



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

NOVEMBER 2026

MARKS: 150

TIME: 3 hours

**This question paper consists of 14 pages and
a SPECIAL ANSWER BOOK of 18 pages.**



INSTRUCTIONS AND INFORMATION

1. This question paper consists of FIVE questions.
2. Answer ALL the questions ONLY in the SPECIAL ANSWER BOOK provided.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show ALL calculations clearly.
5. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Diagrams are NOT necessarily drawn to scale.
8. Write neatly and legibly...



QUESTION 1

- 1.1 TABLE 1 below shows a comparison of selected items bought in different quantities at two different stores.

TABLE 1: COST, EXCLUDING 15% VAT, OF SELECTED ITEMS AT TWO DIFFERENT STORES

ITEM	STORE 1		STORE 2	
	Units	Price (in R)	Units	Price (in R)
Chips 20 g	100	159,72	50	46,74
Lollipops	48	40,76	8	16,99
Juice 200 ml bottle	24	135,96	6	33,99
Chocolate 18 g	24	84,96	24	110,49

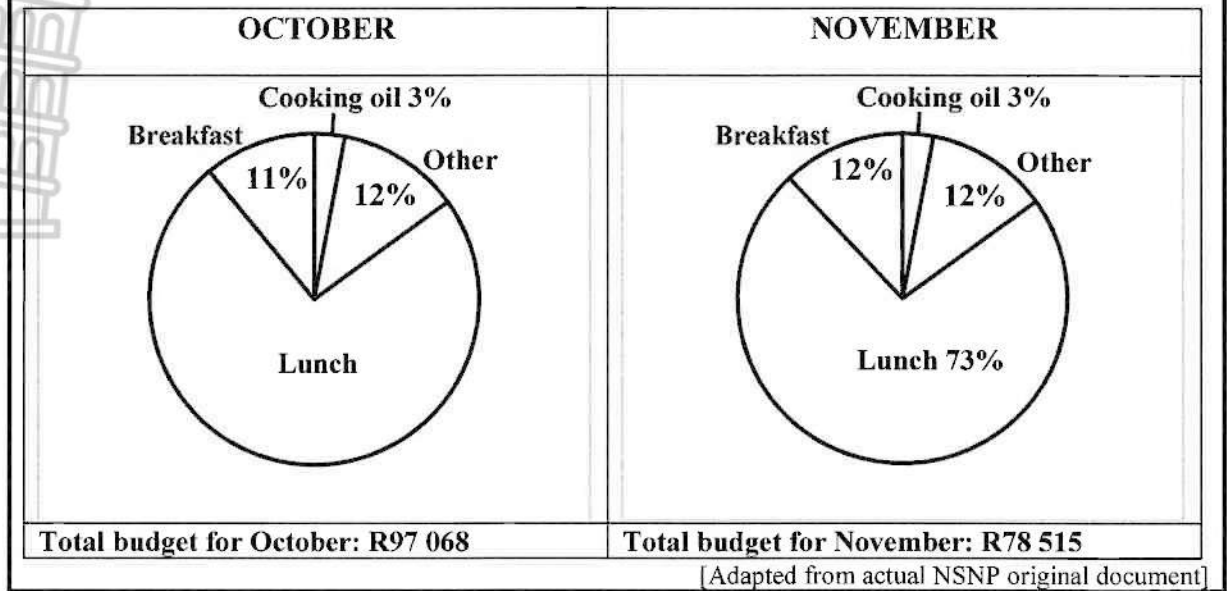
[Adapted from www.makro.co.za and www.checkers.co.za]

Use the information above to answer the questions that follow.

- 1.1.1 Calculate the unit price, excluding VAT, of ONE lollipop from Store 2. (2)
- 1.1.2 Determine the cost, excluding VAT, of 100 units of chips from Store 2. (2)
- 1.1.3 For reselling purposes, a customer adds R40 to the cost price of the 24 bottles of juice.
Calculate the selling price, excluding VAT, of the 24 bottles of juice from Store 1. (3)
- 1.1.4 Show that the VAT amount payable for the chocolates at Store 1 is R12,74. (2)
- 1.1.5 Write down, as a ratio in simplified form, the number of units of lollipops bought at Store 2 in comparison to the number of lollipops bought at Store 1. (3)



1.2 A local school's nutrition budget for October and November is shown in the pie charts below.



Use the information above to answer the questions that follow.

- 1.2.1 Name another type of graph that can be used to represent the information above. (2)
- 1.2.2 Determine the percentage allocated for lunch in October. (2)
- 1.2.3 Calculate, in rand, the amount allocated for 'other' in November. (2)
- 1.2.4 State whether the data given in the pie charts is discrete data or continuous data. (2)



1.3

TABLE 2 below gives definitions of terminology used in Mathematical Literacy.

TABLE 2: DEFINITIONS OF TERMINOLOGY USED IN MATHEMATICAL LITERACY

LETTER	DEFINITION
A	Numbers that give more information about the middle values in a data set
B	The possible outcomes which favour a specific event
C	The values that divide a list of numbers into four equal parts
D	Numbers that indicate how far data values in a data set lie apart
E	An increase in the price of a basket of goods or services that is representative of the economy as a whole
F	The points that divide a data set into 100 equal parts
G	An increase in the percentage of a basket of goods or services that is representative of the economy as a whole
H	Number of favourable outcomes divided by the number of all possible outcomes

Use the definitions given in the table to match the terminology below. Write only the letter (A–H) next to the question numbers (1.3.1 to 1.3.4), e.g. 1.3.5 J.

1.3.1 Probability

(2)

1.3.2 Inflation

(2)

1.3.3 Percentiles

(2)

1.3.4 Measures of central tendency

(2)

[28]



QUESTION 2

2.1 Derrick works at a large digital company in South Africa.

TABLE 3 below shows the financial performance statement of the company for the period ending 2024 and 2025.

TABLE 3: STATEMENT OF FINANCIAL PERFORMANCE

	2025	2024
	R'000	R'000
REVENUE		
Annual appropriation	3 968 611	3 312 185
Departmental revenue	3 159	16 669
TOTAL REVENUE	3 971 770	3 328 854
EXPENDITURE		
Current expenditure		
Compensation of employees	273 211	270 655
Goods and services	876 264	1 333 077
Total current expenditure	1 149 475	1 603 732
Total transfers and subsidies	1 761 500	1 663 384
Expenditure for capital assets		
Tangible assets	2 324	4 587
Intangible assets	-	982
Total expenditure for capital assets	2 324	5 569
Payments for financial assets	1 864	6 970
TOTAL EXPENDITURE	2 915 163	***
NET SURPLUS/(DEFICIT)	1 056 607	A

[Adapted from 2024/25 Annual Report Communications and Digital Technologies]

Use the information above to answer the questions that follow.

- 2.1.1 Write, in words, without using numerals, the actual amount for the total revenue in 2025. (3)
- 2.1.2 Calculate the missing table value A, the net surplus or deficit for 2024. (3)
- 2.1.3 Determine the compensation of employees as a percentage of the total current expenditure for 2025. (4)
- 2.1.4 Give ONE reason why Derrick can state that the company was in a better financial position in 2025 compared to 2024. (2)
- 2.1.5 Determine the table value for the total transfers and subsidies in 2023 if it increased by 6,2% in 2024. (4)



2.2

Derrick received a job opportunity in Auckland, a city in New Zealand.

TABLE 4 below shows selected average monthly incomes and monthly living costs for Cape Town and Auckland.

TABLE 4: SELECTED DATA ON AVERAGE MONTHLY INCOME AND MONTHLY LIVING COST FOR CAPE TOWN AND AUCKLAND

INCOME	CAPE TOWN (ZAR)	AUCKLAND (NZD)
Derrick's net average monthly salary (after tax)	28 341,60	5 435,76
RENT		
Monthly rent (1 bedroom) city centre	14 706,52	2 182,06
Monthly rent (1 bedroom) in the suburbs	9 900,00	1 899,81
OTHER COST		
Monthly utilities (e.g. electricity, heating, water)	2 148,48	264,18
Total expected monthly costs for a person (includes all costs except rent)	11 738,20	1 780,10

[Adapted from www.numbeo.com]

TABLE 5 below shows the exchange rates on 2 October 2025.

TABLE 5: EXCHANGE RATES ON 2 OCTOBER 2025

1 New Zealand dollar (NZD)	=	0,58319513 USD
1 USD	=	17,18288 South African rand (ZAR)

[Adapted from www.xe.com]

Use the information above to answer the questions that follow.

2.2.1 Calculate, in NZD, the difference in the rental cost for a person living in the city centre compared to a person living in the suburbs of Auckland. (3)

2.2.2 Derrick lives in a suburb of Cape Town. Determine how much money he has left after paying his rent and total expected monthly costs. (3)

2.2.3 The price of a burger meal at McDonalds in South Africa is ZAR119,50. In Auckland, this same burger meal is NZD16,00.

Derrick stated that the cost of the burger meal in Auckland is exactly ZAR40 more than the price in South Africa.

Verify, showing ALL calculations, whether this statement is VALID. (7)
[29]



QUESTION 3

3.1 The graph on ANNEXURE A in the ANSWER BOOK shows the following:

- The number of households with free solar power systems (in thousands)
- The total number of households (in hundred thousands)
- The percentage of households connected to the main electricity supply system

NOTE: Provinces omitted from the graph do NOT provide households with free solar power systems.

Use ANNEXURE A to answer the questions that follow.

- 3.1.1 Write down the missing table value **A**, the total number of households in the Free State. (2)
- 3.1.2 State the number of provinces that do NOT provide households with free solar power systems. (2)
- 3.1.3 Give a reason why the number of households that receive free solar power systems in Gauteng is seen as an outlier. (2)
- 3.1.4 Calculate, as a percentage rounded to TWO decimal places, the mean number of households that is still connected to the main electricity supply system. (4)
- 3.1.5 A resident of the Eastern Cape (EC) claimed that the total number of households in the province with free solar power systems are more than $\frac{3}{7}$ of Gauteng's (GP) total households that were provided with free solar power systems.

TABLE 6 below shows the number of households in the GP and EC municipalities with free solar power systems.

TABLE 6: NUMBER OF HOUSEHOLDS WITH FREE SOLAR POWER SYSTEMS

MUNICIPALITY	HOUSE-HOLDS	MUNICIPALITY	HOUSE-HOLDS
Ekurhuleni (GP)	82 177	Elundini (EC)	4 755
Alfred Nzo (EC)	12 000	Mbhashe (EC)	4 754
Matatiele (EC)	7 644	Rand West City (GP)	2 773
Ntabankulu (EC)	155	Dr AB Xuma (EC)	2 560
Winnie Madikizela-Mandela (EC)	2 646	Dr Beyers Naudé (EC)	120
Umzimvubu (EC)	2 548		

[Adapted from www.statssa.gov.za]

Verify, showing ALL calculations, whether the claim is CORRECT. (6)



3.2

TABLE 7 below shows the number of sick leave days taken by permanent and contract employees at different salary scales at the Department of Statistics of South Africa for the period 1 January 2024 to 31 December 2024.

TABLE 7: SICK LEAVE FOR THE PERIOD 1 JANUARY 2024 TO 31 DECEMBER 2024

	Salary scale	Total number of days	% of days with medical certificate	Number of employees using sick leave	% of employees using sick leave
Permanent employees	1–2	460	27,4	54	2,4
	3–5	1 649	28,5	169	7,6
	6–8	9 323	24,0	1 067	47,8
	9–12	6 276	23,0	736	33,0
	13–16	1 128	24,2	151	6,8
Contract employees	1–2	9	22,2	4	0,2
	3–5	31	35,5	24	1,1
	6–8	141	19,9	28	1,3
	TOTAL	19 017	-	2 233	-

[Adapted from www.statssa.gov.za]

Use the information above to answer the questions that follow.

3.2.1 Show, with calculations, that the median number of employees using sick leave is more than 100. (4)

3.2.2 Determine the actual number of days the permanent employees at salary scale 13–16 had medical certificates. (3)

3.2.3 The value of Quartile 1 (Q1) for the % of employees using sick leave is 1,2%.

Determine the interquartile range (IQR) for the % of employees using sick leave.

You may use the following formula:

$$\text{IQR} = Q3 - Q1 \quad (6)$$

3.2.4 Determine, as a percentage, the probability of randomly selecting a permanent employee at salary scale 6–12 using sick leave. (3)
[32]



QUESTION 4

- 4.1 Shriyan is interested in upgrading his current cellphone contract. He looks at the THREE company options in TABLE 8 below to assist him in making an informed choice.

TABLE 8: INFORMATION FOR THREE COMPANY OPTIONS

	COMPANY A	COMPANY B	COMPANY C
TYPE	Prepaid	Contract	Contract
COST PER MONTH	R0	R149	R139
CONTRACT PERIOD	Not applicable	24 months	24 months
FREE MINUTES PER MONTH	0	100	75
OUT-OF-BUNDLE CALL RATE (R/MIN)	R2,10	R1,00	R2,00

When a user exceeds the number of free minutes included in their option, they will pay an out-of-bundle rate per minute, or part thereof used.

The following information is in the SPECIAL ANSWER BOOK:

- A table showing the cost in rand per minute for the THREE company options
- A graphical representation of the table is given with ONE incomplete graph

[Adapted from www.mtn.co.za; www.cellc.co.za; www.telkom.co.za]

Use the information above and in the ANSWER BOOK to answer the questions that follow.

- 4.1.1 Write down the monthly fixed cost for Company C. (2)
- 4.1.2 Calculate the total minimum cost over the contract period for Company B, if Shriyan only uses the 100 inclusive free minutes per month. (2)
- 4.1.3 Calculate the table value **X** in the ANSWER BOOK. Write the answer in the space provided in the ANSWER BOOK. (3)
- 4.1.4 Two complete graphs, representing the call cost for Companies A and C, are drawn in the ANSWER BOOK. A third incomplete graph representing the cost of calls for Company B is also drawn.
- Use the same set of axes to complete the graph for Company B on the ANSWER SHEET.
- NOTE:** First calculate the missing values for Company B in the table to complete the graph. (5)
- 4.1.5 Use the graphs to determine the number of minutes where the cost for Company B and Company C are exactly the same. (2)
- 4.1.6 Shriyan makes an average of 60 minutes of calls a month.
- Use the graphs to determine which company would be the cheapest. (2)



4.2

Shriyan intends to connect his home to the internet instead of using mobile data. He has the option of choosing a fibre network provider or a 5-G network provider.

TABLE 9 below shows the different network provider options and the amount of data provided with the corresponding monthly costs.

TABLE 9: AMOUNT OF DATA AND COST PER MONTH FOR HOME INTERNET

FIBRE NETWORK PROVIDER	AMOUNT OF DATA	COST	5-G NETWORK PROVIDERS	AMOUNT OF DATA	COST
Vox	Unlimited	R749	Axxess	300 GB	R449
Webafrika	Unlimited	R709	Afrihost Pure	1 TB	R849
Afrihost	Unlimited	R747	MTN	500 GB	R619
Herotel	Unlimited	R749	Vodacom	500 GB	R599
MTN	Unlimited	R999	Rain	1 TB	R995

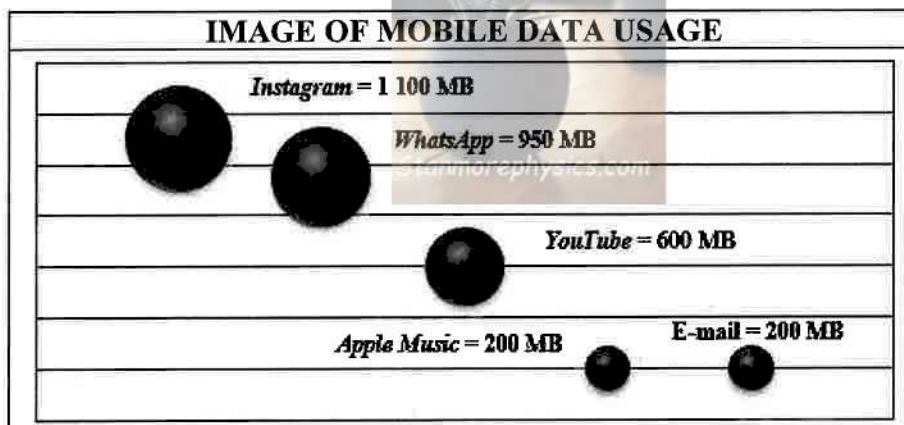
[Adapted from www.businessstech.co.za]

NOTE:

1 terabyte (TB) = 1 000 gigabytes (GB)

1 megabyte (MB) = $\frac{1}{1\,000}$ gigabytes (GB)

The image below illustrates Shriyan's data usage for December 2025.



Use the information above to answer the questions that follow.

4.2.1 Determine the cost per 10 GB if Shriyan chooses the MTN 5 G option. (3)

4.2.2 Calculate, in GB, Shriyan's total data usage for December 2025. (4)

4.2.3 In some homes more than one 5-G network provider is used.

(a) Determine the monthly cost to use both network providers Afrihost Pure and MTN 5 G. (2)

(b) Shriyan used 1 300 GB in one month. He stated that he saved more than R600 using the Afrihost fibre network provider, instead of using a combination of Axxess and Rain 5 G.

Verify, showing ALL calculations, whether his statement is VALID.

(6)
[31]



QUESTION 5

- 5.1 TABLE 10 below shows the world's top ten mining companies in 2024, with their country's revenue generated (in billion \$) and number of employees.

TABLE 10: WORLD'S TOP 10 BIGGEST MINING COMPANIES IN 2024

NAME OF MINING COMPANY	COUNTRY	REVENUE (IN BILLION \$)	NUMBER OF EMPLOYEES
CMOC Group	China	25,68	11 995
Hindalco Industries	India	26,47	40 000
Anglo-American	UK	29,54	100 000
Aluminium Corporation of China	China	32,00	65 000
Zijin Mining Group	China	40,20	40 000
Vale SA	Brazil	42,04	120 000
Rio Tinto	UK	53,96	45 000
BHP Group	Australia	55,22	80 000
Jiangxi Copper	China	73,7	20 000
Glencore	Switzerland	225,97	135 000
TOTAL			656 995

[Adapted from www.sars.gov.za]

Use the information above to answer the questions that follow.

- 5.1.1 Write \$29,54 billion as a number in full, without using the word 'billions'. (2)
- 5.1.2 Determine the percentage difference between the number of employees at Vale SA and the CMOC Group.

You may use the following formula:

$$\% \text{ Difference} = \frac{\text{Difference in the number of employees}}{\text{Number of employees at Vale SA}} \times 100\% \quad (3)$$

- 5.1.3 Determine, as a decimal, the probability of randomly selecting a top mining company that is NOT from China. (3)
- 5.1.4 An analyst stated that the revenue per employee for Hindalco Industries is \$661 750.

Verify, showing ALL calculations, whether the analyst's statement is CORRECT. (4)



5.2

Amali is a new employee at Nakuru mine in Kenya. She was offered a monthly taxable income of 125 000 Kenyan shilling (KES) by her employer.

In Kenya, personal income tax is calculated on an individual's monthly taxable income.

TABLE 11 below shows the personal monthly income levels and tax rates used in Kenya.

TABLE 11: PERSONAL MONTHLY INCOME LEVELS AND TAX RATES USED IN KENYA

	MONTHLY INCOME LEVELS (in KES)	TAX RATES
On the first	0–24 000	10%
On the next	24 001–32 333	25%
On the next	32 334–500 000	30%
On the next	500 001–800 000	32,5%
On all income above	800 000	35%
TAX REBATE		
KES 2 400		

[Adapted from www.ieakenya.or.ke]

Use the information above to answer the questions that follow.

5.2.1 Show that a person earning KES23 000 per month will NOT pay any personal income tax. (3)

5.2.2 Amali decided to invest 5,5% of one month's taxable income for a period of 1 year and 10 months.

A bank in Kenya offered her an interest rate of 7,76% p.a. for the first year and 7,73% p.a. for the second year, compounded annually.

Calculate the total value of the investment at the end of the given period. (8)



5.3

The employer at Nakuru mine in Kenya offers her the following:

- Free accommodation
- 60% payment of her monthly water bill

NOTE: Amali is responsible for settling the remaining amount of the monthly water bill.

Kenya uses a stepped tariff system known as blocks to calculate water consumption in cubic metres (m^3).

TABLE 12 below shows a standard domestic stepped tariff structure (in m^3) used in Kenya.

TABLE 12: STANDARD DOMESTIC STEPPED TARIFF STRUCTURE IN KENYA

BLOCK	CONSUMPTION (m^3)	APPROVED TARIFF (KES) per m^3
1	From 0 to 6	68
2	More than 6 to 20	85
3	More than 20 to 50	91
4	More than 50 to 100	101
5	More than 100 to 300	109
6	More than 300	117

[Adapted from www.nairobiwater.or.ke]

Use the information above to answer the question that follows.

Calculate Amali's contribution towards her monthly water bill if she used 22 m^3 of water in a specific month.

(7)
[30]

TOTAL: 150



Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NSC Answer Book

CENTRE NUMBER**EXAMINATION NUMBER**

DATE _____

SUBJECT CODE

M	L	I	T
---	---	---	---

PAPER NUMBER

1

SUBJECT NAME

MATHEMATICAL LITERACY

[illegible]

READ INSTRUCTIONS ON THE NEXT PAGE.

This answer book consists of 18 pages.



Copyright reserved

Please turn over

FOLLOW THESE INSTRUCTIONS CAREFULLY.

1. Clearly write your examination number and centre number in the spaces provided and attach your barcode label in the space provided.
2. Remember that your own name (or the name of your school) may not appear anywhere on or in this ANSWER BOOK.
3. Answer ALL the questions in the spaces provided in this ANSWER BOOK ONLY. If you require additional space for your answers:
 - 3.1 Use the additional space provided at the end of the ANSWER BOOK.
 - 3.2 When answering a question in the additional space, indicate clearly the question number in the column on the left-hand side.
4. No pages may be torn from this ANSWER BOOK.
5. Candidates may not retain an ANSWER BOOK or remove it from the examination room.
6. Answers must be written in black/blue ink as distinctly as possible.
7. Do not write in the margins.
8. Draw a neat line through any work/rough work that must NOT be marked.



QUESTION 1

	Solution	Marks
1.1.1		(2)
1.1.2		(2)
1.1.3		(3)
1.1.4		(2)
1.1.5		(3)
1.2.1		(2)
1.2.2		(2)
1.2.3		(2)
1.2.4		(2)



	Solution	Marks
1.3.1		(2)
1.3.2		(2)
1.3.3		(2)
1.3.4		(2)
		[28]



QUESTION 2

	Solution	Marks
2.1.1		(3)
2.1.2		(3)
2.1.3		(4)
2.1.4		(2)
2.1.5		(4)



	Solution	Marks
2.2.1		(3)
2.2.2		(3)
2.2.3		(7)
		[29]



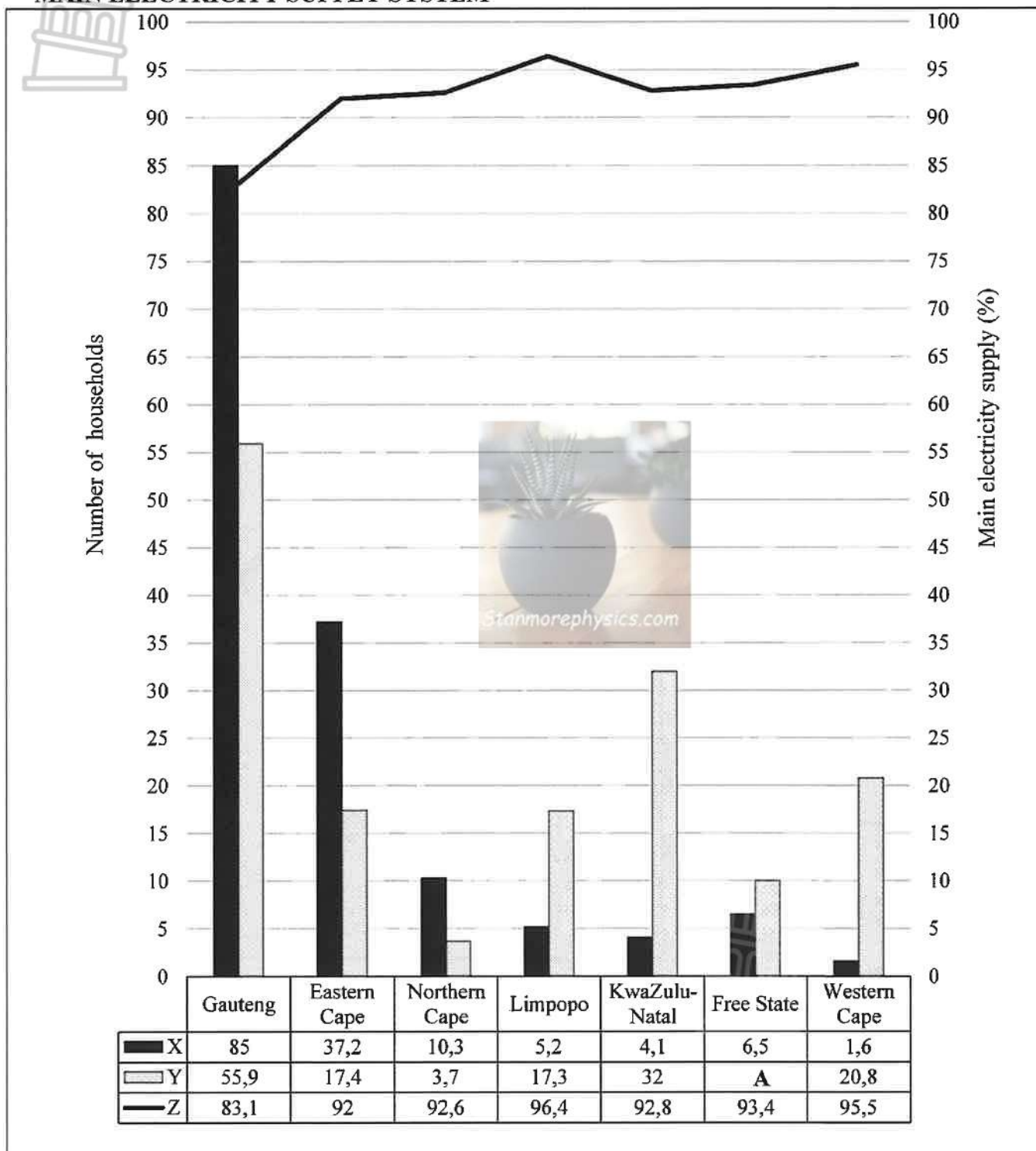


KEEP THIS PAGE BLANK.



ANNEXURE A

NUMBER OF HOUSEHOLDS WITH FREE SOLAR POWER SYSTEMS, TOTAL NUMBER OF HOUSEHOLDS AND PERCENTAGE OF HOUSEHOLDS CONNECTED TO MAIN ELECTRICITY SUPPLY SYSTEM



X = number of households with free solar power ('000)

Y = total number of households ('00 000)

Z = main electricity supply (%)

[Adapted from www.statssa.gov.za]



QUESTION 3

	Solution	Marks
3.1.1		(2)
3.1.2		(2)
3.1.3		(2)
3.1.4		(4)
3.1.5		(6)



	Solution	Marks
3.2.1		(4)
3.2.2		(3)
3.2.3		(6)
3.2.4		(3)
		[32]





KEEP THIS PAGE BLANK.

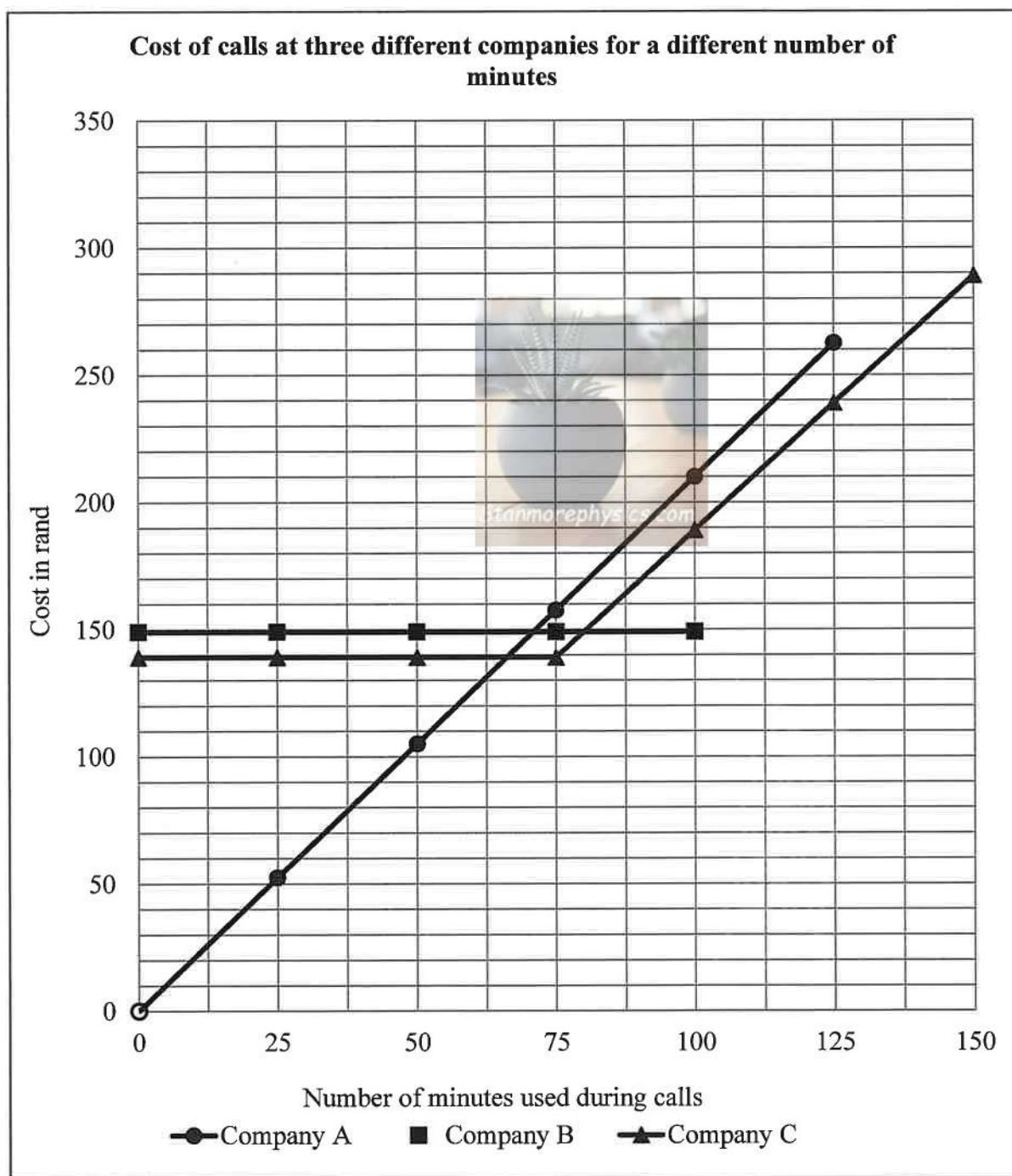


QUESTION 4.1

ANSWER SHEET

COST IN RANDS PER MINUTE AT DIFFERENT CELLPHONE COMPANIES

TIME IN MINUTES	0	25	50	75	100	125	150
COMPANY A	R0,00	R52,50	R105,00	R157,50	R210,00	R262,50	X
COMPANY B	R149,00	R149,00	R149,00	R149,00	R149,00	...	...
COMPANY C	R139,00	R139,00	R139,00	R139,00	R189,00	R239,00	R289,00



QUESTION 4

	Solution	Marks
4.1.1		(2)
4.1.2		(2)
4.1.3		(3)
4.1.4	Use this space to calculate the missing values and complete the graph on the ANSWER SHEET (page 12).	(5)
4.1.5		(2)
4.1.6		(2)



	Solution	Marks
4.2.1		(3)
4.2.2		(4)
4.2.3 (a)		(2)
4.2.3 (b)		(6)
		[31]



QUESTION 5

	Solution	Marks
5.1.1		(2)
5.1.2		(3)
5.1.3		(3)
5.1.4		(4)



	Solution	Marks
5.2.1		(3)
5.2.2		(8)
5.3		(7)
		[30]

TOTAL: 150



	Addition





RE-MARK/RE-CHECK				
Question	Marks			Initials
1				
2				
3				
4				
5				
TOTAL				
HASH TOTAL				

