possible to pass this increase on to the customer.
- Some purchase invoices have been incorrectly posted twice. Action required is to amend the accounting records.

ACTIVITY 3

This is dedicated to those of you who like to play about with numbers. It is a real brainteaser.

The accounts for the year ended 31/12/99 for a business are incomplete because of system failure. You are required to reconstruct the trading, profit and loss account and the balance sheet at that date and then to calculate the ROCE ratio.

You do have some information to go on:

GP R100, 000
GP ratio 40%
Stock as at 1/1/99 R30, 000
Creditors R27, 000
The business takes 2 months to pay its creditors
Expenses excluding depreciation are 20% of sales
Fixed assets at 1.1.99 R120, 000 with accumulated depreciation at that date of R80, 000
Depreciation of 25% reducing balance is required
Debtors take 50 days to pay
Profits and capital brought forward from 1.1.99 R31, 200
Additional capital introduced this year R12,800
liquidity ratio = 3 to 1

SOLUTION

Trading, profit and loss account for the y/e 31/12/99

	R	R
Sales		250,000
less cost of sales		
opening stock	30,000	
purchases	162,000	
less closing stock	(42,000)	(150,000)
Gross profit		100,000
expenses	50,000	
depreciation	10,000	(60,000)
Net profit for the year		40,000

Balance sheet as at 31/12/99

	Cost	Accumulated Depreciation	Net book value
	R	R	R
Fixed assets	120,000	90,000	30,000
Current Assets			
Stocks	42,000		
debtors	34,000		
bank	5,000	81,000	
Current liabilities			
creditors		(27,000)	
Net current assets			54,000
			84,000
Represented by:			
additional capital introduced		12,800	
capital and profits as at 1.1.99		31,200	
profit for the year		40,000	84,000

ROCE = 40,000 / 84,000 x 100% = 47%

Workings

1. GP ratio is given as 40%. This means that 40 / 100 x sales = GP which is given as R100, 000. Sales is therefore = 100,000 x 100 / 40 = 250,000

2.Cost of sales is found by deducting the gross profit from sales i.e. = 250,000 - 100,000 = 150,000.

3. Expenses is given as 20% of sales i.e. = 250,000 x 20 / 100 = 50,000

4. Depreciation is 25% reducing balance. This means we have to calculate 25% of the net book value which is given as 120,000 - 80,000 = 25% of 40,000 = 10,000. Accumulated depreciation in the balance sheet needs therefore to be 80,000 as given plus the 10,000 for the current year.

5.Debtors are found by using the debtors' payment ratio. We are told that the debtors period = 50 days. The calculation for the debtors period in days = [Debtors / sales] x 365.

This means 50 = [debtors / sales of 250,000] x 365

This means debtors = 50 x 250,000 / 365 = R 34,246 say R 34,000.

6. Purchases is found by using the creditors payment period which = creditors / purchases x 12 months. This means 2 = [27,000 / purchases] x 12.

This means purchases = 27,000 x 12 / 2 = R162, 000.

7.Now that we have the purchases figure of R 162,000 and we also have the opening stock figure of R30, 000 and the cost of sales figure of 150,000 we can work out the closing stock figure by using the following equation:

Cost of sales = opening stock + purchases - closing stock

150,000 = 30,000 +162,000 - closing stock.

30,000 + 162,000 - 150,000 = closing stock = R 42,000

8.The bank figure is calculated by using the fact that the liquidity ratio is 3 to 1.

This means that total current assets are three times the current liabilities figure.

The liabilities figure is creditors of 27,000 as given in the question. This means that the total of current assets = 3 x 27,000 = 81,000 which can be said to be made up of:

- stock R 42,000
- debtors R 34,000
- bank R 5,000
- total current assets R 81,000

The bank figure is found by deducting the stock and debtors figure from the total of R81,000 which gives R5,000

9. ROCE = NP / capital employed x 100 %

= 40,000 / 84,000 x 100 %

= 47 %

ACTIVITY 4

Case Study: Kariba Ltd

Interpretation of Financial Statements

Situation:

Prior to the March senior management meeting to review the performance of KARIBAs for the quarter ended March 2009, Steve Ambrose, the MD and John Thisile the recently appointed management accountant were discussing ways in which they could not only improve the management financial reporting system but also aid the other members of the team in interpreting the information.

Steve and John had recently been reviewing the previous two years' performance and had discussed some aspects of the forecast for the current year.

The following summaries show the profit statement for the two years ended 31 December 07 and 08 and the forecast for 09; together with the Balance Sheets for the same periods.

Kariba Ltd
Summary Income Statements
Years Ended 31 December 07, 08 and Forecast 09

					Forecast
	07		08		09
	Rm		Rm		Rm
Turnover	2.50		2.75		3.20
Cost of Sales	1.95		2.07		2.40
Gross Profit	0.55		0.68		0.80
Admin and Distribution Costs	0.18		0.19		0.20
Profit before Taxation	0.37		0.49		0.60
Taxation	0.08		0.10		0.13
Profit after Taxation	0.29		0.39		0.47
Dividends	0.07		0.08		0.10
Retained Profit	0.22		0.31		0.37

Balance Sheet

As at 31 December 07, 08 and Forecast 09

	Rm		Rm		Rm
Fixed Assets	2.16		2.45		2.86
Current Assets					
Stock	0.17		0.18		0.21
Debtors	0.26		0.30		0.29
Cash at Bank	0.16		0.17		0.19
	0.59		0.65		0.69
Less Current Liabilities falling due within one year					
Creditors	0.18		0.19		0.22

Dividends	0.07		0.08		0.10
Taxation	0.08		0.10		0.13
	0.33		0.37		0.45
Net Current Assets	0.26		0.28		0.24
Total Assets less Current Liabilities	2.42		2.73		3.10
Capital and Reserves	2.42		2.73		3.10

NB: Capital and Reserves Year 00

R2.2m

	Rm
Debtors	0.23
Stocks	0.16
Creditors	0.17

They decide to arrange a day's training for the other members of the management team on interpretation of financial information and Steve requests that John prepares an analysis of the 07, 08 accounts and forecast performance for 09.

After much discussion John presents Steve with a list of accounting ratios that he intends to use in the analysis and these could be the basis for benchmarking performance in the future. John mentions that it may also be possible to access comparative performance indicators for a number of businesses in the same sector at a later date.

Ratios for Analysis Purposes

- Return on Capital Employed
- Asset Turnover
- Gross Profit as % of Sales
- Net Profit as % of Sales
- Current Ratio
- Acid Test
- Stock Turnover
- Debtors Collection Period

- Creditors Payment Period
- Value Added per 'R' of Employee Costs

These ratios cover concepts as:

- profitability
- liquidity
- utilisation

He states that comparisons may include:

- The current year's results with those of the previous year or years to establish whether performance is more favourable or adverse than before.

- The current year's results with those of comparable companies in the same line of business, to establish whether the company is performing better or worse than its competitors.

- Current performance against a standard or benchmark of performance.

The following is a summary of John's notes prepared in advance of the training day:

- Return on Capital Employed

This is often referred to as ROI, Return on Investment.

This is the main measure of profitability and considered the primary ratio.

Capital employed is defined as Total Assets less Current Liabilities or Share Capital and Reserves.

The return is expressed as:

$$\frac{\text{Profit before Tax}}{\text{Capital Employed}} \times 100 / 1$$

It represents the percentage of profit being earned on the total capital employed; and relates profit to capital invested in the business. Capital invested in a corporate entity is only available at a cost – corporate bonds or loan stock finance generates interest payments and finance from shareholders requires payment of dividend in the short and longer term.
It is therefore good business strategy to maximise the profit per 'R' of investment.

From the Kariba accounts we find:

* NB: Average capital employed is used here

	Year 07		Year 08		Forecast 09	
	0.37	x 100 / 1	0.49	x 100 / 1	0.60	x 100 / 1
	* 2.31		2.575		2.915	
=	16.01%		19.03%		20.58%	

It is difficult to set a benchmark for our type of business because of the lack of inter-firm comparative information but it is interesting to note, for example, that the top '5' supermarkets in the SA have averaged returns of approximately 19% over the past five years.

Further comment on the three-year analysis will be given in a summary at the end of the report.

The primary ratio measuring overall return is analysed in more detail by using secondary ratios:

- Asset Turnover
- Profit margin – net profit before tax as a percentage of sales

These two factors, or a combination of both, influence the return achieved by the business entity. The asset turnover is a measure of utilisation and management efficiency. It indicates how well the assets of the business are being used to generate sales or how effectively management have utilised the total investment in generating income.

As many business overheads are fixed costs, high production and sales volumes are needed to maximise overhead recovery and ultimately profit.

- Asset Turnover

It is expressed as:

$$\frac{\text{Turnover}}{\text{Capital Employed}}$$

	Year 07		Year 08		Forecast 09
	2.50		2.75		3.20
	* 2.31		2.575		2.915
	* Average capital employed				
	1.08		1.07		1.10

- Net Profit % of Sales

The profit margin indicates how much of the total revenue remains to provide for taxation and to pay the providers of capital, both interest and dividends. This return to sales can be directly affected by the management's ability to control costs and determine the most profitable sales mix.

It is expressed as:

$$\frac{\text{Profit before tax}}{\text{Turnover}}$$

	Year 07		Year 08		Forecast 09	
	0.37 / 2.50	x 100 / 1	0.49 / 2.75	x 100 / 1	0.60 / 3.20	x 100 / 1
=	14.8%		17.82%		18.75%	

- Gross Profit % to Sales

Expressed as:

$$\frac{\text{Gross Profit}}{\text{Turnover}} \times 100 / 1$$

	Year 07		08		Forecast 09	
	0.55 / 2.50	x 100 / 1	0.68 / 2.75	x 100 / 1	0.80 / 3.20	x 100 / 1
=	22%		24.72%		25%	

It is interesting to note for example that:

Asset Turnover x Profit Margin = ROCE

For year 03 we find:

1.10 x 18.75 = 20.62

(does not reconcile to return shown for 03, because of rounding)

Management's objective is to increase return on capital. Therefore they may focus on one or a combination of these two factors, which influence and drive performance.

Measures of liquidity include:

- Current Ratio
- Acid Test (Liquidity Ratio)

The current ratio is expressed as:
Current Assets: Current Liabilities

If current assets exceed current liabilities then the ratio will be greater than 1 and indicates that a business has sufficient current assets to cover demands from creditors. However, the speed at which stock can be converted into cash flow is such that it is not prudent to regard stock as available to cover creditors (although this is not the case with all businesses). Thus a second ratio in terms of liquidity is considered – the quick ratio or acid test. This is expressed as Current Assets – Stocks: Current Liabilities. If this ratio is 1:1 or more, then clearly the company is unlikely to have liquidity problems. If the ratio is less than 1:1 we would need to analyse the structure of the current liabilities, to those falling due immediately and those due at a later date. The level of the current ratio and acid test vary considerably between business sectors.

- Current Ratio

07	08	09 Forecast
0.59 : 0.33	0.65 : 0.37	0.69 : 0.45
1.79 : 1	1.76 : 1	1.53 : 1

- Acid Test

0.42 : 0.33	0.47 : 0.37	0.48 : 0.45
1.27 : 1	1.27 : 1	1.07 : 1

- Stock Turnover

This is a further measure of working capital management and relates to the control of inventories; both raw materials and finished stocks. It measures the stockholding in days.

It is expressed as:

$$\frac{\text{Stocks}}{\text{Cost of Sales}} \times 365 \text{ days}$$

07		08		09 Forecast	
* 0.165 / 1.95	x 365	0.175 / 2.07	x 365	0.195 / 2.40	x 365
= 30.88 days		30.86 days		29.65 days	

* Based on average stocks

- Debtors Collection Period

This is a measure of management's efficiency from a credit control perspective.

It is expressed as:

$$\frac{\text{Debtors}}{\text{Turnover}} \times 365 \text{ days}$$

- based on average debtors

07		08		09 Forecast	
0.245 / 2.50	x 365	0.28 / 2.75	x 365	0.295 / 3.20	x 365
35.77 days		37.16 days		33.65 days	

- Creditors Payment Period

The balance between debtor and creditor days is influenced by the working capital cycle. The creditor days is a measure of how much credit, on average is taken from suppliers. It is expressed as:

Creditors (Trade)

Cost of Sales

The ratio is an aid to assessing company liquidity, as an increase in creditor days is often a sign of inadequate working capital control.

	07		08		09 Forecast
	* average creditors				
	* 0.175 / 1.95	x 365	0.185 / 2.07	x 365	0.205 / 2.40 x 365
=	32.76 days		32.62 days		31.17 days

The following is a breakdown of the cost of sales figures for the three-year period:

	01		02		03 Forecast
	Rm		Rm		Rm
Cost of Sales	1.95		2.07		2.40
Admin and Distribution	0.18		0.19		0.20
	2.13		2.26		2.60
Bought Out Items	1.04		1.09		1.19
Employee Costs	0.85		0.90		1.10
Depreciation	0.24		0.27		0.31

- Value added – a measure of productivity

Value added per 'R' of employee costs is a true measure of employee productivity. It can also be perceived as a measure of the way in which management have utilised the human capital resource.

It considers the company's ability to mobilise its human assets.

Value added is defined as turnover less all bought in materials and services.
Value added:

	07		08		09 Forecast
	Rm		Rm		Rm
Turnover	2.50		2.75		3.20
Bought in materials and services	1.04		1.09		1.19
	1.46		1.66		2.01

Value added per 'R' of employee costs:

	07		08		09
	1.46		1.66		2.01
	0.85		0.90		1.10
=	1.72		1.84		1.83

Kariba Ltd

Summary of Ratios 07, 08 and 09

	Year		Year		Forecast
	07		08		09
Return on Capital Employed	16.01%		19.03%		20.58%
Asset Turnover	1.08		1.07		1.10
Net Profit as % of Sales	14.8%		17.82%		18.75%
Gross Profit % of Sales	22%		24.72%		25%
Current Ratio	1.79 : 1		1.76 : 1		1.53 : 1
Acid Test	1.27 : 1		1.27 : 1		1.07 : 1

Stock Turnover	31 days		31 days		30 days
Debtors Collection Period	36 days		37 days		34 days
Creditors Payment Period	33 days		33 days		31 days
Value Added per 'R' of Employee Costs	1.72		1.84		1.83

The return on capital increased between years 07 and 08 and is forecast to increase in year 09. The asset turnover has remained fairly constant, whereas both the gross and net profit margins show an encouraging upward trend. The main factor which influences this is that the increased volume of sales, approximately 30% over the three year period, results in a greater recovery of fixed costs and hence increased profitability.

Both the current ratio and the acid test show a sound level of liquidity although the liquidity in the forecast year 09 is set to fall marginally.
The stock in terms of days suggests a strict control of inventories and both the debtor and creditor days are most favourable and indicate good sound working capital policies.

Value added per 'R' of employee costs shows an upward trend in productivity between years 07 and 08 and this set to be maintained in the forecasted period

Calculations: Percentages

Understanding Percentages

In mathematics, a percentage is a way of expressing a number as a fraction of 100 (*per cent* meaning "per hundred"). It is often denoted using the percent sign, "%". For example, 45% (read as "forty-five percent") is equal to $\frac{45}{100}$, or 0.45.

In order to master these techniques explained here it is vital that you undertake plenty of practice exercises so that they become second nature.

After reading this text, you should be able to:

- Calculate a percentage of a given quantity;
- Increase or decrease a quantity by a given percentage;
- Find the original value of a quantity when it has been increased or decreased by a given percentage;
- Express one quantity as a percentage of another.
- Calculate mark-up.
- Calculate a simple and compound interest

1. What is a percentage?

The word ‘percentage’ is very familiar to us as it is used regularly in the media to describe anything from changes in the interest rate, to the number of people taking holidays abroad, to the success rate of the latest medical procedures or exam results. Percentages are a useful way of making comparisons, apart from being used to calculate the many taxes that we pay such as VAT, income tax, etc.

Financial ratios involve the comparison of various figures from the financial statements in order to gain information about a company's performance are expressed in terms of percentages. For this reasons, it is important to understand how percentages are calculated.

Percentages are used to express how large one quantity is, relative to another quantity. The first quantity usually represents a part of, or a change in, the second quantity, which should be greater than zero. For example, an increase of R 0.15 on a price of R 2.50 is an increase by a fraction of $\frac{R0.15}{R2.50}$ = 0.06. Expressed as a percentage, this is therefore a 6% increase.

Although percentages are usually used to express numbers between zero and one, any dimensionless proportionality can be expressed as a percentage. For instance, 111% is 1.11 and −0.35% is −0.0035.

So percentages are very much part of our lives. But what does percentage actually mean?

Now 'per cent' means 'out of 100'; and 'out of', in mathematical language, means 'divide by'.

So if you score 85% (using the symbol '%' for percentage) on a test then, if there were a possible 100 marks altogether, you would have achieved 85 marks. So

$$85\% = \frac{85}{100}$$

Let us look at some other common percentage amounts, and their fraction and decimal equivalents.

75%	$\frac{75}{100}$ =	$\frac{3}{4}$ =	= 0.75
50%	$\frac{50}{100}$ =	$\frac{1}{2}$ =	= 0.5
25%	$\frac{25}{100}$ =	$\frac{1}{4}$ =	= 0.25
10%	$\frac{10}{100}$ =	$\frac{1}{10}$ =	= 0.1
5%	$\frac{5}{100}$ =	$\frac{1}{20}$ =	= 0.05

It is worth noting that 50% can be found be dividing by 2, and that 10% is easily found by dividing by 10.

Now let us look at writing fractions as percentages. For example, say you get 18 marks out of 20 in a test. What percentage is this?

First, write the information as a fraction. You gained 18 out of 20 marks, so the fraction is $\frac{18}{20}$. Since a percentage requires a denominator of 100, we can turn 20 into a fraction out of 100 by multiplying both numerator and denominator by 5:

$$\frac{18}{20} = \frac{18}{20} \times \frac{5}{5} = \frac{90}{100} = 90\%.$$

Since we are multiplying both the numerator and the denominator by 5, we are not changing the value of the fraction, merely finding an equivalent fraction.
In that example it was easy to see that, in order to make the denominator 100, we needed to multiply 20 by 5. But if it is not easy to see this, such as with a score of, say, 53 out of 68, then we simply write the amount as a fraction and then multiply by $\frac{100}{100}$:

$$\frac{53}{68} \times \frac{100}{100} = 53 \div 68 \times 100\% = 77.94\%$$

which is 78% to the nearest whole number. Although it is easier to use a calculator for this type of calculation, it is advisable not to use the % button at this stage. We shall look at using the percentage button on a calculator at the end of this unit.

Percentage means 'out of 100', which means 'divide by 100'?
To change a fraction to a percentage, divide the numerator by the denominator and multiply by 100%.

Exercises 1

(a) 7 out of every 10 people questioned who expressed a preference liked a certain brand of cereal. What is this as a percentage?

(b) In a test you gained 24 marks out of 40. What percentage is this?

(c) 30 out of 37 gambling sites on the Internet failed to recognize the debit card of a child. What is this as a percentage?

(Refer to solution on page 147)

2. Finding percentage amounts

For many calculations, we need to find a certain percentage of a quantity. For example, it is common in some countries to leave a tip of 10% of the cost of your meal for the waiter. Say a meal costs R25.40:

$$10\% \text{ of R25.40} = \frac{10}{100} \times \text{R25.40} = \text{R2.54}.$$

As mentioned before, an easy way to find 10% is simply to divide by 10. However the written method shown above is useful for more complicated calculations, such as the commission a salesman earns if he receives 2% of the value of orders he secures. In one month he secures R250, 000 worth of orders. How much commission does he receive?

$$2\% \text{ of R250, 000} = \frac{2}{100} \times \text{R250, 000} = \text{R5, 000}.$$

Many things that we buy have VAT added to the price, and to calculate the purchase price we have to pay we need to find 14% and add it on to the price. This can be done in two ways.
For example, the cost of a computer is R6 340 plus VAT. Find the total cost.

$$\begin{aligned}\text{VAT} &= 14\% \text{ of R6 340} \\ &= \frac{14}{100} \times \text{R6 340} \\ &= \text{R887.60}\end{aligned}$$

so total cost = R6340 + R887.60 = R7227.60.

Or, instead of thinking of the total cost as 100% of the price plus 14% of the price, we can think of it as $\frac{114}{100}$ of the price, so that

$$114\% \text{ of R6 340} = \frac{114}{100} \times \text{R6 340} = \text{R7227.60}.$$

In a similar way to a percentage increase, there is a percentage decrease. For example, shops often offer discounts on certain goods. A pair of trainers normally costs R75, but they are offered for 10% off in the sale. Find the amount you will pay.

Now 10% of R75 is R7.50, so the sale price is R75 − R7.50 = R67.50.

What you are paying is the 100% of the cost, minus 10% of the cost, so in effect you are paying 90% of the cost. So we could calculate this directly by finding 90% of the cost.

$$90\% \text{ of R75} = \frac{90}{100} \times \text{R75} = \text{R67.50}.$$

3. Finding the original amount before a percentage change

Let us look at an example where the price includes VAT, and we need the price excluding VAT.

Example

The cost of a computer is R699 including VAT. Calculate the cost before VAT.

Solution

Now a common mistake here is to take 14% of the cost including VAT, and then subtract. But this is wrong, because the VAT is not 14% of the cost including the VAT, which is what we have been given. Instead, the VAT is 14% of the cost before the VAT, and this is what we are trying to find. So we have to use a different method.

Now we have been told that R699 represents the cost including VAT, so that must equal the cost before VAT, plus the VAT itself, which is 14% of the cost before VAT. So the total must be 100% + 14% = 114 of the cost before VAT. Thus, to find 1% we divide by 144. So

$$114\% \text{ of the price excluding VAT} = \text{R699},$$

$$1\% \text{ of the price excluding VAT} = \frac{699}{114}$$

To find the cost before VAT we want 100%, so now we need to multiply by 100. Then the price excluding VAT = $\frac{699}{114} \times 100$ = R586.84.

Let us look at another situation where we need to find an original amount before a percentage increase has taken place.

Example

An insurance company charges a customer R320 for his car insurance. The price includes government insurance premium tax at 5%. What is the cost before tax was added?

Solution

Here, the R320 represents 105% of the cost, so to calculate the original cost, 100%, we need to calculate $\frac{320}{105} \times 100$ = R304.76.

Here is one more similar calculation, but this time there has been a reduction in cost.

Example

A shop has reduced the cost of a coat by 15% in a sale, so that the sale price is R127.50. What was the original cost of the coat?

Solution

In this case, R127.50 represents 85% (that is, 100%− 15%) of the original price. So if we write this as a fraction, we divide by 85 to find 1% and then multiply by 100 to find the original price.

$$\frac{127.50}{85} \times 100 = \text{R}150.$$

If you are given a percentage change and the final amount, write the final amount as 100% plus (or minus) the percentage change, multiplied by the original amount.

4. Expressing a change as a percentage

We might wish to calculate the percentage by which something has increased or decreased. To do this we use the rule

$$\frac{\text{Actual increase or decrease}}{\text{Original cost}} \times 100\%.$$

So you write the amount of change as a fraction of the original amount, and then turn it into a percentage.

Example

Four years ago, a couple paid R180, 000 for their house. It is now valued at R350, 000. Calculate the percentage increase in the value of the house.

Solution

$$\text{Percentage increase} = \frac{\text{actual increase or decrease}}{\text{original cost}} \times 100\%.$$

$$= \frac{R350{,}000 - R180{,}000}{R180{,}000} \times 100\%$$

$$= \frac{R170{,}000}{R180{,}000} \times 100\%$$

= 94% to the nearest 1%.

Let us look at an example where the change has been a decrease.

Example

A car cost R12, 000. After 3 years it is worth R8, 000. What is the percentage decrease?

Solution

$$\text{Percentage decrease} = \frac{\text{actual decrease}}{\text{Original cost}} \times 100\%$$

$$= \frac{R12{,}000 - R8{,}000}{R12{,}000} \times 100\%$$

$$= \frac{R4{,}000}{R12{,}000} \times 100\%$$

= 33% to the nearest 1%.

To write an increase or decrease as a percentage, use the formula:

$$\frac{\text{Actual increase or decrease}}{\text{Original cost}} \times 100\%.$$

5. Calculating percentages using a calculator

Here is a warning about using the percentage button on a calculator: the result depends on when you press the % button in your calculation. Sometimes it has no effect, sometimes it seems to divide by 100, and at other times it multiplies by 100. Here are some examples

- Pressing 48÷400% gives an answer of 12. Now 48÷400 = 0.12, so pressing the % button has had the effect of multiplying by 100. This has found 48 as a percentage of 400.
- Pressing 1 ÷ 2 × 300% gives the answer 1.5. Now 1 ÷ 2 × 300 = 150, so pressing the % button here has divided by 100. This has found 300% of a half.
- Pressing 400 × 50% gives an answer of 200. Now 400 × 50 = 20, 000, so pressing % here has divided by 100. This has found 50% of 400.
- Pressing 50% × 400 results in 400 on the display, requiring = to be pressed to display an answer of 20,000. So pressing the % button here has had no effect.

We recommended that you use the % button on a calculator only when you understand what affect it is having on your calculation.

Exercises 2

(a)What is the amount of VAT (at a rate of 14%), which must be paid, on an imported computer game costing R16.00?

(b) A visitor buys a bus ticket costing R27.50 including VAT at 14%. How much VAT can be reclaimed?

(c) At the end of 2007 you bought shares in a company for R100. During 2000 the shares increased in value by 10%. During 2008 the shares decreased in value by 10%. How much were the shares worth at the end of 2007?

(Give your answers to the nearest cents.)

Answers

Exercise 1		
A	B	C
70%	60%	81%
Exercise 2		
A	B	C
R2.24	R4.14	R99.00

Calculation of mark-up

Step 1

Before you can calculate mark-up, you first need to understand what mark-up is.

Mark-up is simply the difference between what you sell something for and what it costs you. In other words, it's your "profit per item."

So if it costs me R10 to get something and I sell it for R15, my mark-up is R5.

Step 2

Mark-up can be expressed as an amount figure, as we did above. Or it can be a percentage. For example, I can say my mark-up was 5%.

Some business professionals think in terms of figures, while other think in terms of percentages. So that's why mark-ups can be stated either way.

Step 3

Calculating dollar mark-up

Let's focus on how to calculate the amount we are marking something up. This is very easy!

All you do is take your selling price--what you'll actually sell it for or the amount you think you'll sell it for--and subtract your cost.

Now cost will include everything necessary to get the item ready for sell. In other words, all your "selling costs" will be included!

If this is too difficult to calculate, you can use just the actual cost to get the item for simplicity sake.

Step 4

Percent mark-up methods

The harder one is calculating your percentage mark-up. That's because you can mark-up using one of two methods.

The first is to mark-up based on your cost. And the second is to mark-up based on your selling price. Depending upon which method you use, your percentages will be different!

Step 5

Marking up based on cost

Let's start with how to calculate your percent mark-up based on your cost. Many businesses do it this way because they know how much it costs them to get their items. So it's easier or makes more sense to mark-up this way.

To calculate your percent mark-up, you simply take your amount mark-up and divide that by your cost.

In other words, if it costs you R10 to get the item and you sell it for R15, your mark-up is R5.

Your percentage mark-up based on cost would be calculated by taking the R5 mark-up and dividing it by your R10 cost x100%. That would give you a mark-up of 50%.

Step 6

Marking up based on selling price

Now let's turn our attention to calculating our percent mark-up based on our selling price. The reason many businesses will do it this way is because they know how much they want to sell things at. So it's just easier or makes more sense to do it this way.

To calculate your percent mark-up based on sales, you simply take your mark-up amount

and divide by your selling price.

Going back to my earlier example--R10 cost and R15 selling price--your mark-up would be R5.

To calculate your percent mark-up based on selling price, you'd take the R5 mark-up and divide by your R15 selling price x 100%. This would give you a percentage mark-up of 33%.

Step 7

Comparison: mark-up based on cost vs. mark-up based on selling price

The important thing to realize here is that your mark-up amount will always be the same! That's because it's calculated by taking your selling price and subtracting cost.

What will differ is your percentage mark-up! And your percent mark-up based on selling price will be lower than your percent mark-up based on cost.

That's because you're dividing by the higher selling price figure. In other words, good business means selling items above cost to generate a profit. So dividing by a larger figure lowers your percentage.

This is why manufacturing mark-ups tend to be higher than retail ones. Because manufacturers know and control their costs and will tend to mark-up based on cost. So they're dividing by a lower figure, which raises the percentage mark-up.

But retail stores tend to know their selling prices and monitor those more. So they're generally using mark-up based on selling price. This means they're dividing by the higher figure, which lowers the percentage mark-up.

What is Interest

Interest is the cost of borrowing money. Interest is a fee paid on borrowed assets. It is the price paid for the use of borrowed money, or, money earned by deposited funds. When you take a loan out from a bank, or wherever, they will expect you to pay interest. it is a percentage charged on the principle amount for a period of a year - usually. This means that you pay back what you took out on a loan, plus extra money.

So for example, if you took a loan out for R500, and let's say you have to pay it back with 15% interest, you would pay back R575, that is:

R500 x 15 divide by 100% = R75

R500 + R75 = R575

An interest rate is the cost stated as a percent of the amount borrowed per period of time, usually one year, e.g. 15% interest rate above..

Simple Interest

Simple interest is calculated on the original principal only. Accumulated interest from prior periods is not used in calculations for the following periods.

It is the money charged on the fixed amount by the lender for lending the money to the borrower for the certain period of time. The interest charged in case of simple interest remains fixed for all the year.

The formulae for simple interest is = p * i * n

Where:

p = principal (original amount borrowed or loaned)

i = interest rate for one period

n = number of periods

Compound Interest

Compound interest is calculated each period on the original principal and all interest accumulated during past periods. Compound interest is the concept of adding accumulated interest back to the principal, so that interest is earned on interest from that moment on. The act of declaring interest to be principal is called compounding (i.e., interest is compounded).

How to teach the Difference Between Simple Interest and Compound Interest

Example:

Find the Difference Between the Simple Interest and the Compound Interest on an Investment of R1000, (Called Principal or Capital), for 3 years, (Time), at 5% annually, (Rate).

Go through the process of finding the Amount of Interest at the end of each year, and then we will take the Total of these Interests.

At The end of the First Year, The Simple Interest on R1000 @ the rate of 5% is: R1000 x 5% = R1000 x 0.05 =R50. At the end of the Second Year, the Interest is: R1000 x 0.05 = R50. At the end of the Third Year, the Interest is: R1000 x 0.05 = R50. The total Simple Interest for the 3 years is R150.
This Process is OK for 3,4,or 5 years but will be tedious for 30,40,50 years or more, so a Simple Formula will be welcomed at this time. The Formula is: Simple Interest = Principal x Time x Rate/100%

= R1000 x 3 x 5%/100% = R1000 x 3 x 0.05 = R150.

We now turn our attention to finding the Compound Interest for the same Given Problem. At the end of the First Year, the Compound Interest on R1000 @ the rate of 5% is: R1000 x 5% = R1000 x 0.05 =R50. We now Add this Interest of R50 to the Principal of R1000, giving us The Total of R1050 to be invested for the Second Year.
At the end of the Second Year the Compound Interest on R1050 at the rate of 5% is: R1050 x 5% = 1050 x 0.05 = R52.50, we Add This Interest of R52.50 to the Principal of R1050, giving us the Total of R1102.50 to be invested for the Third Year.

At the end of the Third Year the Compound Interest on R1102.50 at the rate of 5% is:
R1102.50 x 5% = 1102.50 x 0.05 = R55.125, we Now Add all the Compound Interests for the 3 years, giving us the Total of
R50 + R52.50 + R55.125 = R157.625, rounding off this Amount to the nearest hundredth, we get R157.63 as the total Compound Interest.

Again we can see that this process would be very Tedious and Time consuming, so a Formula that would make it much easier to calculate the Compound Interest will be greatly appreciated at this time.

The Formula for the Compound Interest is:
Compound Interest = Principal x (1 + Rate/N)^ (N x Time) - Principal, where N is the Number of times within one year that the Principal should be reinvested.

Using The Compound Interest Formula with the above Given Problem we get the following:
Compound Interest = R1000 x (1 + 0.05/1)^(1x3)-R1000 =
R1000 x (1 + 0.05)^3-R1000 = R1000 x 1.05^3-R1000 = R1000 x 1.157625-R1000 =
R1157.625 - R1000 = R157.625, which is approximately R157.63.

The Difference Between The Compound Interest and Simple Interest of the Given Problem above is, R157.63 - R150 = R7.63 the Compound interest is more than the simple interest by R7.63.

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Accounting Internet Library: *Accounting Cycle by* Walter Antoniotti *(Debit and Credit Approach*) for Accounting Equation, Recording of Transactions and Accounting Cycle.

Basic College Accounting (BCA) for the Accounting Concepts Regulatory Framework and the questions on Accounting Principles.

Department of Basic Education: National Curriculum Statement, *Accounting Orientation Module*.

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