

CHAPTER 3

Finance

CONTENTS

1	Financial Documents	1
1.1	Exercise 20	1
2	Tariff Systems	2
2.1	Exercise 21	2
3	Income, Expenditure, Profit/Loss, Income and Expenditure Statements and Budgets	3
3.1	Exercise 22	3
3.2	Exercise 23	7
4	Cost Price and Selling Prices	8
4.1	Exercise 24	8
5	Break-even Analysis	9
5.1	Exercise 25	10
6	Interest	12
6.1	Exercise 26	12
6.2	Exercise 27	13
7	Banking, Loans and Investments	15
7.1	Exercise 28	15
8	Inflation	18
8.1	Exercise 29	18
9	Taxation	19
9.1	Exercise 30	19
10	Exchange Rates	22
10.1	Exercise 31	22
11	Answers for Exercises	24
11.1	Exercise 20	24
11.2	Exercise 21	24
11.3	Exercise 22	24
11.4	Exercise 23	26
11.5	Exercise 24	26
11.6	Exercise 25	27

11.7 Exercise 26	31
11.8 Exercise 27	32
11.9 Exercise 28	32
11.10Exercise 29	33
11.11Exercise 30	33
11.12Exercise 31	34

August 26, 2021

1 FINIANCIAL DOCUMENTS

1.1 Exercise 20

1. Study the statement of a bank account for July 2017 below. Study the relevant information to answer the questions.

Best Bank
Bank Statement - Savings Account
Client: George Moosa Statement Date: July 2017
Account number: 0987654

Transaction Date	Transaction Detail	Amount	Account Balance
1	Opening Balance		R 9 234,99
1	Debit Card Purchase	R 1 234,78	R 8 000,21
1	Transaction fee	R 3,50	R 7 996,71
4	Stop Order-Rental	R 5 000,00	R 2 996,71
4	Transaction Fee	R 10,90	R 2 985,81
4	Debit order - cell phone account	R 350,00	R 2 635,81
4	Transaction fee	R 3,50	R 2 632,31
15	ATM withdrawal	R 1 000,00	R 1 632,31
15	Transaction fee	R 10,00	R 1 622,31
16	Cash deposit at Branch	R 1 000,00	R 2 622,31
16	Transaction fee		
17	Debit order - car insurance		R 2 014,81
17	Transaction fee	R 6,00	
18	ATM withdrawal	R 1 000,00	
18	Transaction fee	R 10,00	
27	Electronic deposit - Salary	R 15 280,81	
28	Monthly account fee	R 54,00	
	Closing Balance		

Amount of money in account	Interest Rate (% per annum)
R 1 - R 4 999,99	1,2%
R 5 000 - R 9 999,99	1,5%
R 10 000+	1,8%

- 1.1 Give the name and surname of the person who is the account holder.
- 1.2 George has deposited R1 000,00 at the branch on 16 July. The bank uses the following formula to calculate the transaction fee on money deposited into an account at a branch:
Transaction fee = R4,20 + 0,75% of the transaction amount. Use the formula to calculate the transaction fee.
- 1.3 What was the balance in the account at the end of the 16th of July?
- 1.4 Calculate how much the client pays for car insurance (17 July)
- 1.5 What amount did the person have in the account on the 17th of July?
- 1.6 Calculate the total amount that this client paid towards banking costs in July 2013. (Banking costs are all the transaction fees and account fees which were deducted automatically from the account during the month.)
- 1.7 What is the interest rate that George will receive 18th July?
- 1.8 What is the interest rate that George will receive 27th July?

2 TARIFF SYSTEMS

2.1 Exercise 21

1. The table below shows the costing structure for water usage.

Water usage in kilolitres	Tariff *(per kilolitre)	Fixed charges per month
0 kl to 9 kl	Nil	Nil
From 9 kl to 25 kl	R 9,27	R 83,43
From 25 kl to 30 kl	R 12,36	
From 30 kl to 45 kl	R 19,06	
More than 45 kl	R 20,96	

*NB Tariffs exclude 15% VAT

- 1.1 Use the water tariff table above to calculate the cost of refilling a pool with 52 kl of water (including VAT).
- 1.2 How many litres are for free?

2. Gautrain tariff

Pay-as-you-go: single trip

	Hatfield	Pretoria	Centurion	Midrand	Malboro	Sandton	Rosebank	Park	Rhodesfield
Hatfield		20,00	25,00	37,00	43,00	46,00	49,00	52,00	49,00
Pretoria	20,00		23,00	30,00	40,00	43,00	46,00	49,00	46,00
Centurion	25,00	23,00		25,00	31,00	38,00	40,00	43,00	41,00
Midrand	37,00	31,00	25,00		23,00	25,00	28,00	31,00	29,00
Malboro	43,00	40,00	31,00	23,00		20,00	22,00	25,00	23,00
Sandton	46,00	43,00	38,00	25,00	20,00		20,00	22,00	27,00
Rosebank	49,00	46,00	40,00	28,00	22,00	20,00		20,00	29,00
Park	52,00	49,00	43,00	31,00	25,00	22,00	20,00		31,00
Rhodesfield	49,00	46,00	41,00	29,00	23,00	27,00	29,00	31,00	

2.1 Chris lives near the Hatfield Gautrain Station and wants to go to Rosebank Mall. He can either drive 59,2 km in each direction by car, or take the Gautrain to the Mall. According to the AA the running cost at R3,34 per kilometre. With no traffic it will take him 43 minutes in each direction. What would you advise him to do? Show all calculations and motivate your answer.

2.2 Calculate the cost if Chris gets another passenger to share the cost.

3 INCOME, EXPENDITURE, PROFIT/LOSS, INCOME AND EXPENDITURE STATEMENTS AND BUDGETS

3.1 Exercise 22

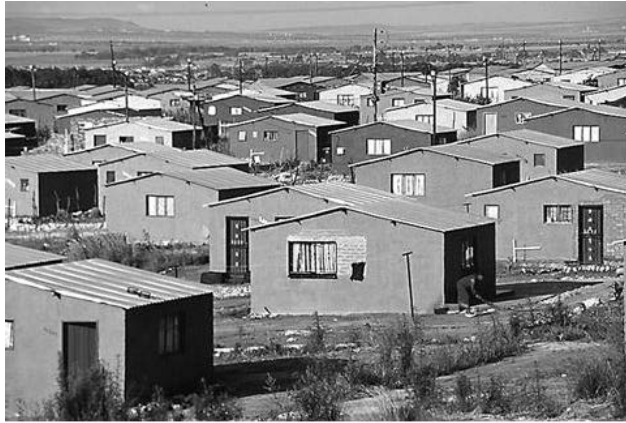
A budget is a planning of how to spend your money in the best way during the coming month

1. Mr and Ms Hattingh realised that they overspent and decided to review their expenses for the month of May. They also have certain expenses that are quoted annually but need to be paid monthly. (Note: p.m. is per month and p.a. is per annum that means per year.)

Study the budget below and answer the questions:

Home loan instalment	R 5000,00	p.m.
Instalment on fridge	R 104,17	p.m.
School fees for the 2 kids	R 1200,00	p.a. each
Clothes account	R 560,00	p.m.
Insurance on 2 vehicles	R 3600,00	p.a.
Pension fund	R 1200,00	p.a.
Insurance on home and content	R 8400,00	p.a.
Tithe (for church)	R 200,00	p.m.
Bank charges	R 70,00	p.m.
Entertainment	R 1000,00	p.m.
Gym fees	R 94,50	p.m.
Petrol	R 1000,00	p.m.
Salaries for domestic workers	R 1500,00	p.m.
Food	R 3000,00	p.m.
Cell Phone costs	R 1200,00	p.m.
Video rentals	R 300,00	p.m.
DSTV	R 5200,00	p.a.

- 1.1 Calculate the total amount of the **annually** quoted expenses.
 - 1.2 What would the monthly payment of these expenses be if it is paid in 12 instalments?
 - 1.3 Mr Hattingh earns R 15 200 p.m. How much did they overspend on their budget in May, assuming that they would pay all annually quoted expenses on a monthly basis?
 - 1.4 They would have to reduce their expenses. Propose 4 ways in which they can do so. Provide good reasons in support of your answers.
 - 1.5 Mr Hattingh decided to sell one of his vehicles and to buy a bicycle in an effort to save on their expenses. He bought the car for R90 000 and sold it for R55 000. What is the **percentage loss** that he incurred on the sale of his car?
 - 1.6 Why would you say it is important to budget and what can you do to force yourself to keep to your budget?
2. The Municipality of Polokwane plans to build 44 new houses. They budgeted an amount of R8 million (R8 000 000) to build two bedroom and three bedroom houses. According to the costing clerk it will cost R160 000 to build a two bedroom house and R240 000 to build a three bedroom house.



- 2.1 How many two-bedroom houses will R8 000 000 enable the Municipality to build?
 - 2.2 How many three-bedroom houses will R8 000 000 enable the Municipality to build?
 - 2.3 Do a cost analysis to build 22 two-bedroom houses and 18 three-bedroom houses.
 - 2.4 The Municipality spent R6 480 000 to build three-bedroom houses. How many houses did they build with this amount?
3. You and your partners need R140 000 to open a business. You invest R36 000, Partner **X** invests R56 000 and Partner **Z** invests R48 000. The profit will be divided amongst the partners according to the ratio of capital invested.
- 3.1 What is the ratio of contribution, in its simplest form?
 - 3.2 What will the percentage of profit be for each partner? Round your answer off to the nearest percentage.
 - 3.3 You are the manager of the business and therefore **receive** 15% extra of the profit. The rest is divided in the profit percentage as in the previous question. Calculate the amount of money each partner receives, if the business made a profit of R90 000 after the first month.
 - 3.4 The business has a 25% profit ratio, and gives a 5% discount if a person buys for more than a certain amount. Express the ratio of the cost price to the selling price.
 - 3.5 Express the ratio of the marked price to the selling price.
 - 3.6 Partner **Z** wants to import stock from either Germany or Japan. The exchange rates are: $1\text{€} = \text{R}9,97$ and $1\text{¥} = \text{R}0,085$. The German supplier charges 50€ per case of 1 000 and the Japanese supplier charges 6 000¥ per case of 1 000. Which supplier will be the cheaper? (Show all your calculations.)
4. When you started the business, you and your partners made an investment of R140 000. The bank offered an interest rate of 9,5% compound interest. Three years after you started your business you and your partners decide to buy the building in which your shop is situated. The building costs R2,4 million. The bank requires a 20% deposit and the remaining amount will be lent to you at an interest rate of 9,5% simple

interest for 25 years.

Formulas: Compound & Simple interest:

$$A = P(1 + i)^n$$

$$A = P(1 + i \times n)$$

(Note that the formulas will not be provided in the CAPS question papers, therefore the years won't be that high. You may not make use of the formula in Exams.)

- 4.1 What will the **balance** of the fixed deposit be now?
- 4.2 You are going to use the investment as part of your deposit. How much money do you still need in order to get the 20% deposit?
- 4.3 What will the borrowed amount be at the end of 25 years?
- 4.4 What will the monthly payment on the building be if the interest rate stays the same for 25 years?
- 4.5 Calculate the annual property tax if the property is valued at R1,9 million and the tax calculated at 7.64c.
- 4.6 The agent who has sold the building receives a commission of 2,5% on the first million and 3% on the rest. Calculate the commission that the agent receives.
- 4.7 Partner Z is declared insolvent, his assets are R900 000 and his liabilities are R1,5million. The cost of the liquidation amounts to R7 500. How much in Rand can his creditors expect?
- 4.8 If he owes their business R500 000, how much will the business receive?

5. A fitness shop buys and sells gym equipment at the following prices: Complete the table:

Item	Cost Price	Selling Price	Profit/Loss	Profit%/Loss%
Weights 2 kg	R220	R275		
Stability ball 55 cm	R120	R155		
Stability ball 65 cm	R150	R170		
Elastics	R65		R20 profit	
Microfibre Yoga Mat		R300	R55 profit	
Towels		R95	R5 loss	

3.2 Exercise 23

1. A Laptop is advertised for a cash price of R6 400,00. Carl wants to buy it on hire purchase over 3 years. The deposit will be 15% of the cash price.



- 1.1 Calculate the deposit.
15% of R6 400,00
- 1.2 Hire purchases are **ALWAYS** calculated by using simple interest. If the interest rate is 12%, calculate how much interest you will have to pay on the remaining amount (that is after the deposit has been deducted from the purchase price). ($SI = P \times i \times n$)
Calculate the remaining amount
- 1.3 Calculate the interest: $SI = P \times i \times n$
- 1.4 Calculate the monthly instalment that must be paid. You first need to calculate the debt.
- 1.5 How many months does Carl have to pay?
- 1.6 What is the better: hire purchase or cash purchase? Motivate your answer.
What would the computer cost if Carl paid the cash price?

4 COST PRICE AND SELLING PRICES

4.1 Exercise 24

1. Applications - financial affairs

1.1 A pair of shoes costs R180 without VAT. Calculate the price of the shoes with VAT (15%) included.

1.2 A pair of running shoes is marked at R400. Jean pays cash and therefore only has to pay R350. Calculate the percentage discount granted to Jean. Learn this formula by heart.

$$\frac{\text{Selling Price} - \text{Cost Price}}{\text{Cost Price}} \times 100 = \% \text{Discount}$$

Take Note: You must add the **percentage** sign here. It is seen as a "unit"

1.3 Calculate the selling price of a bag of potatoes that was acquired at R18 if the profit percentage is 20%.

1.4 You invest R500 at 6% per year calculated with simple interest, for two years. Calculate the amount you will have at your disposal after the two years.

1.5 Sipho wants to buy a new car. The price of the car is advertised at R150 000. He is granted 10% discount and only after that the VAT is added. Calculate the amount (incl. VAT) that Sipho has to pay for his new car.

1.6 Calculate the price of a 2 liter Coke after VAT is added, if the Coke costs R9,12 before VAT is added.

1.7 A merchant buys a soccer ball at R34,50. He sells it at R42,65. Calculate the profit percentage. How much did he pay for 18 soccer balls?

1.8 Your parents want to sell their house. They requested R560 000 in their pockets. However, the sales agent asks 7% commission. Calculate the selling price of the house.

1.9 Clear Merchant has to close his doors and decides to sell out all goods at a loss of 7%. Amongst other things, he had acquired 16 containers of washing powder at R33 each. Sheila decides to acquire 4 of the containers washing powder at a sale. Calculate how much she has to pay.

1.10 According to the budget of the government of Barbados for 2007, \$23,45 million from the total amount of \$886,9 million is allocated for the World Cup. What percentage is this amount of the total amount? Round off to 2 decimal places.

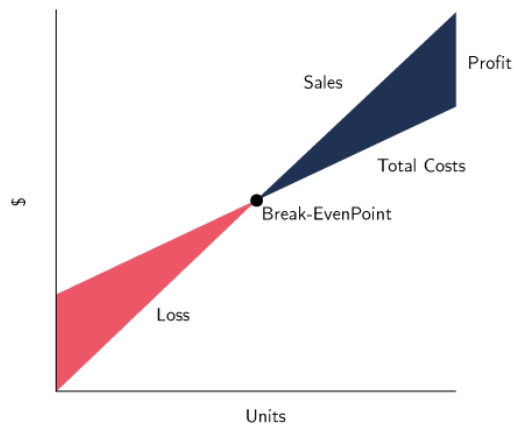
1.11 You work for an average of 80% in all your subjects. At this stage you do have an average of 78% for 6 of your subjects. You still need to hear your Math mark. Determine the result of your Math mark in order to raise this average to 80%

5 BREAK-EVEN ANALYSIS

In order for a business to do well they need to be in control of their income and their expenses.

$$\text{Income} - \text{Expenses} = \text{Profit}$$

The goal of a business is to make maximum profit. If the income is more than the expenses, the business makes a PROFIT. If the income is LESS than the EXPENSES, the business runs at a LOSS. If the income is EXACTLY THE SAME as the expenses, the business BREAKS EVEN.



Whenever two graphs cross each other, it is showing a break-even point. It is the point where they simply cover all their expenses. Where there is a loss, the expenses curve is above the income curve and it means that the income is less than the expenses.

Where the income graph is above the expenses, the area represents where the business is making a profit.



5.1 Exercise 25

1. A printing company drew the following table to determine the costs to print brochures. The company pays R10 to print only one pamphlet. The selling price is R20 each. The overhead costs is R1 000 per month.

Number of pamphlets	0	50	1 00	150	200
Overhead costs	1 000	1 000	1 000	1 000	1 000
Printing costs	0	500	1 000	1 500	2 000
Total cost	1 000	1 500	A	2 500	3 000
Income	0	1 000	2 000	B	4 000

- 1.1 Make use of this table to draw a line graph that represents the costs and the income of the company: (Remember your labels).
- 1.2 How many pamphlets must the company sell to break even?
- 1.3 What is the profit when it sells 200 pamphlets?
- 1.4 Write a formula to determine the income.
- 1.5 Write a formula to determine the total cost.
- 1.6 Solve the break-even point algebraically.
2. Pieter's dad wants to encourage him to learn harder for his matric exam.
- OPTION A** To motivate him, his dad offers him R500,00 if he studies 3 hours every afternoon. For every distinction that he achieved, he will receive R250,00.

$$\text{Option A} = 500 + 250 \times (\text{number of distinctions})$$

OR

OPTION B His dad offers him R1 000,00 if he studies 3 hours every afternoon. For every distinction that he achieved, he will receive R100,00.

$$\text{Option B} = 1\,000 + 100 \times (\text{number of distinctions})$$

- 2.1 Complete the table: **OPTION A**

Amount of distinctions	0	1	2	3	4	5	6	7
Amount in R								

- 2.2 Complete the table: **OPTION B**

Amount of distinctions	0	1	2	3	4	5	6	7
Amount in R								

2.3 Draw the graphs on the same pair of axis.

2.4 Add a Y on your graph for the break-even point and explain it in your own words.

2.5 If Pieter achieved 5 distinctions, which option will be the better one? Do the calculations and read the answers from you graph. (Show the reading from your graph)

2.6 Pieter's goal is to earn R2 000. Read the number of the distinctions that he must achieve from your graph.

2.7 Do you think it's the best way to motivate a child? Discuss.

3. Ms Coetzee bought a small franchise that sells CD's at the local flea market on weekends. The franchise costs her R1 250 per month up front and she also pays R200 per weekend in order to trade at the flea market. Each CD costs R75 and her plan is to sell them for R175,00 each. Assume that the month in which she is trading has 4 Sundays.

3.1 Write formulas that she can use to calculate her

MONTHLY INCOME =

MONTHLY EXPENSES =

3.2 Complete the following table:

Nr of CD's	0	5	10	15	20	25	30
Monthly income							
Monthly expenses							

3.3 On the same set of axes draw a line graph representing Ms Coetzee's monthly income and another line graph representing her monthly expenses.

3.4 Determine Ms Coetzee's profit or loss if she sold 25 CD's.

3.5 Determine the minimum number of CD's that Ms Coetzee must sell in order to make a profit.

3.6 How many CD's must she sell to break-even?

3.7 Show the area where there is a loss, where the expenses curve is above the income curve.

3.8 Show on the graph, where the income is above the expenses, the area where the business is making a profit.

6 INTEREST

6.1 Exercise 26

1. Complete the table: You invest R2 000 at a simple interest rate of 12% for 5 years

How much money do you have at the end of the first year ? $2\,000 + 0,12 \times 2\,000 = R2\,240$	Interest earned is
How much money do you have at the end of the second year ? $2\,240 + 0,12 \times 2\,000 = R2\,480$	Interest earned is R240
How much money do you have at the end of the third year ? $2\,480 + 0,12 \times 2\,000 = R2\,720$	Interest earned is
How much money do you have at the end of the fourth year ? $2\,720 + 0,12 \times 2\,000 = R2\,960$	Interest earned is
How much money do you have at the end of the fifth year ? $2\,960 + 0,12 \times 2\,000 = R3\,200$	Interest earned is R240

Test your answer with the formula. You may not use the formulas in the exam. Simple Interest
 $= P \times i \times n$ and Final Amount $= P(1 + i \times n)$

2. I borrow R4 000 from the bank at 12% simple interest for three years. If I want to pay back the full amount after three years, how much will the amount be?
3. Sharon invests R18 000 for three years at 6,75% p.a. simple interest. Calculate the amount she will have at her disposal after the three years.
4. You are considering a hire-purchase transaction. You have already paid the deposit and want to borrow the outstanding amount of R45 678.00 from the bank. They are prepared to loan this amount to you at a simple interest rate of 12% per annum over 6 years. How much interest would you have to pay?
5. Sometimes you have to change the subject of the formula. You must know how to solve an equation in mathematics in order to do this. Your teacher must assist you here! Substitute all the given values and make the unknown value the subject of the formula e.g.

Calculate the capital that must be invested to earn a certain amount of interest:

$$ER = P \times i \times n$$

$$R500 = P \times 0,1 \times 5$$

$$\frac{R500}{0,1 \times 5} = P$$

Now you can calculate the capital that must be invested.

6. Calculate the capital that must be invested for 5 years at a simple interest rate of 15% per annum if the interest after 5 years amounts to R675
7. At what simple interest rate must R800 be invested in order to earn R704 interest after 8 years?
8. Complete the Table:

A	P	i	n
	R12 578	12%	6 months
R20 000		10%	3 years
	R20 000	15%	5 years
R30 000	R12 000		5 years
R17 000	R14 000	9,75%	

6.2 Exercise 27

1. You invest R2 000 at a compound interest rate of 12% p.a. for 5 years. Complete:

How much money do you have at the end of the first year? $2\,000 + 0,12 \times 2\,000 = R2\,240$	Interest earned is R240
How much money do you have at the end of the second year? $2\,240 + 0,12 \times 2\,240 = R2\,508,80$	Interest earned is
How much money do you have at the end of the third year? $2\,508,80 + 0,12 \times 2\,508,80 = R2\,809,86$	Interest earned is R301,06
How much money do you have at the end of the fourth year? $2\,809,86 + 0,12 \times 2\,809,86 = R3\,147,04$	Interest earned is
How much money do you have at the end of the fifth year? $3\,147,04 + 0,12 \times 3\,147,04 = R3\,524,68$	Interest earned is R377,64

-
2. You can invest an amount of R778 at an interest rate of 11% per annum compounded monthly for a period of 5 months. How much money will you have in the bank at the end of this period? Complete the table:

How much money do you have at the end of the first month?	Interest earned is
How much money do you have at the end of the second month?	Interest earned is
How much money do you have at the end of the third month?	Interest earned is
How much money do you have at the end of the fourth month?	Interest earned is
How much money do you have at the end of the fifth month?	Interest earned is

7 BANKING, LOANS AND INVESTMENTS

7.1 Exercise 28

1. Complete the following table

Places where you can save money	Advantages	Disadvantages
Keep your money at home.	_____ _____ _____ _____	_____ _____ _____ _____
Save your money in a group saving scheme or society e.g. Stokvel.	_____ _____ _____ _____	_____ _____ _____ _____
Put your money in an account at the bank or post office.	_____ _____ _____ _____	_____ _____ _____ _____
Invest your money in insurance policies or unit trusts.	_____ _____ _____ _____	_____ _____ _____ _____
You can take out an annuity.	_____ _____ _____ _____	_____ _____ _____ _____

2. The table shows the monthly payments on loans of various amounts, over various periods.

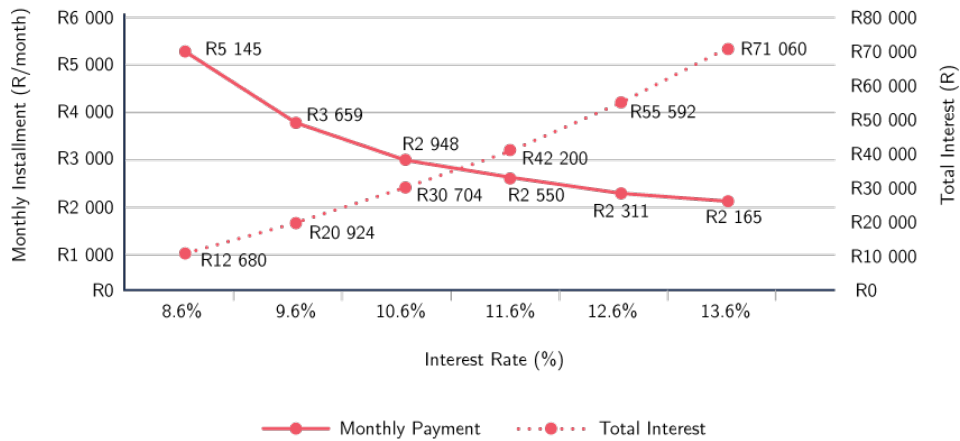
Amounts	24 months	36 months	48 months	60 months
R500	R286	R218	R184	R164
R10 000	R563	R426	R358	R319
R15 000	R818	R611	R509	R449
R20 000	R1 087	R812	R676	R596
R25 000	R1 357	R1 012	R842	R742
R30 000	R1 626	R1 213	R1 009	R889

- 2.1 Read from the table how much the monthly payment is on a loan of R25 000 over 24 months, and R25 000 over 48 months.
- 2.2 How much will be paid back in total for each of the two loans?
- 2.3 Suppose you took out a loan of R15 000. Should you pay it back over 24 months or over 60 months? Support your answer with calculations.

3. Pieter was a student at UCT University in Cape Town and unfortunately he failed his academic year and had to pay back his loan to the bank. Study the table and graph below and answer the following questions.

Student Loan Repayment Schedule: Loan = R110 800						
	Marginal Interest Rate (Prima @ 8.6%)	Effective Interest Rate	Months	Monthly Payment (interest included)	Total Repayment	Total Interest on
	x% above Prime	(%)		(R/m)	(R)	R110 800
Option 1:	0%	8.6%	24	R5 145	R123 480.00	R12 680
Option 2:	1%	9.6%	36	R3 659	R131 724.00	R20 924
Option 3:	2%	10.6%	48	R2 948	R141 504.00	R30 704
Option 4:	3%	11.6%	60	R2 550	R153 000.00	R42 200
Option 5:	4%	12.6%	72	R2 311	R166 392.00	R55 592
Option 6:	5%	13.6%	84	R2 165	R181 860.00	R71 060

Loan Repayment Schedule



- 3.1 If Peter earns a monthly salary of R6 000,00, which option would be the best? Motivate your answer.
- 3.2 How much interest will he pay on top of the money that he loaned?
- 3.3 How long would it take him to pay back his debt?
- 3.4 Which percentage of the amount of money that he loaned will he pay on interest?

8 INFLATION

8.1 Exercise 29

Inflation is defined as a sustained increase in the general level of prices for goods and services. It is measured by comparing goods at two points in time. The increase in price over time is at **compound interest**.

- This invoice dated 26/09/1978 shows the amount paid for breakfast at the Oribi Restaurant at Potchefstroom. Study this transaction and answer the following questions:

ORIBI RESTAURANT		HOTEL IMPALA		POTCHEFSTROOM
TEL. 2-3954/5				
Datum Date	Tafel No. Table	Kelner Nr. Waiter No. Couvert	Rek. Acc.	
26/9/78	4		N ^o 014726	
RESTAURANT				
2 Mushroom Soup				1 40
2 Tomato Omelettes				5 50
PAID/KONTANT				
BAR/KROEG				6 - 90
TABAК/TOBACCO				
Kamernr. Room No.	Handtekening Signature	Sub Totaal		
Adres/Address		Sub Total		
		18% Dienskos		
		10% Service Charge		
		TOTAAL		
		TOTAL		

- How many years ago was this?
- You will pay R45,00 for one mushroom soup and R35,00 per omelette today at the same restaurant. Work out the current bill for this lunch.
- What was the percentage price increase based on the total amount on these transactions?

9 TAXATION

9.1 Exercise 30

Value-added tax (VAT) VAT is an indirect tax paid by citizens on the consumption of goods and services. This tax is revenue to the government.

VAT-inclusive price – the price includes the 15% VAT, so the price is considered to be equal to 115% of the actual price of the product or service.

VAT-exclusive price – advertised price does not include the 15% VAT, so that the price represents the cost of the product or service.

Most till slips are printed to calculate VAT on VAT-inclusive prices.

Example : VAT

Calculate the VAT amount on the VAT-inclusive price of R180,00

$$\text{VAT} = \frac{15}{115} \times \text{R}180 = \text{R}23,48$$

1. Complete the table by calculating the missing values:

VAT-exclusive price	VAT-inclusive price	VAT
R110		
	R1 898,90	
	R12 376,78	

The Unemployed Insurance Fund (UIF)

UIF is 1% of the employee's gross salary that is deducted and paid to SARS. The employer must also contribute a further 1% on behalf of each employee. If the employee becomes unemployed, he/she can apply from the fund for a certain period or until they find another job. **The salary ceiling is R14 872,00 per month.**

2. Complete the table by calculating the missing values:

Gross Salary Per Month	1%	Amount that goes to the fund
R2 000.00		
R14 900.00		
	R95.00	

3. Susan (65 years of age) is a teacher and is employed by the state. She receives a gross salary of R25 546,50 per month during the 2015/2016 tax year. Each month PAYE (current tax system), as well as contributions to the pension fund, medical fund and UIF are subtracted from her salary. The table below shows her salary advice for June 2015 for the 2015/16 tax year.

Susan's salary advice for June 2015

Pay date			Salary Notch		
20150603			B		
Earnings			Deductions		
Item	Description	Amount	Item	Description	Amount
0001	Basic Salary	25 546.50	0001	PAYE Current tax system	2 391.86
0554	Accommodation	800.00	0002	Pension (7.5% x monthly salary)	C
			0005	Medical Fund Contribution	700.00
				UIF	D
	GROSS SALARY	A		Total deductions	E
				NETT SALARY	F

- 3.1 What is her **GROSS** salary per month? (A)
- 3.2 Calculate Susan's **NOTCH**. (B)
- 3.3 Determine her **PENSION** deduction. (C)
- 3.4 Determine her **UIF** deduction. (D)
- 3.5 What will her **NETT** salary (F) per month be, after all **DEDUCTIONS** (E) have been made?
- 3.6 Explain the **PAYE** current tax system.
4. Juan (65 years) is a salesman at Electronic Warehouse. His salary package is made up as follows:
- Basic salary R3 500 p.m.
 - 9% commission on sales (His total sales for the tax year was R3 550 450.)
 - Annual performance bonus of R4 000

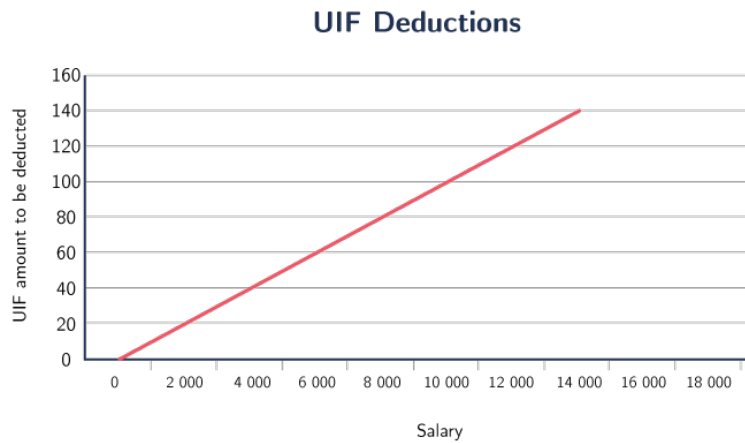
What is his **Gross Salary**?

5. Peter is a gardener, who works for one employer three times a week.

5.1 How many hours must he work per month to be able to contribute to the UIF?

5.2 If he earns R200,00 per day, what should the total monthly contribution to the UIF be?

6. UIF deductions on various salary amounts.



6.1 Complete the graph

6.2 What will be the UIF deduction from a salary of R8 000 ? Show where you did the reading from the graph.

10 EXCHANGE RATES

10.1 Exercise 31

1. My uncle in America sent me \$200 for my birthday. A bank offers me an exchange rate of R8,139/\$1. I wish to buy myself a new cricket bat. The bat is marked at R1 500, but I am offered 10% discount if I pay cash.

1.1 Calculate the amount in Rand I have received from my uncle.

1.2 Would I be able to afford the bat with the money my uncle sent me?

1.3 If not, how much am I short? If yes, how much money in Rand will I have left?

1 \$	R8.139
_____	R3 899.99



$$\div 8.139$$

2. Peter saved R3 899,99 and wanted to buy a camera. He asked his granddad in the US to buy him a camera. How much money in dollars would he be able to spend? Complete the table below.

1 \$	R8.139
_____	R3 899.99



$$\div 8.139$$

3. Complete the table

1 \$	R8.139
\$22 000	R
	R300 000
\$154 345	
	R1 000 000

11 ANSWERS FOR EXERCISES

11.1 Exercise 20

1.1 George Moosa

1.2 R 11,70

1.3 R 2 610,61

1.4 R 595,80

1.5 R 2 008,81

1.6 R 109,60

1.7 1,2%

1.8 1,8%

11.2 Exercise 21

1.1 R 835,10

1.2 9000 litre

2.1 It is cheaper and faster to take the train.

2.2 It is cheaper to take the Gautrain.

11.3 Exercise 22

1.1 R 20 800

1.2 R 1 733,33

1.3 R 562

1.4 They can reduce on Entertainment, Gym fees, Video rentals, Cell Phone DSTV

1.5 38,89%

1.6 Budget is planning to spend your money. Discuss ways to keep to your budget.

2.1 50 houses

2.2 33 houses

2.3 R 7 840 000

2.4 27 houses

3.1 9 : 14 : 12

3.2 You: 26%

X : 40%

Z : 34%

3.3 You: R 32 390

X :R 30 600

Z :R 26 010

3.4 4 : 5

3.5 20 : 19

3.6 The German supplier is the cheapest.

4.1 R 183 810, 53

4.2 R 296 189, 47

4.3 R 999 639, 46

4.4 R 3 332, 13

4.5 R 145 160

4.6 R 67 000

4.7 R 0, 595

4.8 R 297 500

	Item	Cost Price	Selling Price	Profit/Loss	Profit%/Loss%
	Weights 2 kg	R220	R275	R55 profit	25%
	Stability ball 55 cm	R120	R155	R35 profit	29%
5.	Stability ball 65 cm	R150	R170	R20 profit	13%
	Elastics	R65	R85	R20 profit	31%
	Microfibre Yoga Mat	R245	R300	R55 profit	22%
	Towels	R100	R95	R5 loss	0, 05%

11.4 Exercise 23

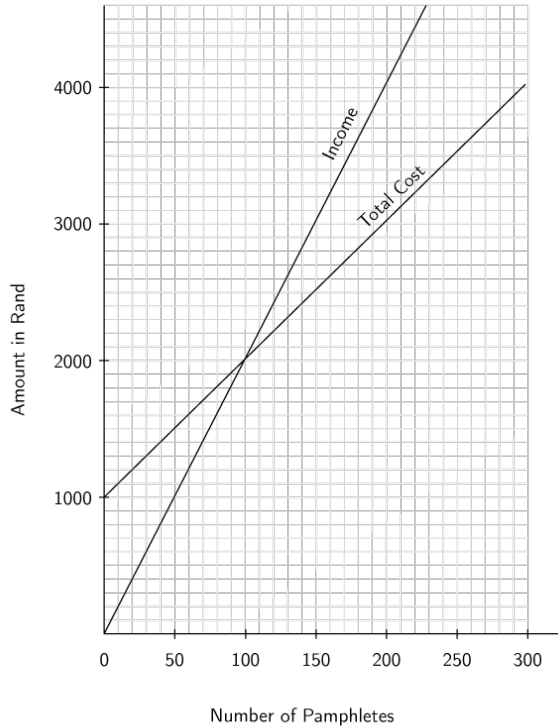
- 1.1 R 960
- 1.2 R 5 440
- 1.3 R 1 958,40
- 1.4 R 7 398,40
- 1.5 36 months
- 1.6 A cash purchase is better, cash price would cost R 6 400,00

11.5 Exercise 24

- 1.1 R 207,00
- 1.2 12,5%
- 1.3 R 21,60
- 1.4 R 560
- 1.5 R 155 250
- 1.6 R 10,49
- 1.7 Balls Cost: R 621
Profit Percentage: 23,62%
- 1.8 R 599 200
- 1.9 R 122,76
- 1.10 2,64%
- 1.11 92

11.6 Exercise 25

1.1



1.2 100

1.3 R 1 000

1.4 $I = 20 \times \text{Amount}$

1.5 $C = 1\,000 + 10\text{Amount}$

1.6 100

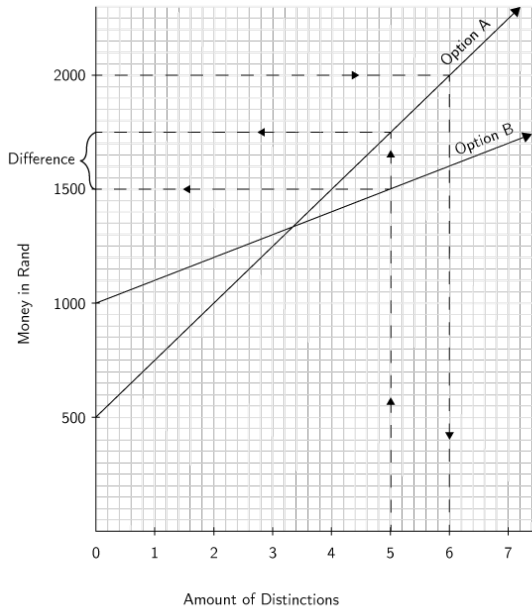
2.1

Amount of distinctions	0	1	2	3	4	5	6	7
Amount in R	500	750	1000	1250	1500	1750	2000	2250

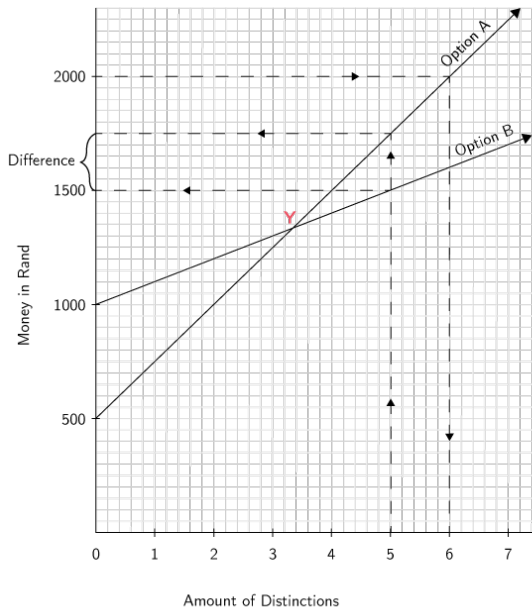
2.2

Amount of distinctions	0	1	2	3	4	5	6	7
Amount in R	1050	1100	1200	1300	1400	1500	1600	1700

2.3



2.4



2.5 Option A will be better if he achieved 5 distinctions.

2.6 6 Distinctions

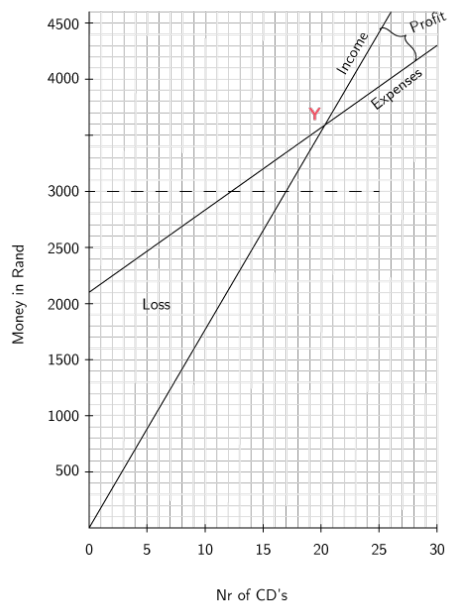
2.7 Discussion

3.1.1 $R\ 175,00 \times \text{number of CD's sold}$

3.1.2 $R\ 2\ 050 + R\ 75 \times \text{number of CD's}$

	Nr of CD's	0	5	10	15	20	25	30
3.2	Monthly income	0	R875	R1750	R2625	R3500	R4375	R5250
	Monthly expenses	R2050	R2425	R2800	R3175	R3550	R3925	R4300

3.3

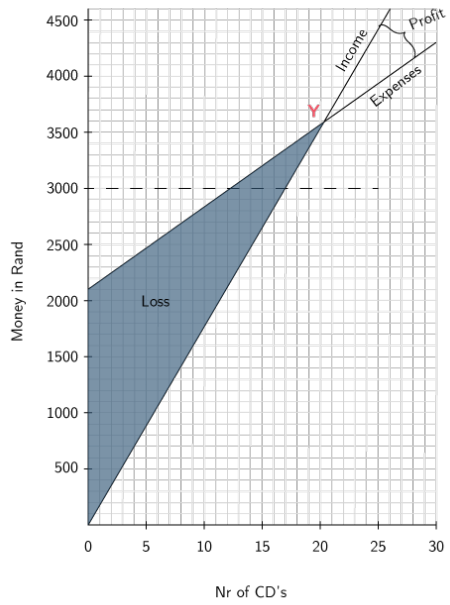


3.4 R 450

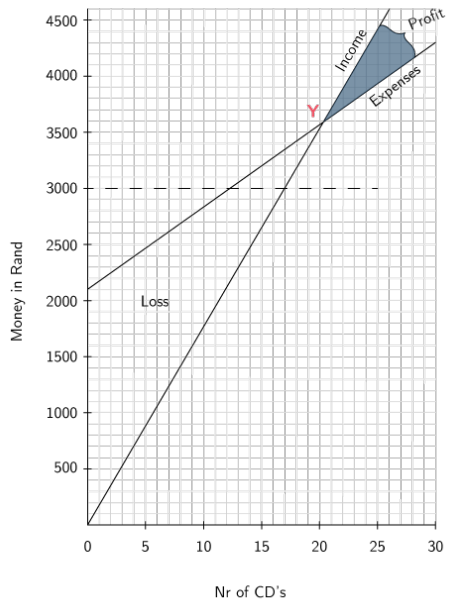
3.5 21

3.6 21

3.7



3.8



11.7 Exercise 26

1.	How much money do you have at the end of the first year? $2000 + 0,12 \times 2000 = R2240$	Interest earned is R240
	How much money do you have at the end of the second year? $2240 + 0,12 \times 2000 = R2480$	Interest earned is R240
	How much money do you have at the end of the third year? $2480 + 0,12 \times 2000 = R2720$	Interest earned is R240
	How much money do you have at the end of the fourth year? $2720 + 0,12 \times 2000 = R2960$	Interest earned is R240
	How much money do you have at the end of the fifth year? $2960 + 0,12 \times 2000 = R3200$	Interest earned is R240

2. R 5 440

3. R 21 645

4. R 32888,16

5. R 1 000

6. R 900

7. 11%

	A	P	i	n
8.	R754,68	R12 578	12%	6 months
	R20 000	R66 666,67	10%	3 years
	R26 666,67	R20 000	15%	5 years
	R30 000	R12 000	5%	5 years
	R17 000	R14 000	9,75%	13 years

11.8 Exercise 27

1.	How much money do you have at the end of the first year? $2000 + 0,12 \times 2000 = R2240$	Interest earned is R240
	How much money do you have at the end of the second year? $2240 + 0,12 \times 2240 = R2508,80$	Interest earned is R268,80
	How much money do you have at the end of the third year? $2508,80 + 0,12 \times 2508,80 = R2809,86$	Interest earned is R301,06
	How much money do you have at the end of the fourth year? $2809,86 + 0,12 \times 2809,86 = R3147,04$	Interest earned is R337,18
	How much money do you have at the end of the fifth year? $3147,04 + 0,12 \times 3147,04 = R3524,68$	Interest earned is R377,64
2.	How much money do you have at the end of the first month? $R778 + 0,11 \times 778 = R863,58$	Interest earned is R85,58
	How much money do you have at the end of the second month? $R863,58 + 0,11 \times 863,58 = R958,57$	Interest earned is R94,99
	How much money do you have at the end of the third month? $R958,57 + 0,11 \times 958,57 = R1064,01$	Interest earned is R105,44
	How much money do you have at the end of the fourth month? $R1064,01 + 0,11 \times 1064,01 = R1181,05$	Interest earned is R117,04
	How much money do you have at the end of the fifth month? $R1181,05 + 0,11 \times 1181,05 = R1310,97$	Interest earned is R129,92

11.9 Exercise 28

	Places where you can save money	Advantages	Disadvantages
1.	Keep your money at home.	Availability	It is not safe
	Save your money in a group saving scheme or society e.g. Stokvel.	The money is more, so the interest is more.	People can disagree and fight
	Put your money in an account at the bank or post office.	It is safe. Earn interest.	It is not always available.
	Invest your money in insurance policies or unit trusts.	High interest	It is not available.
	You can take out an annuity	Interest is good.	Money is not available.

2.1 R 1 357 over 24 months
R 842 over 48 months

2.2 R 32 568 (24 months loan)

R 40 416 (48 months loan)

2.3 24 months because the longer you take to pay back the loan, the more you pay on interest.

3.1 Option 5: He must pay R 2 311 per month.

3.2 R 55 592,00

3.3 6 years

3.4 50,17%

11.10 Exercise 29

1.1 36 years ago

1.2 R 160

1.3 2 218%

11.11 Exercise 30

	VAT-exclusive price	VAT-inclusive price	VAT
1.	R110	R125,40	R15,40
	R1 665,70	R1 898,90	R233,20
	R10 856,82	R12 376,78	R1 519,96

	Gross Salary Per Month	1%	Amount that goes to the fund
2.	R2 000,00	R20	R40
	R14 900,00	R148,72	R297,44
	R9 500,00	R95,00	R190

3.1 R 26 346,50

3.2 R 306 558,00

3.3 R 1 915,99

3.4 R 255,47

3.5 R 21 189,94

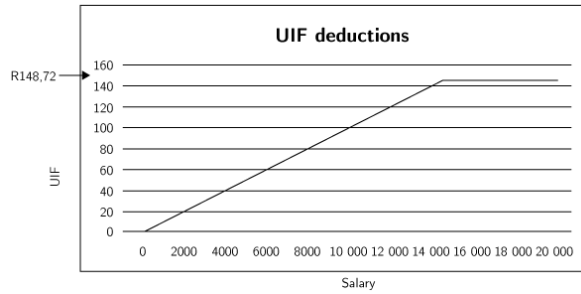
3.6 You pay as you earn to avoid paying all the tax at the end of the tax year which is end of February.

4. R 365 540,50

5.1 24 Hours

5.2 R 48

6.1



6.2 R 80

11.12 Exercise 31

1.1 R 1 627,80

1.2 Yes

1.3 R 277,80

2.

\$1	R8,139
\$479,17	R3 899,99

3.

\$1	R8,139
\$22 000	R179 058
\$36 859,57	R300 000
\$154 345	R1 256 213,96
\$122 865,22	R10 000 000