

2022 SUBJECT WORKBOOK Grade 11

a+b=c MATHEMATICAL LITERACY

A joint initiative between the Western Cape Education Department and Stellenbosch University.



Western Cape Government



forward together sonke siya phambili saam vorentoe 2022 WORKBOOK | Grade

MATHEMATICAL LITERACY

a+b=c

BROADCAST SESSIONS

GRADE 11	FINANCIAL DOCUMENTS
GRADE 11	MAPS AND PLANS - SCALE

Session	Date	Time	Торіс
1	23/02/2022	15:00 - 16:00	Financial Documents
2	07/03/2022	15:00 – 16:00	Maps and Plans / Scale





INTRODUCTION AND TOPICS

Financial documents

The interpretation and understanding of financial documents are an important life skill as it empowers us to make responsible financial decisions.

Knowledge of scale enables us

Draw smaller images of large objects. Draw larger images of very small objects. Understand more clearly the concept of ratio and proportion

Topics	Description
Financial documents	 Work with the following financial documents: documents relating to personal and/or household finance, including household bills (e.g., electricity, water, telephone, cell phone) shopping documents (e.g., till slips, account statements) banking documents (e.g., bank statements and fee structures) household budgets
Maps and Plans - Scale	 Work with number scale and bar scale Understand the difference between both the number and bar scale. To calculate length and distance when map or plan measurement are given. Determine the most appropriate scale in which to draw a map and plan and use the scale to complete the task.





MATHEMATICAL LITERACY

a+b=c

TERMINOLOGY: FINANCIAL DOCUMENTS

Term	Definition
Bank statement	The details of all the transactions made from one bank account in a given time period.
Invoice	A comprehensive document that details all the work done or items sold, and what costs are due.
Withdrawal	Money taken out of a bank account.
Statement	A summary of transactions (debits and credits, or payments and receipts) made on an account.
Tariff	The rate charged for a service rendered, e.g. import duties, water consumption cost, etc.
Expenditure	An amount of money that is spent on something.





SESSION 1 | FINANCIAL DOCUMENTS



Household bills:

Electrical Bill

SUMMARY

WHAT YOU SHOULD KNOW

Understand terminology used in documents, including:

- date or time period of the document
- opening and closing balance
- credit and debit
- payment due
- minimum payment
- tariff or charge
- income, expenditure, profit/loss
- VAT
- UIF, net pay, gross pay, deductions and taxable income
- items and quantities
- PAYE and SITE
- interest rates
- repayment amounts and periods

Explain and demonstrate how the values appearing in the documents have been determined.

Eskom		WESTERN REGION PO BOX 377 BELVILLE 7 CONTACT CENTRE:	535 (0860) 037	366		0 37566
ESKOM HOLDINGS SOC LTD RE	G NO 2002/015527/30	E-MAIL:	0862 437 5 customenser	ices@eskom.co.za	SMS: 3532	в
VAT REG NO 4740101508		YOUR ACCOUNT	NO NO	8389643487	CUSTOMER SE	LF SERVICE WEBSITE:
		SEC URITY H		334.53	https://csonline.e	skom.co.za
MRS J E CONWAY PO BOX 390		BILLING D	ATE	2020-12-10	WESTERN REGI PO BOX 377 BEL	ON VILLE 7535
PAARL		ACCOUNT MO	NTH	DECEMBER 2020	DIRECT DEPOS	IT DETAIL
7620		CURRENT DUE D	TE	2021-01-04	BANK: BRANCH COD	ABSA E: 334110
				NOT SUPPLIED	BANK ACC NO:	340167430
	TAX INVOICE	E-M	AIL: dtcon	way@gmail.com	ACCOUNT NO	REFERENCE NO
READING TYPE: ESTIMATE	READING DATES: 2020/11/09 - 2020/12/08	NO OF DAYS: 29	S	EASON:	8389643487	7
Your nextactual reading will be on 11/01/ CONSUMPTION SUMMARY FOR BILLING	2021 PERIOD				MRS J E CONW	AY
METER NUMBER PREV. READING	CURR READING DIFFERE	NCE CONSTANT		CONSUMPTION 224.0000	FAX NUMBER	
TOTAL ENERGY CONSUMED	FOR BILLING PERIOD (kWh)	4.0000		224.00		
PREMISE ID NUMBER	8389643037 TARIFF NAME:	Homepower Standard			2 093	4 8389643487
ERF 1721 PLOVER AVE, VERMONT					093	- 0303043407
Network Capacity Charge @ R3.81 per da Energy Charge (0 - 600 kWh) 224 kWh @	y for 29 days R1.4555 /k/Wh :		R R	110.49 326.03		
TOTAL CHARGES FOR BILLIN	IG PERIOD		R	436.52	_	
ACCOUNT SUMMARY FOR DE	CEMBER 2020					
BALANCE BROUGHT FORWARD (GUD P PAYMENTS, RECEIVED / TOTAL CHARGES FOR BLLING PERIOD VAT RAISED ON ITEMS AT 14% VAT RAISED ON ITEMS AT 15%	ate 2020-12-07) CG Payment - 2020-12-07)		R R R R	555.35 -555.00 436.52 0.00 65.48	11341 8389643487	>>>>> 9207 1839 9643 487
ARREARS					Click to pay via	
>90 DAYS 61-90 DAYS 31-60 0.00 0.00	0.00 CURRENT 0.00 502.35 TOT	AL AMOUNT DUE	R	502.35		502.35
Balance brought forward is reflected in the paid.	E E E E E E E	020-12-07 to avoid disconn	ection. Ple	ase ignore if already	PAYMENTARR	
50 450 0 0 0 0 0 0 0 0 0 0 0 0 0	J J A S O N D (ArActual, E=Estimate)	Messag hat Eskom Wesken Cape O Readings from November to use the dedicated e-mail Dust the dedicated e-mail BitLL BitLL	RUN NO BROUP PAGE	it will resume its mess are br concerns relating EE 78 I OF 1	INSTALMENT ARREARS DUE DATE 2021-01-04 AMOUNT PAID LATE PAYMEN ADDED TO OV	0.00 0.00 T CHARGES WILL BE RERDUE ACCOUNTS
						I

FINANCIAL DOCUMENTS

A till slip is a receipt that serves as proof of goods that were purchased. It is important to keep this proof of payment in case of damaged or unwanted items.

Shopping documents:

<u>Till slips</u>

Ampsport

Whale Coast Mall Hermanus (228) Shop G81 Whale Coast Mall Situated on R43 Sandbaai Date: 2019/12/ Assistant: MANDLA Store Manager: LAMEEZ

2019/12/30 09:20:24 MANDLA (MANGC) LAMEEZ

a+b=c

7200

Tel: 028-3121435

	TAX	CASH SALE	Ļ			
ITEM	DESCRIPTION		%	QTY	PRICE	VALUE
						R
7302610076060	Aquasock L3		15	1	129.99	129.99
7302710049130	Aqua B1		15	1	99.99	99.99
9911010016001	Plastic Bags Small		15	1	0.00	0.00
TOTAL DUE				3		R229.98
TOTAL Before VAT VAT : @ 15.00% R TOTAL After VAT: f * Includes VAT	7: R199.98 130.00 R229.98					
FACILITY		PAYMENT				BALANCE
		TENDERED				
Debit Card: *****97 CHANGE	776					R229.98 R0.00

VAT REG. NO : 4420116552

FINANCIAL DOCUMENTS

When you buy goods on an account, you buy it on credit and need to pay it back within a certain amount of time.

An account statement:

- Is sent to customers on a regular basis (usually monthly)
- It is a record of transactions that shows items bought on credit, payments that were made, interest charges and amounts that are outstanding.
- Is a receipt of money that was paid.

MA	ARK	(H A M	ACCOUNT STATEME	NT			
					STATEMENT DAT	E: 15 JAN.	2019
	MR D 27 SE COLF VRYE 8601	PETERSON COND AVENUE RIDGE SURG					G RDS R TOU
					1 CARD, EXCI	USIVE OF	FERS
					OVER 20 RI	ETAIL BRA	NDS
					Account customers	are automat	ically
DATE		REFERENC	Ϋ́F	Г	ESCRIPTION	AMOUN	NT
22	12 mo	nths revolving		Openir	ig balance	1 215.36	-
17 DEC.	ASJ Z	evenwacht Mall		Purchase		3 750,00	
19 DEC.	ASJ Z	evenwacht Mall		Purcha	Purchase		
19 DEC.	ASJ Z	evenwacht Mall		Purcha	Purchase returned		CR
31 DEC.	HO FY	VB electronic payn	nent	Payme	nt	698,01	CR
12 JAN.				My kit	chen	26,70	
12 JAN.				Kids o	nly	20,00	
12 JAN.	Install	ment 440,00	Due 38,37	Interes Closin	t g balance	92,66 4 656,71	
My currer	nt credit	What can I spend	What	is my	By how much am	What is a	my
allocat	tion		installi	nent?	1 in arrears?	balance	:/
8 800	,00	4 143,29	440	,00	0,00	4 656,7	1
CURR	ENT	30 DAYS	60 D.	AYS	90 DAYS	(BY 1 st	DE D
38,3	37	0,00	0,0	0	0,00	38,37	

[Adapted from a Markham's account]

Important terminology in terms of an account statement:

Opening balance:	Amount due at the start of the time period
Closing balance:	Amount due at the end of the time period
Amount due:	A minimum amount that needs to be paid
	(usually a percentage of
the total	
	outstanding amount)
Debit:	Amount is owed by the client
Credit:	Payment(s) were made by the client

Account statements

BANKING DOCUMENTS

Banking documents: Bank Statements

WINBANK

Details of the owner of the account

Bank statement – SAVINGS ACCOUNT

Client name: J Johnson Adress: Apartment 3C Hi	ghlands estate		Statement de February 202 Shows which Account nun ***#2189	ate: 20 account it is nber:
Transaction date	Transaction details		<u>Amount</u>	<u>Account</u> balance
	Opening balance			R 9 872.50
Transaction: money was	Debit card transaction –		R 1 516.72	R 8 355.78
used and therefore	Groceries		R 1 50	R 8 354 28
deducted from the balance	Transaction costs			110 00 1/20
11	IT disaction costs			
1				
	Debit order – Rent		R 3 600,00	R 4 754,28
All transactions that took	Transaction cost		R 6,00	R 4 748,28
place on 2 February	Debit order – cell phone		R 289,32	R 4 458,96
22	Transaction cost		R 6,00	R 4 452,96
2				
2				
3	Debit order – Car insuran	ce		R 3 800,96
3	Transaction cost		R 6,00	R 3 794,96
6	ATM withdrawal		R 1000,00	R 2 794,96
6	Transaction cost		R6,00	R 2 788,96
10	ATM withdrawal		R 880,00	R 1 908,96
10	Transaction cost		R6,00	R 1 902,96
	Cash deposit at a branch		R 325,00	R 2 227,96
Most banks charge a	Transaction cost		R5,59	,
monthly fee for the account- a debit amount				
21 21				
27	Electronic deposit – salar	у	R7 675,90	R 9 898,27
28	Monthly account fee		R8,20	R 9 890,07
			Closing	R 9 890,07
			balance	
	Money in account	Intere	st rate (% per	
Indication of how interest is		year)		
earned according to the	R1 - R4999,99		1,2	
amount of money in the	R5 000 – R 9 999,99		1,5	
daily, but added monthly –	R 10 000+		1.8	
see example below			_,-	

Page 8

FEE STRUCTURES

Fee structures

Banking costs

- Also called transaction costs
- Banks use different cost structures for the services that they offer (e.g., Deposits, withdrawals, debit orders, cheques etc.)
- Some banks allow some free transactions up to a certain point, depending on the type of account
- Interest is charged on unpaid credit card balances

It is important to consider the cost structure of different banks and their respective accounts before choosing where to bank.

	Gold Value Bundle
Monthly fee	R109.00 pm
Recommended income	R4 000 pm
Point-of-sale swipes and cash withdrawals	√
Electronic information enquiries	√
eStatements	\checkmark
Absa ATM cash withdrawals	Up to the total value of R4 500
PStop orders	\checkmark
Electronic payments	\checkmark
Lump sum death benefit included	R20 000
DragonPass airport lounge visits	-
Retrenchment and Disability benefit	R5 000

SESSION 1 | FINANCIAL DOCUMENTS



CLASS DISCUSSIONS

SUNSHINE SUPERETTE

Welcome to our Store	
7th Street Melville	
Tel No: 011 482 1092	
VAT NO 1340763486	
TAX INVOICE	
Retain as proof of purchase	
LAST DAY FOR A FULL REFUND IS 27/0	7/2015

VECETABLE	COUD INCT	DE OF	
VEGETABLE	SOUP INST	R0.95	
MINI TENNI	S BISCUIT	R3.95	
50G BILTON	G	R19.99	
24 LITRE VT	C (FOODS)	R0.44	
500ML VEG	OIL	R16.99 *	×
YOGHURT 1	75G	R5.49	
BREAD/BRO	WN	R6.99 *	e)
1L MILK/LO	W FAT	R11.95 *	*
COTT/CHEE	SE 250G	R15.99	
SHAMPOO		R15.99	
MUFFINS/CI	HOC	R13.95	
BALANC	E DUE		
ROUNDI	NG	-R0.03	
CASH P/	YMENT	R150.00	
CHANGE	L		
Rate	Vat	Total	
14.00%			
* 0,00%	0.00	35.93	
28/	05/2015 18	3:15	
CASHI	ER - Babalw	a Noza	
visit our websi	te www.sunst	inespar.co.za	

- 1. State the name and telephone number of the store
- 2. On what date and at what time were the purchases made?
- 3. How many items were bought?
- 4. What does the * indicate?
- 5. Calculate the Balance due
- 6. Determine the amount of change that the customer will receive if he pays cash?
- 7. Calculate the rand value of VAT on this till slip

- 1. Sunshine Superette; (011) 482 1092
- 2. 28.05/2015 at 18:15
- 3. 11
- 4. VAT exempted items
- 5. Balance due =R118,68
- 6. Change = R150 R118,68

= R 31.35

7. Total VAT-inclusive items = R118,68 - R35,93 = R 82,75

VAT = R82,75 ×
$$\frac{14}{100}$$
 = R11,59

1.	What is the opening
	balance of this
	account?

- 2. How many purchases were made?
- 3. How much interest was charged on this account?
- 4. Calculate the closing balance
- 5. What is the value of the minimum payment?
- 6. By when must the minimum value be paid?

		VOOL	WORTHS	INANCIAL SER	VICES			W
3					STAT	EMENT DATE	12 SEP 2015	
					PAYME	NT DUE DATE	07 OCT 2015	
		iane@u	amail co za		ACCO	UNT NUMBER	5708 8501 ****	****
		Janetas	pinan.co.za		INSTALMENT	FREQUENCY	Monthly	
es was	STORE CARD STATEMENT			ENT	Woolworths Financial Services PO Box 5553 Cape Town 8000 21 Howe Street, Observatory, Cape Town 7925 Telephone 0661 50 20 20 Fax 0861 99 91 94 Woolworths Financial Services (Pty) Ltd Reg no 2000/009327/07 A registered credit provider NCRCP49 Email wwfs@woolworths.co.			00 (7/07 rths.co.z
	YOU	R TRANSA	CTION DETAILS				Pa	age 1
a	DATE	E 1	TORE	DESCRIPTION			AMOUNT	
f the ?	13 AU 15 AU 19 AU 22 AU 23 AU 25 AU 12 SE	JG 2015 M JG 2015 M JG 2015 C JG 2015 M JG 2015 S JG 2015 M JG 2015 M EP 2015 M	IICHOL WAY - JHB IICHOL WAY - JHB SAPE TOWN AIRPOR IICHOL WAY - JHB SUMMIT ROAD IICHOL WAY - JHB HEAD OFFICE	OPENING BALANCE PURCHASE -FOODS, PURCHASE FOODS PURCHASE -CUT FLO PURCHASE FOODS PURCHASE PAYMENT - THANK YO INTEREST	CONDIMENTS WERS,FOODS DU		4 318.33 302.03 171.74 152.15 279.67 55.19 4 000.00 CF 70.36	ł
	Payr	nent Due Date Please note if	payment of full balance is	Credit Limit	R5 200.00 (a date, interest is charg	Closing Balance ed on full balance	and on new purchas	e.
	Banking Details:							
	Banki	Bank: ABSA Bank Bank Account Number: 4072263822 Beneficiary Reference: Branch Code: 632005 Woolworths account nu Account Holder: WFS Instore Cards Direct Deposits Swift Code: ABSAZAJJ Woolworths Store Cards				Please use your	on voi	
	Banki Bank Accou	ABSA Bank nt Holder: WFS	Instore Cards Direct Depo	Branch Code: 632005 sits Swift Code: ABSAZAJ	J Wooly	worths account ni worths Store Card	umber as it appears I as the payment re	ference
	Banki Bank: Acccu 1.	ABSA Bank nt Holder: WFS R4318	Instore Cards Direct Depo	Branch Code: 632005 Isits Swift Code: ABSAZAJ	Wooh J Wooh	vorths account n worths Store Card	umber as it appears I as the payment re	ference
	Banki Bank: Acccu 1. 2.	ABSA Bank nt Holder: WFS R4318 5	Instore Cards Direct Depo	Branch Code: 632005 Isits Swift Code: ABSAZAJ	Wooh J Wooh	vorths account ni worths Store Card	umber as it appears	ference
	Banki Bank: Accou 1. 2. 3.	ABSA Bank nt Holder: WFS R4318 5 R70,3	Instore Cards Direct Depo 3,33	Branch Code: 632005 Isits Swift Code: ABSAZAJ	J Wooh	vorths account ni worths Store Card	umber as it appears	ference
	Banki Bank: Acccu 1. 2. 3. 4.	ABSA Bank nt Holder: WFS R4318 5 R70,3 Closin	Instore Cards Direct Depo 3,33 6 Ig balance	Branch Code: 632005 Isits Swift Code: ABSAZAJ	Wooh J Wooh	vorths account ni vorths Store Card	umber as it appears I as the payment re	ference
	Banki Bank: Acccu 1. 2. 3. 4.	ABSA Bank nt Holder: WFS 5 R70,3 Closin = R4 3 R279 = R 1	Instore Cards Direct Depo 3,33 6 9 balance 318,33 + R30 9,67+ R 55,1 349, 47	Branch Code: 632005 Swift Code: ABSAZAJ 02,03 + R171, .9 - R4000 +	74 + 152,1 R70,36	vorths account ni vorths Store Card	umber as it appears I as the payment re	ference
	Banki Bank: Accou 1. 2. 3. 4.	ABSA Bank nt Holder: WFS R4318 5 R70,3 Closin = R4 3 R279 = R 1 R371	Instore Cards Direct Depo 3,33 6 18 balance 318,33 + R30 9,67+ R 55,1 349, 47 171	Branch Code: 632005 Swift Code: ABSAZAJ 02,03 + R171, .9 - R4000 +	74 + 152,1 R70,36	vorths account ni vorths Store Card	umber as it appears	ference
	Banki Bank: Accou 1. 2. 3. 4. 5.	ABSA Bank nt Holder: WFS 5 R70,3 Closin = R4 3 R27 = R 1 R371	Instore Cards Direct Depo 3,33 6 18,33 + R30 9,67+ R 55,1 349, 47 L,71 to b on 2015	Branch Code: 632005 Swift Code: ABSAZAJ 02,03 + R171, .9 - R4000 +	74 + 152,1 R70,36	vorths Store Card	umber as it appears	ference

- 1 State the erf number of 145 ordon road, Mowbray.
- 2. On what date must this account be settled?
- 3. What is the opening balance for this account?
- 4. On what date was a payment made and what was the amount?
- 5. Calculate the arrears (a) on this account.
- 6. Why is there a difference in the amount due if the customer pays the account in cash or not?

	(Page 1 d
and the second division of the second divisio	Civic Centre 12 Hertzog Soulevard 8001	Tax invoice number	160003571479
CALL IN	PO Box 655 Cape Town 8000 VAT Registration number	Customer VAT registration	9364527
117 IF GPL 1999 WHERE SHIFTARE SHIFTARE	4500193497	Account number	634812459
THIS CITY WORKS FOR YOU		Distribution code	6403
		Business partner number 1001923733 Tel: 086 010 3089 - Fax: 086 010 3090 Tel: overseas clients +27 21 401 4701 E-mail: accounts@capetown.gov.za Correspondence: Director: Revenue, P O Box 655, Cape Town 8000 Web address; wvw.capetown.gov.za	
145 GORDON AVI MOWBRAY 7853	E		
Account summary as a At 145 GORDON AVE	at 28/08/2015 / MOWBRAY / Erf 26146	Due	date 19/09/201
Previous account balance	e		2 032.67
ess payments (29/07/20	15) Thank you		349.67-
a)			
atest account - see ove	rleaf		393.72
urrent amount due (b)	Payable by 19/09/2	015	393.72
	Total (a)	+(b)	2.074.72
otal (a) + (b) above	2 07	6.72	2 0/0./2
otal liability	2 07/	6.72	
 Cheques must be made 	e payable to the City of Cape Town d on all amounts still outstanding a	numv 20120330 05352 pen Post-dated cheques will not be accepter the due date.	atatra / atat pted.
 Interest will be charge Failure to pay, could re reconnection of the su amount of your deposi- You may not withhold A convenient debit or Bank charges on paym When making a direct. Register at your bank f Municipality' and inser that there are no space 	sult in your water and/or electricity pply after payment cannot be guar it may be increased payment, even if you are engaged ler facility is available. For further g ent amounts in excess of 84 000,00 deposit at ABSA Bank, please state or internet payments. Log onto you t your nine-digit municipal account is between the numbers.	supply being disconnected/restricted anteed. A disconnection fee will be of in a dispute with the City concerning fetails please phone 086 010 3089. made by credit/debit card will be det your account no. 634812459 at bank's website and select 'City of C number in the beneficiary reference	d. Immediate harged and the pithis account. bited to your account ape Town field. Please ensure
 Interest will be charge Failure to pay, could re reconnection of the su amount of your deposi- You may not withhold A convenient debit orc Bank charges on paym When making a direct Register at your bank f Municipality' and inser that there are no space ABSA Che 	sult in your water and/or electricity pply after payment cannot be guar it may be increased. Payment, even if you are engaged ler facility is available. For further g ent amounts in excess of R4 000,00 deposit at ABSA Bank, please state for internet payments. Log onto you ty our nine-digit municipal account is between the numbers.	supply being disconnected/restricted anteed. A disconnection fee will be of in a dispute with the City concerning letails please phone 086 010 3089, made by credit/debit card will be deb your account no. 634812459 ar bank's website and select 'City of of number in the beneficiary reference wing: Post Office	d. Immediate harged and the phis account. bited to your account ape Town field. Please ensure
 Interest will be charge Failure to pay, could re reconnection of the su amount of your deposis You may not withhold A convenient debit ord Bank charges on paym When making a direct Register at your bank f Municipality' and inser that there are no space ABSA CIPE ABSA CIPE 	sult in your water and/or electricity pply after payment cannot be guar it may be increased. Payment, even if you are engaged ler facility is available. For further g ent amounts in excess of R4 000,00 deposit at ABSA Bank, please state or internet payments. Log onto you it your nine-digit municipal account is between the numbers.	supply being disconnected/restricted anteed. A disconnection fee will be of in a dispute with the City concerning letails please phone 086 010 3089, made by credit/debit card will be deb your account no. 634812459 ar bank's website and select 'City of of number in the beneficiary reference wing: Post Office Account number	d. Immediate harged and the phis account. bited to your account ape Town field. Please ensure
 Interest will be charge Failure to pay, could re reconnection of the su amount of your deposis You may not withhold A convenient debit ord Bank dharges on paym When making a direct Register at your bank f Municipality' and inser that there are no space ABSA Chee ABSA Chee IRS J. GWAYI 	sult in your water and/or electricity pply after payment cannot be guar it may be increased. Payment, even if you are engaged ler facility is available. For further g ent amounts in excess of R4 000,00 deposit at ABSA Bank, please state or internet payments. Log onto you internet payments. Log onto you is between the numbers.	supply being disconnected/restricted anteed. A disconnection fee will be of in a dispute with the City concerning letails please phone 086 010 3089, made by credit/debit card will be det your account no. 634812459 ar bank's website and select 'City of of number in the beneficiary reference wing: Post Office Account number mount due if not paid in cash	d. Immediate harged and the phis account. bited to your account ape Town field. Please ensure 634812459 2 076.72
 Interest will be charge Failure to pay, could re reconnection of the su amount of your deposit You may not withhold A convenient debit ord Bank charges on paym When making a direct Register at your bank f Municipality' and inser that there are no space ABSA Chee ABSA Chee IRS J. GWAYI 	sult in your water and/or electricity pply after payment cannot be guar it may be increased. Payment, even if you are engaged ler facility is available. For further g ent amounts in excess of R4 000,00 deposit at ABSA Bank, please state or internet payments. Log onto you t your nine-digit municipal account is between the numbers. CREETS SHOPRITE	supply being disconnected/restricted anteed. A disconnection fee will be of in a dispute with the City concerning letails please phone 086 010 3089, made by credit/debit card will be det your account no. 634812459 ar bank's website and select 'City of of number in the beneficiary reference wing: Post Office Account number mount due if not paid in cash Amount due if paid in cash	d. Immediate harged and the phis account. bited to your account ape Town field. Please ensure 634812459 2 076.72 2 076.70

- 1. 26146
- 2. 19/09/2015
- 3. R 2032,67
- 4. 29/07/2015 R349,67
- 5. R2 032,67 R349,67 = R 1 683,00
- 6. The amount due is R2 076,72, but since RSA no longer has 1c and 2c pieces, the total amount due will be rounded to R 2 076,70 if the account is paid in cash

The following table shows transaction fees at a bank:

SUMMARY

WHAT YOU SHOULD KNOW

To be able to do your banking at an ATM makes life much easier. Transaction costs are deducted from the balance in your account for transactions that were made at an ATM.

Transaction	Transaction cost
Withdrawal at an ATM	R4,75 + 1,45% of the amount
Deposit at an ATM	R6,70 + 1,17% of the amount

- 1. Beryl has R25 690,45 in her current account. She visits an ATM to withdraw R 3 500. Determine her account balance after the withdrawal.
- 2. A Few days later Beryl makes a deposit of R1 200 at the ATM. Calculate her account balance after the deposit.

1.	Opening balance Withdrawal	R25 690,45 - 3 500,00
	Transaction cost $R4,75 + \frac{1,45}{100} \times 3500$	- 55,50
	Balance	R22 134,95
2.	Balance	R22 134,95
	Deposit	+ 1 200,00
	Transaction cost R6,70 $+\frac{1,17}{100} \times 1200$	- 20,74
	Balance	R23 314,21

MATHEMATICAL LITERACY

a+b=c

TERMINOLOGY: MAPS AND PLANS - SCALE

Term	Definition	
Мар	A symbolic representation of selected characteristics of a place drawn on a flat surface.	
Number scale	A number scale such as 1 : 50 000 means that 1 unit on the map represent 50 000 units in real life	
Scale	Determines how many times smaller an object shown on a plan or map is that its actual size	
Scale drawing	A diagram of a real-life object drawn in proportion.	
Bar scales	Presented as a picture, it means that if you placed a ruler next to this scale, you could determine how many centimeters next to this scale, you could determine how many centimeters represent the specified kilometers	





a+b=a

SESSION 2 | MAPS AND PLANS : SCALE



SUMMARY

WHAT YOU SHOULD KNOW

You must be able to distinguish between the types of scales and be able to do calculations with each type.

Types of scales:

1. Bar Scale:

0 km 40 80 120km

Scale that uses line segments of a certain length to show the scale on the map.

2. <u>Number/ Numeric Scale/ratio scale:</u>

Always written in the following format

Map distance : True distance

e.g. 1:100 000

(this means that one unit on the map represents 100 000 units in real life)

Scale therefore compares a length measured and real length in the same units.

3. Line Scale:

Each segment represents a certain distance (in the example the whole line represents 200km)





WORKSHEET

Question 1

The distance between two shops in a town on a map measure 3.5 mm on a map with a scale of 1: 150 000. What is the distance on the ground in kilometers?

Scale 1: 150 000

It means 1 unit on the map represent 150 000 units on the ground

To convert 3,5 mm

= 3,5 mm x 150 000

= 525 000 mm ÷ 1000 000

= 0,525 km

Question 2

The distance from Stellenbosch to the Paarl is 30km.

What is the distance from Stellenbosch to the Paarl in cm on a map with a

scale of 1:2 000 000?

Scale 1: 02000 000

It means 1 unit on the map represent 2 000 000 units on the ground

So 1cm on the map represents 2 000 000 cm in real life. We need to convert the 2 000 000 cm to km.

Therefore, we need to first convert the km to cm:

30km ×100 000 = 3 000 000 cm

Now you can use the scale.

This can be written mathematically as follows:

30km ×100 000 ÷2 000 000 ×1 = 1,5 cm

Question 3

Use the following scale and answer the questions that follow:



3.1 Use your ruler and measure the line of the scale.

3.2 Use the information to determine the numerical

Jenefollowing answers might vary, depending on the print size of the paper

m

3.2 2cm is equal to 200 km

2cm : 200km

2:20 000 000

1: 10 000 000

Question 4

The following scale appears on a map. The distance from point A to point B on the map measures 13 cm. Determine the distance in real life from point A to point B.



The scale on the map indicates that:

4cm = 120km

13cm ÷ 4cm × 120km = 390 km

MATHEMATICAL LITERACY

a+b=c

CLASS DISCUSSIONS



Use the map of the Kruger national park to answer the following questions.

1.1	Calculate the distance between Phalaborwa airport and
Skukuza	
	airport if the distance between them is 9,5cm on the map
and the	
	scale of the map is
	₽ქල්&00800.

1.2	The bar scale on the map shows that 2cm is equal to
	16km in real life. Use this information to
determ	nine the
	number scale of this map.
1.3	Explain why your answer in 1.2 might differ from the
1.1	numerical scale of the map. 9,5 cm ÷1 ×500 000 = 4 750 000 cm
	4 750 000 ÷100 000 = 4,75 km
1.2	2 cm : 16 km
	2 : 1 600 000
	1 : 800 000
1.3 stretch which y	Because the map could have been ed/ shrunk when adding it to the question will influence the measurements.



Mr Johnson is building a new flat. The floor plan is shown



Use the given scale to determine the length of the wall indicated by the arrow.

Scale: 3cm: 3m

3: 300

1:100

So, length of wall: 8cm ×100 = 480cm

480cm ÷ 100 = 4,8m

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3.1	Mary measures the distance from Durban to
true if the 3.2 km.	Pietermaritzburg as 18cm on a map. Calculate the distance from Pietermaritzburg to Durban (in km) scale of the map is 1:500 000 The distance from Durban to Harrismith is 295
	Determine the distance on the same map in
cm 3.1	18 cm × 500 000 = 9 000 000 cm
	9000 000 cm ÷100 000 = 90km
3.2	295 km ÷500 000 = 0,00059 km 0,00059 km ×100 000 = 59 cm

Advantages and disadvantages of each scale:

	Advantages	Disadvantages
Numeric scale	 More accurate than bar scale, so lengths and distances will be more accurate in real life Easier to use when a very small scale is used Can be used with any unit and converted easily 	 Calculations are needed to determine real life lengths and distances When a map or plan is enlarged/reduced a number scale becomes inaccurate
Bar scale	 Quick and relatively easy to use You could determine true lengths without doing calculations When printing a map/plan the scale enlarges/reduces with the graphics. 	 Some measurements might be less accurate due to mistakes Some calculations might still be needed.

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