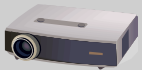


Module 2

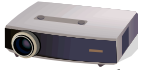
Finance: Deal with finances in personal and/or familiar contexts as well as in the workplace



Lecture slide #1-3

After completing this module, students will be able to:

- Manage finances with confidence
- Read, interpret and act on financial information presented in documents



Lecture slide #4-9

Introduction

Finance is important to two groups:

- *Individuals so that they can properly plan their lives*
- *Enterprises who need to plan their activities.*

The principles of financial management are the same for both groups i.e. we need to record all our income and expenses, and from those we need to prepare an income statement, to tell us how much money we've made (or lost) during the year, a balance sheet, which tells us our current financial position, and a budget which helps us to plan for the future.

1. Manage finances and financial information with confidence

The two subject outcomes overlap extensively and the module is therefore approached under headings which encompass both outcomes.

At the end of this outcome, students will be able to:

- Identify, record and manage sources of *income*.
- List and manage *expenses*.
- Plan and monitor finances.
- Read and identify appropriate information from selected documents.
- Select and interpret information from documents and complete the documents.
- Make and explain decisions using documents.

1.1 Income and expenditure

- *Explain what income is and what expenditure is*
- *Explain the difference between gross income and net income providing examples.*

1.2 Fixed and variable expenses/costs and income

- *Explain the difference between fixed costs and variable costs, providing examples of each.*

Bank statements

- *Explain what a bank statement is, and why it is necessary for accounting purposes.*
- *Explain what a debit transaction is and what a credit transaction is.*



Lecture slide
#10-12

Activity 1

1. Identify items (tick the correct column) of expenditure and revenue (income) from the following list:

Item	Expenditure	Revenue
Interest earned on investment		<i>x</i>
Monthly rental paid for premises of the firm	<i>x</i>	
Tax payable to Receiver of Revenue	<i>x</i>	
Payment for services rendered	<i>x</i>	
Cost of three delivery vans for the running of the business	<i>x</i>	
Cost of goods sold	<i>x</i>	
Wages and salaries to employees	<i>x</i>	
Water and electricity usage	<i>x</i>	
Interest paid on bank overdraft	<i>x</i>	
Cheque payment	<i>x</i>	
Government sponsorship		<i>x</i>

2. Distinguish between fixed and variable income/cost items (tick the correct column):

Item of income/cost	Fixed income/cost	Variable income/cost
Commission		<i>x</i>
Monthly payment for truck rental	<i>x</i>	
Cost to repair broken equipment		<i>x</i>
Municipal water and electricity account		<i>x</i>
Rental of business premises used	<i>x</i>	
Monthly payment for equipment rental	<i>x</i>	
Interest earned on money invested		<i>x</i>
Salaries of long-term workers	<i>x</i>	
Wages of intermittent workers		<i>x</i>
Cost of material to produce items sold		<i>x</i>
Cost of delivery of items sold		<i>x</i>

3. Identify which words on a bank statement mean **income (credit)** and which mean **expenses (debit)**:

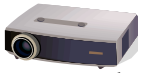
Word	Credit	Debit	Word	Credit	Debit	Word	Credit	Debit
Deposit	<i>x</i>		Card levy		<i>x</i>	Opening balance	<i>x</i>	
Overdraft interest		<i>x</i>	Administration fee		<i>x</i>	Cheque payment		<i>x</i>
Interest	<i>x</i>		Internet banking cost		<i>x</i>	Cheque payment reversal	<i>x</i>	
Transfer cost		<i>x</i>	Cheque deposit	<i>x</i>				

1.3 Bank accounts and bank charges

Bank account

Explain the difference between various types of bank accounts including current accounts, savings accounts and fixed deposit interest accounts.

Discuss how the reserve bank determines interest rates.



Lecture slide

#13-17

Activity 2 – Bank charges

This is an individual activity that students can complete in class or as homework.

1. With the table of transaction costs, calculate the tariffs for the following transactions:
 - a. How much will it cost to withdraw R800 at a Saswitch ATM?
Cost to withdraw R800 at a Saswitch ATM = 5,50 + 2,80 + 7,20 = 15,50
 - b. How much will it cost to withdraw R800 at the ATM of your bank?
Cost to withdraw R800 at the ATM of your bank = 15,50 – 5,50 = 10,00
 - c. How much will it cost to withdraw R10 over the counter inside the bank?
Cost to withdraw R10 over the counter inside the bank = R25

Transaction on savings account	Fee at ATM of bank	Fee at Saswitch ATM	Fee over the counter inside bank
Withdrawal	R2,80 + R0,90 per R100,00	R5,50 + R2,80 + R0,90 per R100,00	R25,00
Balance enquiry	Free	R3,15	R2,35

2. Bank statement on a current account of Ashley Abrahams at Wonder Bank.
 - a. Identify items of **income and expenditure**.
Income = the internet transfer of 15 000; Expenditure to = TH Motors; Auto electric costs; Christelle's account; Bank account; Multichoice rental; and two cash withdrawals
 - b. Complete the **balance** column.
 - c. Calculate the bank fees from 4th July to 25th July.
Total bank fees from 4th July to 25th July = 97,26

Date	Cheque no.	Description	Bank fees	Debits	Credits	Balance
04/07/06	Brought forward					2 000,00
06/07/06	1124	T.H. Motors	24,14	1 100,00		
06/07/06	1125	Auto Elec.	25,99	1 300,00		400,00 -
08/07/06	Internet				15 000,00	14 600,00
08/07/06	Sasw Cash		13,30	500,00		14 100,00
08/07/06	Internet	Christelle's	2,82	200,00		13 900,00
10/07/06	Sasw Cash		13,30	500,00		13 400,00
10/07/06	Internet	Bank C account	10,22	1 000,00		12 400,00
12/07/06	1126	M Choice	7,49	220,00		12 180,00
25/07/06						

3. Table of possible bank costs/charges

Transaction	Bank A	Bank B	Bank C	Bank D	Bank E
Minimum balance	R10,00	R50,00	R50,00	R50,00	R50,00
Interest rates on credit balances	10% p.a. up to R25 000; 7% p.a. from R25 000 to R100 000	0,25% p.a. over R1 000	0,25% p.a. over R1 000	No interest on savings account	2% p.a. over R250
Cash withdrawal at teller	R1,80	R16,00 + R0,90 per R100 up to a max cost of R50	R16,00 + 0,95% of the value	R8,00 for first R100 + R0,89 for every additional R100 or part thereof	R16,25 + 0,9% of the value
Cash withdrawal at own ATM – withdraw R500	R1,80	R6,40	R7,05	R6,40	R4,70
Monthly administration fee	R2,00	R5,65	R5,00	R6,00	R6,25 - R12,50

- Which bank offers the best interest rate p.a.?
Bank A offers the best interest rate p.a.
- At which bank is it the easiest to open an account?
Bank A.
- You want to withdraw R400 cash at the ATM of a bank that holds your account. Calculate the cost at each of the five banks.
If you want to withdraw R400 cash at the ATM of a bank which holds your account, it would cost you: Bank A: R1,80; Bank B: R6,40; Bank C: R7,05; Bank D: R6,40; Bank E: R4,70
- Do the same calculation as in c. if the ATM is non-functional when you arrive at the bank, and you have to go inside the bank to withdraw at the teller.
If the ATM is non-functional when you arrive at the bank, and you have to go inside the bank to withdraw at the teller: Bank A: R1,80; Bank B: R19,60; Bank C: R19,80; Bank D: R10,67; Bank E: R19,85
- Which bank would you advise a friend to go to? Explain your answer.
My friend should go to Bank A as it has a higher interest rate, a lower entry fee and lower bank costs.



Lecture slide
#18-24

Case study 1

Since there are calculations that students might battle with, it is recommended that students work in groups for this case study.

Remember Noluthando's Little Laundry from Module 1?
Study her financial situation as laid out in the bank statement below and then answer the questions that follow.

WONDER BANK Limited
23 Factory Road
BIESIESFONTEIN 5066

Bank statement from: 17 / 05 / 09
to : 31 / 07 / 09

Savings Account:

Ms Noluthando Mkize
Apartment 67
Biesieshof
BIESIESFONTEIN 5061

Date	Branch	Transaction description	Funds In	Funds out (-)	Balance (R)
					<i>Brought forward</i> 31 587,23
17 / 05 / 09	Biesiesfontein, Factory Road	Cash dep	100,00		31 687,23
19 / 05 / 09	Biesiesfontein, Factory Road	Cheque dep	2 000,00		33 687,23
19 / 05 / 09	Biesiesfontein, Factory Road	Electronic dep P.S. Thembu, .	5 000,00		38 687,23
31 / 05 / 09	Head Office	CR Interest	111,44		38 798,67
31 / 05 / 09	Head Office	Monthly fee		2,00	38 796,67
04 / 06 / 09	Biesiesfontein, Factory Road	Direct Dep. Table Way Furnishers		5 025,74	33 770,93
04 / 06 / 09	ATM Factory Road	Cash withdrawal		500,00	33 270,93
05 / 06 / 09	Biesiesfontein, Factory Road	Direct Dep. Hard-Core Bakkies		10 000,00	23 270,93
07 / 06 / 09	Biesiesfontein, Factory Road	Direct Dep. R&D Driving School		720,00	22 550,93
25 / 06 / 09	Biesiesfontein, Factory Road	Direct Dep. Biesiesfontein Municipality		618,27	21 932,66
25 / 06 / 09	Biesiesfontein, Factory Road	PNP P&C fee		380,64	21 552,02
25 / 06 / 09	Biesiesfontein, Factory Road	PNP purch CB fee		2,00	21 550,02
25 / 06 / 09	Biesiesfontein, Factory Road	Direct Dep. Biesiesfontein Municipality		436,75	21 113,27
30 / 06 / 09	Head Office	CR Interest			21 235,00
30 / 06 / 09	Head Office	Monthly fee		2,00	21 233,00
10 / 07 / 09	Pick 'n Pay	PNP P&C fee		392,40	20 840,60
10 / 07 / 09	Pick 'n Pay	PNP purch CB fee		2,00	20 838,60
19 / 07 / 09	Head Office	Electronic dep	5 000,00		25 838,60
25 / 07 / 09	Biesiesfontein, Factory Road	Cheque dep	535,00		26 373,60
26 / 07 / 09	ATM Factory Road	Cash withdrawal		500,00	25 873,60
31 / 07 / 06	Head Office	CR Interest			25 887,04
31 / 07 / 06	Head Office	Monthly fee		2,00	25 885,04

She has a savings account which gives her 7% interest p.a.

- a. Help her with her bank statement. For the bank statement, list the debit items (funds out) and the credit items (funds in). Complete the balance column.

All income items are listed under "Funds in" and all Debit items under "Funds out"

- b. Explain what "CR interest" means. Show how to calculate the R111,44.
CR interest means "credit interest".

- c. Calculate the other interest amounts i.e. on 30/06/09 and on 31/07/09.
7% interest p.a. = 0,019178 % interest per day (7 divided by 365)

Interest in the bank is calculated on a daily basis on the new bank balance.

To facilitate the calculation (and merely as an exercise in compound interest calculation – therefore not accurate amount which would result in a very lengthy calculation), just take the latest bank balance:

Final amount = $38687,23 (1 + 0,019178\%)^{15}$ (The 15 is for the fifteen days up to 31/05/09) = 38799,04

Therefore, the interest = $38799,04 - 38687,23 = 111,81$ (A scientific calculator gives R111,44)

CR interest on 30/06/08 = 121,73

FA = $21113,27(1 + 0,00019178)^{30} = 21235,00$

CR interest on 31/07/08 = FA = $25873,60 (1 + 0,00019178)^{31} = 26027,87$

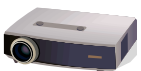
Interest amount = $26027,87 - 25873,60 = 154,27$ (154,16 with simple calculator).

- d. On which of the listed expenses did she spend some of her cash withdrawals?

On soap powder to do the washing.

- e. Has she paid her utilities account for July yet? If not, until what date does she have time to pay it?

No, she has not. She has until the 7th of the month. If the 7th falls on a week-end she has until the Monday



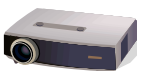
Lecture slide #25

Assignment 1 – Bank charges/costs

This is a research activity which students will have to complete in their own time.

Compare the costs of the following transactions at two local banks:

- Internet transfer of R25 000.
- Withdrawal over the counter of R30 750 to pay wages of employees.
- Stop-order on a monthly payment of R6 500.
- ATM cash withdrawal of R1 000 at a SASWITCH terminal.
- Monthly administration fee.
- Cheque made out for R27 000.



Lecture slide #26

1.4 Records ... are kept in the form of different source documents

Source documents

Explain to students the three different categories of sales documents namely:

- Sales documents.
- Purchase documents.
- Banking documents.

Sales documents

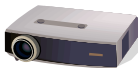
- Invoice
- Debit note
- Credit note
- Receipt
- Till roll

Purchase documents

- Petty cash shkuos
- Purchase order
- Dispatch note and invoice
- Credit and debit notes
- Cheque and cheque stubs

Banking documents

- Bank statements
- Cheque payments
- Crossed cheques
- Blank cheques



Lecture slide #27-28

Activity 3 – Your payslip and bank deposit slip

This is an activity for students to complete by themselves, they will need time to get hold of a deposit slip.

T. Jantjies of T.J. Motors has employed a mechanic. His monthly pay-slips look like this.

T.J. Motors 26 Industrial Road VANGUARD 2357	Employee Name: A. Abrahams I.D. number 7406090058075	Date engaged: 1 st August 2008	Payment date: 1 st September 2008
Basic salary: 60 250,00	Basic salary: 5 020,83		Deductions
Normal hours: 160			Tax: 903,75
Overtime hours: 0			UIF: 50,21
			Total: 953,96
			Net pay: 4 066,87

Questions:

1. What is Ashley's birth date?
90th June 1974 (read from the first 6 digits of his ID number)
2. Does he receive a 13th cheque?
No, because $5020,83 \times 12 = 60249,96$ 60250
3. What % tax does he pay?
18% tax, Calculated $903,75 / 5020,83 \times 100 = 18\%$
4. What % UIF does he pay?
1% UIF
5. Get a bank deposit slip from your bank and fill it in for A. Abrahams depositing his salary into his savings account with account number 822 82826665 which is held at the Hatfield branch in Tshwane.



Lecture slide #29

Case study 2

Students should work in groups of two for this activity. It can be completed for class or for homework.

The questions concern the car repair business of Mr. T. Jantjies of the address:
T.J. Motors
26 Industrial Road
VANGUARD 2357

You might be a secretary, office worker, the wife of the owner, the owner himself or one of the mechanics working for Mr T. Jantjies.

When the work has been completed on a car, you must write out an **invoice** which is given to the customer.

The **invoice is a document which informs the client what he has to pay and why**, i.e. for what.

Invoices are made out in duplicate, and one copy is given to the client/customer.

When the customer has made the payment you can give him a **receipt, i.e. documentary proof that an amount has been received by the business.**

These receipts are pre-printed and have to be numbered or might be pre-numbered as well. Receipts are completed in duplicate. The original is given to the customer as proof of payment whilst the copy remains in the receipt book.

The money then has to be deposited into the bank account of the business. A **bank deposit slip** has to be filled in.



Activity 4 – Invoices, receipts, statements, cheques

This is an individual activity which students can complete in class or for homework

1. The following work has been done on a Ford Sapphire with registration number CW 21439 for a Ashley Abrahams on 2nd October 2008:

Differential and side shafts replaced; tow bar removed before and replaced after work on differential completed; check for any other related problems; road test done.

The labour was calculated as R650,00.

The cost of new or second-hand replacement parts: differential R1 280,00; side shafts (left and right complete) R2 300,00; differential oil R120,00; shock absorber supplies R8,85; bolts and nuts R4,95; extra oil R12,00.

It is invoice no. 235 of this business.

Instruction: Complete the invoice and calculate the VAT at 14%.

TAX INVOICE		NO: <u>235</u>	
FROM: T.J. Motors 26 Industrial Road VANGUARD 2357	VAT registration no.:		
TO: <u>Mr. Ashley Abrahams</u>	—		
DATE: <u>2nd October 2008</u>	Car Make: <u>Ford Sapphire</u>	Car Registration: <u>CW 21439</u>	
Labour (A)	Materials (B)	R	c
Remove and replace tow bar	Differential parts	1280	00
Remove and replace side shafts	Side shafts	2 300	00
Work on differential	Oil	120	00
Check for other problems	Shocks supplies	8	85
Road test	Bolts and nuts	4	95
	Oil	12	00
R650			
	Total:	3725	80
	Total	650	
Labour:	SUB	4 375	80
Total (A & B)		612	61
VAT:		4 988	41
GROSS AMOUNT:			

2. The customer pays R1 000,00 by cheque when collecting the car. He requests to pay the outstanding amount in payments of R1 000 per month. The number of this receipt for the business is 428. Complete the receipt below for the customer for the first payment.

RECEIPT					
DATE: <u>2nd October</u> 20 <u>08</u>	NO. <u>428</u>				
Received with thanks from <u>Mr Ashley Abrahams</u>					
the sum of:					
<u>One thousand</u>	Rand <u>zero</u> cents				
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="width: 50%;">R</td> <td style="width: 50%;">c</td> </tr> <tr> <td>1000</td> <td>00</td> </tr> </table>	R	c	1000	00
R	c				
1000	00				
Cheque					
For: T.J. Motors					
Signed: _____					

3. At the end of the month you have to send Mr. Peter Smith a statement of account mentioning the balance, the amount currently payable and the time limit for the payment within the next 30 days. Fill in this statement of account below.

STATEMENT					
To: <u>Mr. A. Abrahams</u>		From: <u>T.J. MOTORS</u>			
DATE: <u>3 October 2008</u>		<u>26 Industrial Road</u>			
		<u>VANGUARD 2357</u>			
DATE	DETAILS	DEBIT	CREDIT	BALANCE	
				3 727.00	
2/10	Receipt no. 428		R1000.00		
3/10	Invoice	1000.00		2 725.00	
	Ageing	Current	30	60	90
		2 725.00	1000.00		

4. You have to deposit the money received during the week in the bank. Apart from the payment received in question 1, the business has also received:
- a. 3 October 2008 – cash payment of R450,00 for the replacement of a battery, received from Mr. L. Botha.
 - b. 4 October 2008 – Wonder Bank (254/21 branch cd.) cheque payment of R685,00 for replacement of a faulty carburetor, received from Mr. P. Venter;
 - c. 4 October 2008 – cash payment of R250,00 for repair of an alternator, received from Mr. V. Wilson;
 - d. 5 October 2008 – Best Bank (326/89 branch cd.) cheque payment of R3 000,00 for replacement of top gasket of a Jetta, received from Mr. T. Sihlalo.

BEST BANK Deposit slip

Date (ddmmyyy): 5 Oct 2008

Branch: Shangolo

Credit: (name in block letters) T.J. Motors

Depositor's signature: _____

Account no to credit: Current

	Rand	cents
Cash	700	00
Cheques:(name of drawer/branch code/bank)	3685	00
	4385	00

Depositor's contact no. _____

Total amount: R4385.00

5. The business has to pay its monthly rental of R2 500,00 to Precise Properties at the beginning of each month. Make out the cheque for this payment on the 3rd October 2008.

BEST BANK	101-923				
Ltd Reg no. 1961/0004/06 SHONGOLO Main Road	Date: <u>3 October 2008</u>				
Pay <u>Precise Properties</u> or bearer					
Amount <u>Two thousand five hundred rand only</u>					
	<table border="1" style="float: right; border-collapse: collapse;"> <tr> <td style="width: 50px;">R</td> <td style="width: 50px;">c</td> </tr> <tr> <td style="text-align: center;">2500</td> <td style="text-align: center;">00</td> </tr> </table>	R	c	2500	00
R	c				
2500	00				
	T.J. Motors				
	T Jantjies				
0065 2024 1175 245324 09					

6. Also fill in the cheque stub for the cheque in number 4. Start with a balance of R10 000.

Date: <u>3/10/08</u>	
To: <u>Precise Properties</u>	
For: <u>Monthly Rental</u>	
Balance brought forward	10 000
Deposits	1450
Total	11 450
This cheque	2 500
Sub-total	8 950
Withdrawals	
Balance carried forward	8 950
0065	

7. Make a record of all receipts and payments of the one week for T.J. Motors in this simplified page of a cash book. Receipts are entered on the left hand side.

CASH BOOK: CLIENT NAME: T.J. Motors Month ending October 2006 No. 1

CASH RECEIPTS							CASH PAYMENTS					
Date	Receipt no.	Received from	Description	VAT amount	Receipt analysis	Bank deposit	Date	Paid to	Description	VAT amount	Cheque analysis	Cheque amount
2/10	428	A. Abrahams	Chq Pmt			1000	4/10	H&H Spares	Parts	490	3 500	3 990
3/10	429	Botha	Csh Pmt			450	4/10	Valley Gas	Ptrl	36.84	236.16	300.00
4/10	430	Venter	Chq Pmt			685	4/10	ATM	Cash			200.00
4/10	431	Wilson	Csh Pmt									
5/10	432	Sihalo	Chq Pmt			3 000						

9. The following happens on the 4th October 2008:

You need R200,00 in petty cash for the running of your day-to-day expenses in the office. You withdraw this money in cash from the ATM. You also have to buy parts from H & H Spares to the value of R3 500,00 for work to be done on the alternator of a car.

You have to buy petrol from Valley Gas Station to the value of R300 for daily collection of parts.

- Complete the cheques and the cheque stubs for these two payments.
- Add these payments to the cash payments side of the cash book of the previous question. To fill in the VAT amount and cheque analysis (VAT exclusive amount) you will have to calculate what the VAT amount was for the cost of the alternator. Petrol is exempted from VAT.

BEST BANK

Ltd Reg no. 1961/0004/06
SHONGOLO Main Road

101-923

Date: 4/10.2008Pay H&H Spares or bearerAmount Three five zero zero rand only

T.J. Motors

T Jantjies

0066 2024 1175 245324 09

Date: 4/10.08

To: H&H Spares

For: _____

Balance brought forward	8 950.00
Deposits	935.00
Total	9 885.00
This cheque	3 500
Sub-total	5 895
Withdrawals	0.00
Balance carried forward	5 895.00

0066

Date: 4/10/08

To: Valley Gas

For: Petrol

Balance brought forward	5 895
Deposits	0.00
Total	5.895
This cheque	300
Sub-total	5 595
Withdrawals	200
Balance carried forward	5 395

0067

BEST BANK 101-923

Ltd Reg no. 1961/0004/06
SHONGOLO Main Road

Date: _____

Pay Vally Gas or bearer

Amount Three hundred rand only

R	c
300	00

T.J. Motors

T Jantjies

0067 2024 1175 245324 09

9. Complete the bank statement on the cheque account of the business – take the balance brought forward to be R9 000,00:

Date	Branch	Description	Bank fees	Debits	Credits	Balance
	Brought forward					9 000,00
2/10/08	Shongololo	Cheque deposit			1000	10 000
3/10/08	Shongololo	Cash deposit			450	10 450
3/10/08	Shongololo	Precise Prop		2 500		9 950
4/10/08	Shongololo	Cheque deposit			685	10 635
4/10/08	Shongololo	Cash deposit			250	10 885
4/10/08	Shongololo	Cheque H&H		3 990		6 895
4/10/08	Shongololo	Cheque Valley Gas		300		6 595
4/10/08	Cape Town	Cash		200		6 395
5/10/08	Shongololo	Cheque deposit			3000	9 395

STATEMENT

To: L. Dlamini From: T.J. MOTORS
 26 Industrial Road
 VANGUARD 2357

DATE: 31 October 2008

DATE	DETAILS	DEBIT	CREDIT	BALANCE
	Account rendered			1 210.06
9/10/06	Less receipts		900	
				310.06

	Ageing	Current	30	60	90
		310.06			

BEST BANK 101-923

Ltd Reg no. 1961/0004/06
 SHONGOLO Main Road Date: 7/10/08

Pay Auto Parts Ltd. or bearer

Amount Nine hundred and ninety nine rand and ¹⁶/₁₀₀

R	c
999	16

T.J. Motors

T Jantjies

0068 2024 1175 245324 09

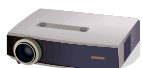
Date: 7/10/08

To: Auto Parts Ltd

For: Motor Parts

Balance brought forward	5 395
Deposits	3000
Total	8395
This cheque	999.16
Sub-total	7395.84
Withdrawals	0.00
Balance carried forward	7395.84

0066



Lecture slide
#51-54

1.5 Savings

- Explain to students the benefit of saving vs. borrowing.
- If you know of any stories where people have fallen into a irrecoverable debt trap or people having made it rich through saving, tell them.
- Take students through examples of calculating simple interest and compound interest.

The formula for simple interest will be:

$$\text{Simple interest} = P \times T \times \frac{r}{100}$$

Where: P : initial amount
T : number of years
r : interest rate

Compound interest: Final amount: $A = P(1+r/100)^n$

(r= interest rate p.a.; n= number of periods and P = initial amount.)

This above formula amounts to the same as calculating simple interest step by step. Calculate it for the example just done for two years to check on the answer of R110,25.

Try this just to refresh your memory on the use of these two formulae:

A man has R7 500. He loans R2 000 at a rate of 5% p.a. and R2 500 at a rate of 7% p.a. (to friends therefore both loans are at *simple interest*). He invests the remaining money at a rate of 10% p.a. *compounded annually*. What will his interest amount to after two years?



Activity 5 – Compound interest

This is a difficult activity that students almost certainly won't be able to complete on their own. Questions 2 and 3 are beyond the scope of the syllabus, and you may find it easiest to just give students the answers for these questions rather than confuse them with the calculations.

1. Calculate the interest amount on R16 500 in a fixed deposit at 8% p.a. for five years. Calculate the interest on a monthly basis.

$$FA = 16500 (1 + \frac{8}{1200})^{24} = 16500 (1,1728849) = 19352,60$$

$$\text{The interest amount} = 19352,60 - 16500 = R1852,60$$

2. Calculate the number of years necessary to have R12 000 increase to R20 000 at an interest rate of 7% p.a. calculated on a quarterly basis.

$$20000 = 12000(1 + \frac{0,07}{4})^n$$

$$\frac{20000}{12000} = (1 + \frac{0,07}{4})^n$$

$$\ln(\frac{20000}{12000}) = \ln(1 + \frac{0,07}{4})^n$$

$$n = \frac{[\ln(\frac{20000}{12000})]}{[\ln(1 + \frac{0,07}{4})]}$$

$$n = 29,44 \text{ months} = 7,36 \text{ years}$$

3. Calculate the interest rate if R7 000 increases to R15 000 in 5 years.

Interest is calculated on an annual basis.

$$15000 = 7000(1 + \frac{r}{100})^5$$

$$\frac{15000}{7000} = (1 + \frac{r}{100})^5$$

$$(1 + \frac{r}{100}) = \sqrt[5]{(\frac{15000}{7000})}$$

$$r = 16,47\%$$

4. Calculate the value of a car that cost R45 000 after 6 years. Depreciation is 6% p.a.

$$\text{Final amount} = 45000 (1 - \frac{6}{100})^6 = 31044,13$$

5. Calculate the amount that has to be invested to have R25 000 available after 10 years at an interest rate of 6% p.a. calculated on a monthly basis.

$$25000 = P \left(1 + \frac{6}{200} \right)^{20}$$

$$P = 13841,90$$



Lecture slide
#55-57

Case study 3 - The extraordinary power of compound interest

The answers given here are approximations and will differ depending on what assumptions the student uses to calculate. Students can work on this in class, where they can ask questions. It is doubtful whether they will be able to complete this activity at home without help.

Twin brothers each have R1 000 per year extra in their pockets from the age of 19.

They can either invest this at 8% p.a. compound interest, or just spend it.

Brother A saves his money each year until he is 29 years old and then decides to rather spend the annual R1 000. However, he does not touch the money already in the bank which continues to grow at a compound interest rate of 8% p.a.

Brother B does the opposite – he squanders the money for the first 10 years and then decides to start saving. He does this for the next 36 years.

- a. Calculate who will have the most money at the age of 65. Use a monthly compounding of the interest.

Brother A obtains approximately R230 000 while brother B obtains approximately R190 000

- b. Plot two curves on the same set of axes to illustrate the growth of their nest eggs. Use time on the horizontal axis and amount of money in the bank on the vertical axis.



Lecture slide
#58-63

1.6 Financial statements

Revise the concepts of income statements and balance sheets with students.

It may be worthwhile to draw up a sample balance sheet and explain the balance sheet equation ($\text{Assets} = \text{Equity} + \text{Liabilities}$) and explain what each of these terms mean.

Remember, an income statement gives us an indication as to how well a business has performed over a period; a balance sheet tells us what the business's current financial position is.



Lecture slide
#64-68

Activity 6 - Budget and calculations of variance and % variance

Using the income statement of Sam's parents, a budget can be worked out for a projected income of R7 550 per month.

Combined budget for Sam's parents:

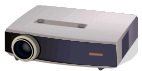
Expense items	Amounts expected as budgeted from an average of 6 months.	Percentage expense with regard to total expense	April Expenses	Variance amount	Variance percentage
Rent	2 050-00	27.13%	2 050-00	0	0
Insurance and funeral policies	400-00	5,29	400-00	0	0
Water & electricity	265-00	3,51	300-00	- 5	1,89%
Telephone	480-00	6,35	500-00	+ 80	16,67%
Transport	300-00	3,97	350-00	0	0
School fees	265-00	3,51	265-00	0	0
Clothes	250-00	3,31	100-00	+ 150	60%
Medical	146-00	1,93	200-00	- 54	36,99%
Food and household	2 850-00	37,72	3 500-00	-350	12,28%
Savings	250-00	3,31	200-00	-50	20%
Entertainment	300-00	3,97	c		
Totals	a 7556.00		b		

- Calculate the total budgeted expenditure.
 - Calculate the total expenditure for the month of April.
 - Calculate how much Sam's parents had left in April for entertainment.
 - Calculate the percentage that each expense item constitutes with respect to the total expenditure.
 - Calculate the variance amounts between the budgeted amounts and the expenses for April. State whether the variance is positive or negative.
 - Calculate the percentage variance for each expense item (state positive or negative.)
2. Prepare an income statement using the following figures for the year 2001 from the business of J.J. Dampies who is a builder:
 Services rendered – R590 000; Salaries – R48 000; Telephone – R7 000;
 Interest received – R5 000; Rent paid – R12 000; Transport costs – R8 000;
 Stationery – R3 000; Building materials – R300 000.

Income:	
Services rendered	590 000
Interest received	5 000
Total Income	595 000
Expenses:	
Salaries	48 000
Telephone	7 000

Rent paid	12 000
Transport costs	8 000
Stationery	3 000
Building materials	300 000
Total Expense	378 000
Net income:	217 000

3. Make a list of all items that need to be considered expenses in your chosen line of work.



Lecture slide #69-70

Studying the income statement

Explain the importance of analysing the income statement, to determine whether the organisation is profitable, and what the major areas of expenditure are. Explain how the income statement is used to measure the performance of the company against industry standards, previous years' financial statements and the goals of the organisation. Also show how the income statement is used to determine the budget for the next year.

Case study 4 – Income statement

Noluthando's Little Laundry

Use the figures from module 1 to compile an income statement for June of 2009 for Noluthando's Little Laundry.

Students should be able to complete this activity in class. Note that the interest payment has been somewhat simplified to avoid complex annuity payments (15% of R29 000).

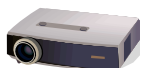
Income Statement For Noluthando's Little Laundry

Sales		5450
Less: Costs		(7713,36)
Install of dishwasher	195,45	
Interest payments	4350	
Petrol	800	
Driving class	720	
L. Lic, Drv Lic & photo	230	
Car registration	618,27	
Soap	380,64	
Water & electricity	400	
Net profit		(2263,36)

1.7 Budgets

Personal, regional and/or national budgets:

- Explain that a budget is a description of the spending/expenditures and financing plans/proposed means of financing, of an individual, a company, a government, or for a specific purpose.
- Give examples of various types of budgets and organisations that budget.



Lecture slide
#71-73

Activity 7 – Interpret the news

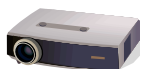
This activity can be completed by students in class or as homework.

The annual budget is presented by the Minister of Finance at the end of February of each year. The first table gives the main features of the National Budget of 2005/2006 as delivered by the Minister of Finance at the end of February 2005. The second table is from the Sunday Times of 24th February 2008.

1. Study the two tables and conclude what is meant by a “billion”.
Each figure in the table should actually be multiplied by 1 000 000 000, e.g. R25,4 = R25,4 billion = R25400000000.
2. Why are two years attached to each year?
The financial year runs from 1st March of any given year to the last day of February of the next year.
3. What do the sections “other” and “payment of interest” mean?
Other = smaller sections of expenses grouped together.
Payment of interest = interest on money owed.
4. Calculate the variance (difference) between the amounts for 2007 and 2008
5. Calculate the % variance 2007 to 2008.
6. Calculate the % variance from 2005 to 2008.
7. Calculate % expenditure on each item of the 2008 budget.

Expenditure: in billion Rand – 2005/2006	
Defence Force	25,4
Police	30,5
Prison services	9,7
Justice	6,4
Education	82,0
Health	48,1
Social Services/ Welfare	72,7
Housing	7,3
Community Development	14,3
Water	6,3
Fuel and Energy	2,7
Agriculture	9,8
Mining, Manufacturing and Construction	2,2
Transport and Communication	19,5
Other	45,3
Payment of Interest	53,1
Total	435,3

Millions of rands	2007/2008	2008/2009	Variance amount: '07 – '08	% variance: '07 – '08	% variance '05 – '08	% expenditure '08
Protection services	86 992	95 324	8332	9,6%		13,3%
Defence and intelligence	28 579	30 440	1861	6,5%		4,2%
Police	38 563	42 730	4167	10,8		6,0%
Prisons	11 114	12 050	936	8,4%		1,7%
Justice	8 736	10 105	1369	15,7%		1,4%
Social services	311 678	354 444	42766	13,7%		49,5%
Education	105 746	121 087	15341	14,5%		16,9%
Health	68 169	75 492	5323	7,8%		10,5%
Welfare	92 224	105 309	13095	14,2%		14,7%
Housing	12 370	14 784	2414	19,5%		2,1%
Community develop.	33 170	37 772	4602	13,9%		5,3%
Economic services	143 213	165 213	22000	15,4		23,1%
Water	15 994	16 775	781	4,9%		2,3%
Fuel and energy	7 045	5 651	1394	19,8%		0,8%
Agriculture, forestry	14 145	14 624	479	3,9%		2,0%
Mining, manufacturing	2 845	2 775	70	2,5%		0,4%
Transport & comm.	54 991	71 281	16290	29,6%		10,0%
Other economic services	48 195	54 107	5912	12,3%		7,6%
Unallocated expenditure	34 876	40 302	5426	15,6%		5,6%
Total allocated expenditure	576 760	655 283	78523	13,6%		91,5%
Interest	55 772	54 960	812	1,5%		7,7%
Contingency reserve	-	6 000	6000	100%		0,8%
Total expenditure	632 532	716 243	83711	13,2%		



Lecture slide
#74-79

Case study 5 – Role play Little Laundry – budget

Students should complete this activity in class.

Your friend plays the role of Noluthando and you are her accountant, Siphso. Noluthando is anxious about her finances and asks you to compile a budget for her.

From the information in Module 1 Activity 12 as well as from the income statement in the activity above, you know:

- how much money she has as an opening balance, and
- how much she earns on average per month.

1. You arrange a meeting with her to discuss her expenses. You discuss a list of possible expenses with her – some of the expenses might not be applicable to Noluthando's situation. The two of you have to complete the following list:

	Amounts
A. Take home pay	5450,00
B. Monthly expenses:	
Rental	950,00
Car running expenses	800,00
Rates, water & electricity	618,27
Insurance	
Telephone	200,00
Clothing	
School expenses	
Loan/Credit Card/ HP	
Food and household	900,00
Entertainment	
Other	
Total monthly expenses	3468,27
Amount remaining for monthly loan repayments	1981,73

2. Noluthando's role now changes to that of your personal assistant as accountant. Together you have to complete the table overleaf. The following worked example will assist you in your calculations:

Calculate the % interest charged on the final amount:

• **For a loan amount of R8 000:**

$$\begin{aligned} \text{Final payment amount (24-month/option A)} &: 551 \times 24 \\ &= \mathbf{R13\ 224} \end{aligned}$$

$$\begin{aligned} \text{R13 224} - \text{R8 000} \\ &= \mathbf{R5\ 224} \end{aligned}$$

$$\begin{aligned} \therefore \text{\% interest charged} &= \frac{5\ 224}{8\ 000} \times 100 \\ &= \mathbf{65,3\%} \end{aligned}$$

• **For Noluthando's amount:**

$$\begin{aligned} &\frac{65,3}{100} \times 29\ 000 \\ &= \mathbf{R18\ 937} \end{aligned}$$

$$\begin{aligned} \text{Total amount of repayment (excluding R10 000 deposit)} &: \text{R29 000} + \text{R18 937} \\ &= \mathbf{R47\ 937} \end{aligned}$$

$$\begin{aligned} \text{Monthly installment:} &\quad \frac{47\ 937}{24} = \mathbf{R1\ 997,38 / month} \end{aligned}$$

Loan amount	24 months			36 months		
	Option A	Option B	Option C	Option A	Option B	Option C
% interest charged	65,3%	17,5%	19,2%	59,48%	26,57%	29,24%
8 000	551	391,67	397,33	354,40	281,27	287,20
10 000	$16530 \div 24 = 688,75$	465,63	496,67	443	351,58	359
15 000	1033,13	698,44	745,24	664,50	527,38	538,50
25 000	1721,88	1224,08	1241,67	1107,50	878,96	897,50
29 000	R1 997,38	R1 419,79	R1440,33	R1 284,70	R1019,56	R1041,16

3. Back to Noluthando. You show her the table that you have compiled of various lending options for 24-month and 36-month periods. You ask her how much she is prepared to give as monthly installment for the remaining R30 000 owed on the car.

Add this amount to her budget.

A wise decision would be R1419,79 which would mean that she has some money to spare for any possible emergencies. She would then repay the loan in 24 months and it would cost her $1419,79 \times 24 = R34074,96$ which is 5074,96 more than the R29000.

4. Adapt her budget if she is in the red, i.e. make a plan for her.

She is not in the red.

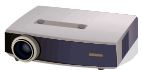


Activity 8 - develop a budget

Students should complete this assignment as homework.

You want to sell hot dogs at the queue where people stand waiting the whole day to receive their social grants. This happens once a month.

- List all items to be bought or rented.
- Find the prices of each item.
- Decide on quantities to be bought.
- Calculate how much one hot dog is going to cost you.
- Decide how much you will charge per hot dog.
- Develop a budget which includes payment of a friend who will assist you.
- Calculate your expected net profit.



Lecture slide #80

1.8 More documents

- Hire-purchase contract
- Loan agreement contract
- Rental contract



Assignment

Student's own research.

Ask around either in the class, amongst fellow-students or at a business, to find someone who has knowledge of these contracts.

Find out:

1. What kind of information is necessary to be accepted as a contracted person?
2. Is it possible for a furnishing store to re-possess/take back furniture that you buy under a hire-purchase agreement? Explain.
3. If the store does re-possess the bought item, what happens to the installments that you have already paid?
4. Which is better for a contracted person: to pay **smaller or larger amounts** per month?
5. What maximum % is a loan-business allowed to charge you?
6. If you have signed a rental contract for a flat for 24 months and you have to move out of the area, what can you do to prevent having to continue paying the monthly rental amount?
7. Did your friend read the "fine print"? If so, what did it say? If your enquiry is directed to a store, ask them what is in the "fine print".

1.9 Tables

You have encountered quite a few tables already in this module. Here is one more.



Activity 9 - Cell phone vs. land line rates

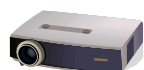
Look at the table for cell phone rates:

	Off-peak***	Peak **	Happy hour*
Cell phone to cell phone	R0,97	R1,80	R1,49
To national landline numbers (Telkom)	R0,97	R2,20	---
SMS per message	R0,35	R0,80	---

- *** 20h00 – 07h00 Monday to Friday, and
00h00 – 24h00 Saturday, Sunday & public holidays
- ** 07h00 – 20h00 Monday to Friday
- * 17h00 – 20h00 Monday to Friday

Questions:

1. Explain the words "peak", "off-peak" and "happy hour".
"Peak" is when there is a peak or surge of calls i.e. when most people want to make calls. "Off-peak" is when few people call e.g. at midnight. "Happy hour" is between the "peak" and the "off-peak" time around 18h00.
2. Is it cheaper to quickly phone (45 seconds) or to send an SMS?
SMS is much cheaper than any phoning.
3. During one month you make the following calls: 45 calls from cell phone to cell phone of which 30 are orders placed which last on average two



Lecture slide
#81-83

minutes each, and 15 calls from cell phone to land-line. Nine of the latter calls last about 5 minutes (peak time) and the rest take 7 minutes each (off-peak). All of the business calls are in peak time. You also used happy hour rates for 22 calls to family and friends, talking on average 10 minutes per call. You send about 100 SMS's during the month. Calculate your cell phone cost for the month.

$$30 \times 2 \times 1,80 = 108$$

$$9 \times 5 \times 2,20 = 99$$

$$6 \times 7 \times 0,97 = 40,74$$

$$22 \times 10 \times 1,49 = 24,50$$

$$70 \times 0,35 = 24$$

$$\text{Total amount} = R624,04$$



Lecture slide
#84-91

Summative assessment

This should serve as the final revision before the summative assessment test. Students should complete this alone and in silence.

Note: For learners to be able to complete this activity, they will need to know the following:

Selling price of each item (markup of 40%)

- Toffees R1,10 ea
- Lollipops 40c ea
- Boiled sweets 15c ea
- Potato crisps 50c ea
- Cheese curls 50c ea
- Chocolate bars R2,67 ea
- Tennis biscuits R2,80 ea
- Carbonated drinks R5,60 ea
- Fruit juice R2,75 ea
- Bananas R1,40 ea
- Apples R2:20 ea
- Oranges R2,35 ea
- Matches 60c/box
- Cigarettes 1 R1,55 / cigarette
- Cigarettes2 R2,10 / cigarette
- Assume that a month has 20 days
- Assume that any fruit not sold is wasted.
- Expenses should be calculated on stock used not stock bought, learners will therefore have to calculate the cost of stock used at cost price.
- $\text{Profit margin} = \text{Net profit/sales} \times 100$

1. Noluthando's daughter, Thuleka, decides in February to start a small tuck shop on the premises of the Little Laundry.

Her mother agrees that she can use a table and cool box to put the drinks and ice in. She expects to do good business because of the location of their house:

- They live five houses from the clinic.

- All of the students of the local high school pass the little Laundry during the school term. She has saved R850 from doing waitressing at a local restaurant and will use this money to start her small business. She decides to buy the following stock:
- Separate toffees/lollipops/boiled sweets (bought in big bags, sold separately): lollipops cost R15 for 50; boiled sweets cost R25 for a bag of 250; toffees cost R80 for a bag of 100.
- Potato crisps and cheese curls, 30 g packets cost R19 for 50 packets.
- Assortment of small chocolate bars – about R120 for 45 bars.
- Tennis biscuits – cost R48 for 24 packets.
- Tins of carbonated drinks – cost R48 for 12 tins.
- 250 ml containers of fruit juice – this costs R235 for a box of 200.
- Bananas – cost R3,99 per kilogram and there are about 4 bananas per kilogram.
- Apples – cost R7,95 per kilogram and there are about 5 apples per kilogram.
- Oranges – cost about R4,99 per kilogram and there are about 3 oranges per kilogram.
- Matches – a packet of 12 boxes cost R5,00.
- Two different brands of cigarettes – the one kind costs R22,00 per packet and the other costs R29,50 per packet.

Item	Stock bought	Amount (bought; sold at cost)	Stock sold	Amount	Profit
Toffees	200	R160; R148	185	203,50	R55,50
Lollipops	200	R60; R46,80	156	62,40	R15,60
Boiled sweets	250	R25; R21,50	215	32,25	R10,75
30g potato crisps	100	R38; R19,76	52	26,00	R6,24
Cheese curls	150	R57; R47,12	124	62,00	R14,88
Chocolate bars	90	R240; R98,79	37	166,50	R67,71
Tennis biscuits	72	R144; R116	58	162,40	R46,40
Tins of carbonated drinks	60	R240; R220	55	308,00	R88
Fruit juice	200	R235; R141,60	120	330,00	R188,40
Bananas	6 / day	R120; R120	6 / day	168	R48
Apples	12 / day	R381,60; R281,60	10 / day	445,20	R163,60
Oranges	20 / day	R668; R668	17 / day	799,00	R131
Matches	15 boxes / day	R126; R126	15 boxes / day	175,00	R49,00
Cigarette 1	30 packets	R660; R550	25 cigs. / day	775,00	R225
Cigarette 2	20 packets	R580; R522	18 cigs. / day	756,00	R234
Ice	2 bags / day			Not sold	

Questions:

1. Calculate her expenses and income.
(see table)
2. Draw up an income statement for the first month of Thuleka's small business.

<i>Sales</i>		4471.25
<i>Less Costs:</i>		(3127.27)
<i>Stock</i>	3127.17	
<i>Net Profit</i>		1343.98

3. Draw up a budget for Thuleka listing the separate items to guide her.
Students should draw up their own budgets based on what they predict the sales to be, or if it is easier, assume that sales will increase by 10% in the next month.
4. What is her profit margin?
$$\text{Profit margin} = \text{Net profit} / \text{sales} \times 100$$
$$= 30\%$$
5. Her business does very well and she has no time before the end of the month to visit the bank. She therefore has the whole month's income in her pocket when she goes to the bank with Noluthando on the last day of the month. She has to apply for a savings account. Decide which bank to use – look at the table of bank charges. Get an application form from a bank and fill it in for her.
Learners own work.
6. Fill in the deposit slip with Thuleka.
Learners own work.
7. Explain to Thuleka which documents she should keep and why she should do this.
Learners own work.
8. Thuleka needs you to help her save on phone costs. Advise her at what time of day to phone. Work out how much her cell phone account (43 calls each lasting about 1,5 minutes) will cost her in peak and off-peak times. (Refer to table in Activity 15).
Cell to cell:
$$\text{Peak time} - 43 \times 2 \times 1,80 = 154,80$$
$$\text{Off-peak time} - 43 \times 2 \times 0,97 = 83,42$$
Off-peak phoning will save her 71,38
Cell to land-line:
$$\text{Peak time} - 43 \times 2 \times 2,20 = 189,20$$
$$\text{Off-peak time} - 43 \times 2 \times 0,97 = 83,42$$
Off-peak phoning will save her 105,78