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DEPARTMENT OF
EDUCATION

CAPRICORN NORTH DISTRICT

GRADE 12

MATHEMATICAL LITERACY

CONTROLLED TEST 1

DATE: 18 MARCH 2025

MARKS : 100

DURATION: 2 hours

This question paper consists of 12 pages and 1 answer sheet



INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Answer QUESTION 4.3.4 on the attached ANSWER SHEET.
Write your name and surname in the spaces provided on the ANSWER SHEET. Hand in the ANSWER SHEET with your ANSWER BOOK.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. An approved calculator (non-programmable and non-graphical) may be used unless stated otherwise.
6. Show ALL calculations clearly.
7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Pictures and diagrams are NOT necessarily drawn to scale unless stated otherwise.
10. Write neatly and legibly.



QUESTION 1

1.1 TABLE 1 below shows the fees charged at Marie Secondary School.

TABLE 1: SCHOOL AND HOSTEL FEES FOR 2020**Account holder**

Katleho Titus

Account for the year is payable on 1 February.
Arrangement for quarterly or monthly (over 11 months) payments can be made.

School Fees

Date	Description	Debit	Credit
01/01/2020	Balance brought forward		R32,55
06/01/2020	School fees 2020	R12 540,00	
13/01/2020	EFT bank deposit		R3 135,00
03/04/2020	EFT bank deposit		R3 135,00
10/07/2020	EFT bank deposit		R3 135,00
30/10/2020	EFT bank deposit		R3 135,00

Hostel Fees

Date	Description	Debit	Credit
01/01/2020	Balance brought forward		R00,00
06/01/2020	Hostel fees 2020	R20 350,00	
13/01/2020	EFT bank deposit		R5 100,00
03/04/2020	Hostel cancelled		R15 250,00
01/12/2020	Total due		R00,00

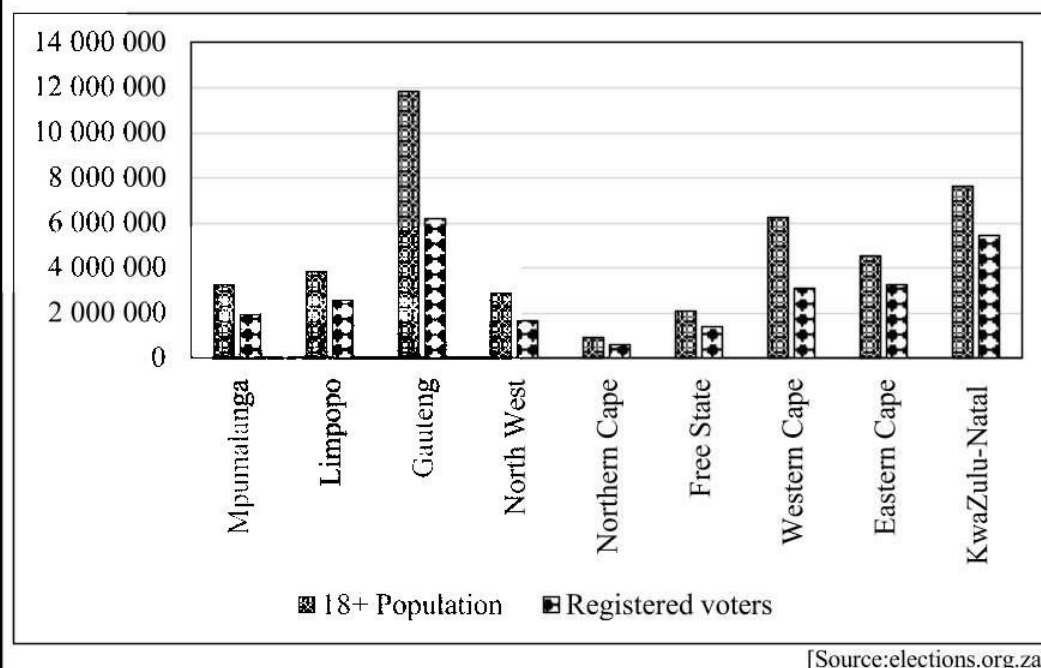
[Adapted from actual school statement]

Use TABLE 1 above to answer the questions that follow.

- 1.1.1 Explain the meaning of the term **debit** in this context. (2)
- 1.1.2 Write down the frequency of the school fee payments. (2)
- 1.1.3 Identify a descriptor that indicates Katleho did not stay at home during the first three months of 2020. (2)
- 1.1.4 Determine the school fee amount to be paid if the monthly payment option was used. (3)
- 1.1.5 Calculate the total amount paid for school and hostel fees in 2020. (3)



- 1.2 The graph below indicates the number of registered voters per province for the 2021 municipal elections.



Use the graph above to answer the questions that follow.

- 1.2.1 Identify the type of graph drawn. (2)
- 1.2.2 Write down the minimum age required for voting. (2)
- 1.2.3 Determine the probability of randomly selecting a province where the number of registered voters is higher than the voting population. (2)
- 1.2.4 Express the number 5 471 539 in words. (2)
- 1.2.5 Write down the number of provinces taking part in the municipal elections. (2)



1.3

Buying a cell phone is sometimes not easy as one has to compare the storage capacities and the price.

The information below indicates the prices charged for different storage capacities of the same brand of cell phone.



Capacity	Cash price
256 GB	R25 899
128 GB	R23 699
512 GB	R30 899
1 TB	R35 299

NOTE: GB stands for gigabyte
TB stands for terabyte
1000 GB = 1TB

Study the information above to answer the questions that follow.

- 1.3.1 Write down the cash price of a cell phone with the lowest capacity. (2)
- 1.3.2 Arrange the cell phone capacity in descending order. (2)
- 1.3.3 Determine the price difference between a 512 GB and a 256 GB cell phone. (2)
- 1.3.4 Round R23 699 to the nearest thousand rand. (2)

[30]



QUESTION 2

2.1

During a particular month, Domestic worker 's employer, Debbie, used 25 kℓ of water.

TABLE 2 shows the residential water tariffs, including VAT.

TABLE 2: RESIDENTIAL WATER TARIFFS INCLUDING VAT

Block	Tariff in kilolitres (kℓ)	Tariff in Rand per kilolitre (kℓ)
Block 1	0 – 6 kℓ	R10,34
Block 2	7 – 15 kℓ	R24,54
Block 3	16 – 30 kℓ	R27,63
Block 4	31 – 60 kℓ	R33,10
Block 5	61 or more kℓ	R38,91


[Source: Mangaung.co.za]

Use TABLE 2 and the information above to answer the questions that follow.

- 2.1.1 What does the acronym **VAT** stand for? (2)
- 2.1.2 Determine the maximum number of kℓ that can be charged in Block 2. (3)
- 2.1.3 Calculate the amount that Debbie will pay for the water used. (6)

2.2

Debbie wants to buy a water purifying system for her drinking water. The following options are available for her.

PAYMENT OPTIONS	PICTURE OF A WATER PURIFYING SYSTEM
<p>Option 1: The cash price is R2 299</p> <p>Option 2:</p> <ul style="list-style-type: none"> • R216 per month • The amount includes insurance and service fee • 24 months to pay • Interest 17,25% p.a. <p>Option 3:</p> <ul style="list-style-type: none"> • R211 per month • Amount excludes insurance and service fee • 12 months • Interest 17,5% p.a. 	



North District/March 2025

Use the information above to answer the questions that follow.

2.2.1 Write the acronym **p.a.** in full. (2)

2.2.2 Calculate the amount of interest p.a. charged in option 3. (3)

2.2.3 Debbie told her domestic worker that she would pay more than double the cash price if she chose to buy using option 2.

Verify, showing all calculations, if Debbie's statement is correct. (5)

[21]



QUESTION 3

- 3.1 Many South Africans use the weekly advertising in the local newspapers to help with shopping decisions.

TABLE 3 below indicates the number of copies distributed and average monthly household income around some areas in Pretoria.

TABLE 3: NUMBER OF COPIES DISTRIBUTED AND AVERAGE MONTHLY HOUSEHOLD INCOME

Area	Number of distributed copies	Average readership in %	Average monthly household income in Rand (R)
Pretoria East	79 210	76	30 685
Centurion	60 350	61	24 695
Pretoria North	40 100	62	28 435
Moot	33 630	76	20 330
Pretoria West	20 250	70	20 250
Pretoria Far North	29 000	80	14 660
Mamelodi	30 000	76	16 360

[Source: rekord.co.za]

Use TABLE 6 and the information above to answer the question that follow.

- 3.1.1 State the frequency of receiving this newspaper in Pretoria. (2)
- 3.1.2 Write down the mode for the average readership. (2)
- 3.1.3 Determine the interquartile range (IQR) for the average monthly household income in Pretoria.

You may use the formula: $IQR = Q3 - Q1$ (5)



- 3.2 Mr Malinga, a 52-year-old resident at Pretoria North, earned a monthly taxable income of R35 357,00 during the 2021/22 tax year. During this time, Mr Malinga was a member of a medical fund for himself, his wife and his two children.

Table 4 below shows the tax table for the 2021/22 tax year.

TABLE 4: TAX RATES FOR 2021/22 TAX YEAR

TAX BRACKET	TAXABLE INCOME	TAX RATES (in R)
1	1–216 200	18% of the taxable income
2	216 201–337 800	38 916 + 26% of taxable income above 216 200
3	337 801–467 500	70 532 + 31% of taxable income above 337 800
4	467 501–613 600	110 739 + 36% of taxable income above 467 500
5	613 601–782 200	163 335 + 39% of taxable income above 613 600
6	782 201–1 656 600	229 089 + 41% of taxable income above 782 200
7	1 656 601 and above	587 593 + 45% of taxable income above 1 656 600

[Adapted from www.sars.gov.za]

Table 5 below shows the tax rebates and medical tax credits for the 2021/22 tax year.

TABLE 5: TAX REBATES AND MEDICAL TAX CREDITS FOR 2021/22 TAX YEAR

TAX REBATES	
Primary	R15 714
Secondary (65 and older)	R8 613
Tertiary (75 and older)	R2 871
MEDICAL TAX CREDITS PER MONTH	
Main member	R332
First member	R332
Each additional member	R224

[Adapted from www.sars.gov.za]

Use TABLES 4 and 5 above to answer the questions that follow.

- 3.2.1 Determine Mr Malinga's annual taxable income. (2)
- 3.2.2 Show with calculations that Mr Malinga will receive R13 344 medical tax credits for the 2021/22 tax year. (4)
- 3.2.3 Calculate the amount of tax Mr Malinga must pay for 2021/22 tax year. (8)
- 3.2.4 Use calculations to show how the value of R70 532 on the tax table for the third tax rate, was derived. (3)


[26]



QUESTION 4

Mogodu Monday has become a popular South African weekly occasion wherein many celebrate the most unpopular day of the week by turning it into an enjoyable time over great food with family and friends. During this day, mogodu is often enjoyed with a side of warm pap, samp or dumpling.

A small business sells a plate of mogodu for R50,00.

NOTE WELL	PLATE OF MOGODU SERVED WITH PAP
<p>Mogodu is a combination of chopped tripe and intestines served as a stew.</p> <p>Pap is a traditional porridge made from maize meal.</p>	

The cost to make one plate of mogodu is given by the following formula:

Total cost = R1 200 + (26 × m) where **m** = number of plates

[Adapted from #ReMojaKaofela@MojaCafe]

Use the information above to answer the questions that follow.

4.1 Use the equation above to determine the number of plates sold if the total cost is R2 760. (4)

4.2 Construct a formula that can be used to calculate the income from selling a plate of mogodu, in the form:

Income = _____ (2)



- 4.3 TABLE 6 below shows the total cost and income from selling plates of mogodu.

TABLE 6: COST AND INCOME OF SELLING PLATES OF MOGODU

Number of plates	0	10	30	50	70	90	100
Cost (R)	1 200	1 460	1 980	2 500	3 020	3 540	3 800
Income (R)	0	500	1 500	2 500	3 500	4 500	5 000

- 4.3.1 Explain the term **break even** in this context and identify the number of plates that must be sold to break even. (4)
- 4.3.2 The manager of the small business stated that she could make a $\frac{8}{25}$ profit on 100 plates of mogodu sold.
Verify, showing ALL calculations, if his statement is correct. (6)
- 4.3.3 Write down the type of graph that can be used to represent the information on TABLE 6 above. (2)
- 4.3.4 The income graph has already been drawn on the attached ANSWER SHEET.
Use the information from Table 6 to draw on the same set of axes a graph representing the cost of plates of mogodu. (5)

[23]

[TOTAL:100]



QUESTION 4.3.4**NAME AND SURNAME:** _____