LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

SEPTEMBER 2025

MARKS: 150

TIME: 3 hours

EMLITP1

This question paper consists of 12 pages.

Copyright reserved

INSTRUCTIONS AND INFORMATION

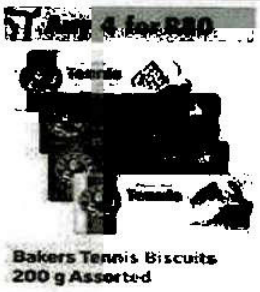
1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Read ALL the questions carefully.
3. Use ANNEXURE A, on page 15 in the Answer book, to answer QUESTION 5.2.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. For the purposes of answering this question paper, a VAT rate of 15% must be used where necessary.
10. Write neatly and legibly.

Copyright reserved

QUESTION 1

1.1 TABLE 1 below shows an advertisement from a GAME store.

TABLE 1: SPECIALS AT GAME (ALL PRICES INCLUDES 15% VAT)

		
Bakers Tennis Biscuits 200g each	Willards Flings 150g each OR Willards Cheese Curls 150g each	Beacon Chocolate Slabs 80g each
Combo: Any 4 for R80	Combo: Any 6 for R90	Combo: Any 5 for R55
Normal price: R26,99 each	Normal price: R21,99 each	Normal price: R16,99 each

(Adapted from www.gamespecials.co.za)

Use TABLE 1 to answer the questions that follow.

1.1.1 Write down the acronym VAT in full. (2)

1.1.2 Calculate the discount price for ONE 200 g Bakers Tennis Biscuits pack if you buy the combo. (2)

1.1.3 Determine the number of Bakers Tennis Biscuit Combo's you can buy with R400. (2)

1.1.4 Bakers Tennis biscuits are available in the following flavours: Original, Caramel and Mint-chocolate.

Write down the probability of randomly selecting a Chilly Cheese flavoured packet of Tennis Biscuits. (2)

1.1.5 Calculate the total price if you buy one packet of Willards Flings and one Beacon Chocolate Slab at the normal price including VAT. (2)

1.1.6 Determine the total amount for five Beacon Chocolate Slabs if you buy each one at the normal price including VAT. (2)

1.1.7 Determine the total price if you buy a combo of Bakers Tennis Biscuits and a combo of Willards Flings or Cheese Curls. (2)

Copyright reserved

1.2 Phokwane Municipality is situated within the Frances Baard District in the Northern Cape Province. TABLE 2 shows their total operating income and total operating expenditure for four years from 1 March – 28 February for each year.

TABLE 2: INCOME AND EXPENDITURES (IN MILLION RAND)

YEAR	2019-2020	2020-2021	2021-2022	2022-2023
Total operating income	339,994	342,110	359,591	377,194
Total operating expenditure	294,431	310,235	325,310	340,861
Surplus/Deficit	45,563	31,875	34,281	A

[Adapted from www.phokwane.gov.za]

Use TABLE 2 to answer the questions that follow.

1.2.1 Are the four years categorical or numerical data? (2)

1.2.2 Write down the Total operating expenditure for the year 2020 -2021 in words. (2)

1.2.3 Define the term "deficit" in the given context. (2)

1.2.4 Choose and write down the letter, A, B or C that best describes the probability of randomly selecting a year with the total operating income that is more than R300 million.

A impossible
B 50/50 chance
C certain (2)

1.2.5 Calculate A, the surplus/deficit for the year 2022-2023. (2)

1.2.6 In which year did the Municipality have the second least surplus? (2)

[26]

Copyright reserved

QUESTION 2

2.1 Mpho lives in Johannesburg. Johannesburg water uses an increasing block tariff system for the water service. This divides water usage into blocks, where the tariff per kilolitre increases with increased consumption.

A fixed levy of R31,08 (VAT inclusive) is charged to all residents for each water connection.

Mpho must pay the fixed levy and for his water usage as per kilolitre according to the block tariff per kilolitre.

TABLE 3 shows the block water tariffs for Johannesburg.

TABLE 3: WATER TARIFFS OF JOHANNESBURG

Kiloliters per month	Tariff (R/kℓ)
0 to 6	Free
More than 6 to 10	22,26
More than 10 to 15	23,23
More than 15 to 20	32,57
More than 20 to 30	45,01
More than 30 to 40	49,23
More than 40 to 50	62,11
More than 50	66,56

(All tariffs are VAT exclusive)

[Adapted from www.joburg.org.za]

Use the information above to answer questions that follow.

2.1.1 Mpho used 14 kilolitres of water for the month. Calculate what his monthly cost of water will be, including VAT. (8)

2.1.2 Determine what percentage Mpho had to pay for his fixed levy on his total monthly cost for 14 kilolitres. (3)

Copyright reserved

2.2

Mpho wants to buy a new house in Johannesburg. He has R1 000 000 in savings for the purchase of a new house but does not have the full cash amount.

Property24 has the following details on three bond payment options for a house on sale in Johannesburg as shown in TABLE 4.

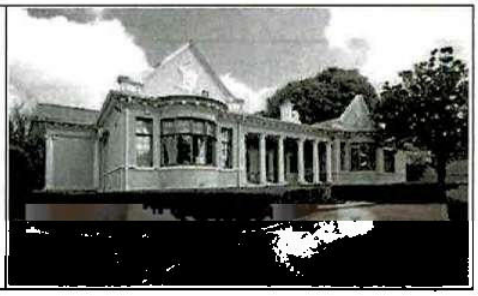


TABLE 4: PAYMENT OPTIONS OF HOUSE IN JOHANNESBURG

	Option 1	**Option 2**	**Option 3**
Purchase Price	R 5 990 000	R5 990 000	R5 990 000
Deposit	R1 000 000	R1 000 000	R1 000 000
Interest rate	10,75% per year	10,75% per year	10,75% per year
Term agreement	10 years	15 years	20 years
Monthly instalment	R68 033	R55 935	R50 659
Once-off costs	R1 600 015	R1 600 015	R1 600 015

[Adapted from www.property24.com]

Use TABLE 4 to answer the following questions.

2.2.1 Write down the term agreement in months for bond payment option one. (2)

2.2.2 Convert the 10,75% per year interest rate to a rate per month to one decimal place. (3)

2.2.3 Calculate the total cost of the house if he decides to use bond payment option one (the monthly instalments remained the same throughout the contract period).
You may use the following formula:
Total cost = Total value of monthly instalments + Once-off costs (5)

2.2.4 Lerato claims that the percentage more than the purchase price Mpho will be paying if he decides to use bond payment option one is less than 60% of cash price.
Verify, by showing ALL calculations, whether her claim is correct. (4)

2.2.5 To relocate to the new house, Mpho takes out a loan of R350 000 from his father at an interest rate of 17% per year compound interest. He will pay back the full amount after 3 years.

Calculate, rounded to the nearest one hundred rand, the amount he pays back. (6)

2.2.6 Mpho stated that the difference between the total monthly instalments of bond payment option two and option three is less than R2 000 000.
Verify if his statement is valid. (5)
[36]

Copyright reserved

QUESTION 3

3.1. Mr Gareth lives in South Africa. For the past two years he travelled to different countries in Africa.
TABLE 5 below shows the inflation rate of 10 countries in Africa for 2022 and 2023. Each country has a different inflation rate and it change from year to year.

TABLE 5: INFLATION RATE OF 10 COUNTRIES IN AFRICA

COUNTRY	2022 (%)	2023 (%)
Morocco	8,3	8,9
Kenya	9,1	9,0
Algeria	8,2	9,3
Botswana	12,4	9,3
Libya	2,9	4,1
Uganda	10,2	10,4
Senegal	12,8	10,6
Tunisia	10,1	10,2
Republic of the Congo	12,9	**P (more than** 12,9)
Egypt	21,3	25,5

[Adapted from www.tradingeconomics.com]

Use TABLE 5 to answer the questions that follow.

3.1.1 Name the countries in which inflation rate decreased from the previous year. (2)

3.1.2 Which of the following types of graphs will be the best to represent the data above?

A line graph
B pie chart
C compound bar graph (2)

3.1.3 Name the country with the second lowest inflation rate for 2022. (2)

3.1.4 Calculate the median percentage inflation rate for 2022. (4)

3.1.5 Determine the probability of randomly selecting an African country from TABLE 5 with an inflation rate of less than 10% in 2022. Write your answer as a decimal number. (3)

3.1.6 The mean percentage inflation rate for 2023 is 11,14%.

Calculate the missing value **P**, by showing all calculations. (6)

3.1.7 Is the mean percentage inflation rate for 2023 a good indication of the inflation rate for the ten African countries? Give a reason for your answer. (3)

Copyright reserved

3.2. TABLE 6 below shows the total population of each African country Mr. Gareth travelled to for the past two years.

TABLE 6: TOTAL POPULATION OF 10 COUNTRIES IN AFRICA (IN MILLIONS)

COUNTRY	2022	2023
Morocco	37,945	38,134
Kenya	56,645	57,085
Algeria	45,753	46,066
Botswana	B	2,484
Libya	7,093	7,132
Uganda	49,333	49,786
Senegal	17,826	17,979
Tunisia	12,110	12,164
Republic of the Congo	5,849	5,898
Egypt	106,981	107,734

[Adapted from www.worldometers.info]

Use TABLE 6 to answer the questions that follow.

3.2.1 Determine by how much the population in Senegal increased in 2023. (3)

3.2.2 The range of the total population in 2022 were 104,535. Determine the missing value B that was the lowest total population for the two years. (3)

3.2.3 Calculate the percentage increase in the total population of Egypt from 2022 to 2023.

You may use the following formula:

$$\text{Percentage increase} = \frac{Population\ 2023 - Population\ 2022}{Population\ 2022} \times 100\%$$

(3)

3.2.4 Write down the name of the country with the second highest total population in 2023. (2)

3.2.5 Which country is an outlier as far as population size is concerned? Give a reason for your answer (3)

[36]

Copyright reserved

QUESTION 4

4.1 Bran owns a store in his town that sells Cricket and Rugby equipment. TABLE 7 shows some of the equipment in Bran's store with the cost price and selling price for each product as well as the number he sold.

TABLE 7: EQUIPMENT'S COST PRICE, SELLING PRICE AND NUMBER SOLD

CRICKET EQUIPMENT	COST PRICE (IN RAND)	SELLING PRICE (IN RAND)	NUMBER SOLD
BAS King Hitler Cricket Bat	1 750	2 765	18
SNS Prestige Batting Pads	600	948	22
Masuri T-Line Steel Helmet	2 450	3 871	7
RUGBY EQUIPMENT			
Medalist Rugby Ball	155	248	44
Asics Rugby Boots	1 250	S	8
Camouflage Rugby Scrum Cap	600	960	11

[Adapted from www.takealot.com]

Use TABLE 7 to answer the following questions.

4.1.1 Rearrange the cost prices of ALL the equipment in ascending order. (2)

4.1.2 Write down as a simplified ratio, the cost price of the Asics Rugby Boots to the cost price of the SNS Prestige Batting Pads. (3)

4.1.3 One customer bought 6 Medalist Rugby Balls at Bran's store. Determine the profit Bran made on this sale of the Medalist Rugby Balls. (4)

4.1.4 Bran claims that he will make more than 55% profit on the BAS King Hitler Cricket Bat.

Verify, by showing ALL calculations, if his claim is valid. (5)

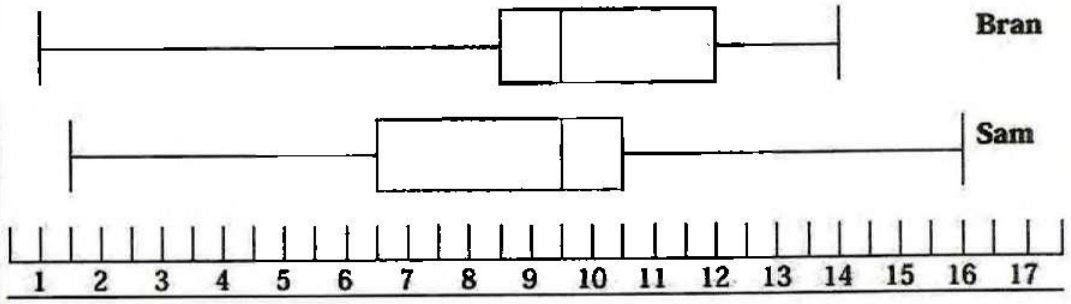
4.1.5 Calculate the missing value S, if Bran makes 60% profit on all his Rugby equipment. (3)

Copyright reserved

4.2

Bran and Sam are both practicing for a race in their town. In the diagram below are the distances in kilometers both ran while practicing.

DATA DIAGRAMS FOR JOHN AND KYLE'S DISTANCES IN KILOMETRES



Use the data diagrams above to answer the questions that follow.

4.2.1 Identify the type of diagram drawn above. (2)

4.2.2 Write down the following:

(a) the maximum distance Bran ran. (2)

(b) the minimum distance Sam ran. (2)

4.2.3 Determine the median distances for both of them? (2)

4.2.4 Bran stated that the Interquartile Range (IQR) of Sam is less than 4km. Verify the statement, by calculations. (5)

[30]

Copyright reserved

QUESTION 5

5.1 Mr Gareth plans to travel to Botswana and Algeria for the holidays with his son. He has R0,4 million in savings for the holidays. TABLE 8 shows the exchange rate on 18 February 2023.

TABLE 8: CURRENCY CONVERSION FACTORS

CURRENCY	UNITS PER ZAR	ZAR PER UNIT
Botswana Pula (BWP)	0,725761	1,3778640627
Algerian Dinar (DZD)	7,48593	0,1335839368

[Adapted from www.xe.com]

Use TABLE 8 to answer the questions that follow.

5.1.1 Write down the exchange rate between the Botswana Pula (BWP) and the South African Rand (ZAR). (2)

5.1.2 Which ONE of the currencies is stronger than the South African Rand (ZAR)? (2)

5.1.3 Mr. Gareth wants to use 40% of his savings to travel to Algeria. Determine the Algerian Dinar (DZD) value of 40% of his savings he wants to use to travel to Algeria. (4)

5.2 Mr Gareth's father, Neville who is 74 years old, earned a monthly taxable income of R46 031,50 for the 2022/23 tax year. During the 2022/23 tax year Neville was a member of a medical fund with two dependents.

ANNEXURE A shows TABLE 9, the tax table for the 2022/23 tax year, and TABLE 10, the tax rebates and medical credits for the 2022/23 tax year.

Use TABLE 9 and TABLE 10 on ANNEXURE A in the answer book to answer the questions that follow.

5.2.1 Determine Neville's yearly taxable income. (2)

5.2.2 Which institution is responsible for the collection of Income tax? (2)

5.2.3 Calculate the amount of tax Neville must pay for the 2022/23 tax year before any rebates and medical credits. (3)

5.2.4 Determine the total yearly medical credits of Neville for the 2022/23 tax year. (3)

5.2.5 Neville stated that he pays more than R100 000 tax after all rebates and medical credits a year. Verify his statement. (4)

[22]

[TOTAL: 150]

Copyright reserved

ANNEXURE A QUESTION 5.2

TABLE 9 below shows the tax table for the 2022/23 tax year.

TABLE 9: TAX RATES FOR 2022/23 TAX YEAR (1 March 2022 to 28 February 2023)

TAX RACKET	TAXABLE INCOME (R)	RATES OF TAX (R)
1	1 – 226 000	18% of taxable income
2	226 001 – 353 100	40 680 + 26% of taxable income above 226 000
3	353 101 – 488 700	73 726 + 31% of taxable income above 353 100
4	488 701 – 641 400	115 762 + 36% of taxable income above 488 700
5	641 401 – 817 600	170 734 + 39% of taxable income above 641 400
6	817 601 – 1 731 600	239 452 + 41% of taxable income above 817 600
7	1 731 601 and above	614 192 + 45% of taxable income above 1 731 600

TABLE 10 below shows the tax rebates and medical credits for the 2022/23 tax year.

TABLE 10: TAX REBATES AND MEDICAL CREDITS FOR THE 2022/23 TAX YEAR.

TAX REBATES	
Primary	R16 425
Secondary (65 and older)	R9 444
Tertiary (75 and older)	R3 145
MEDICAL CREDITS PER MONTH FOR MEDICAL AID MEMB	**RS**
Main member	R364
First dependent	R364
Each additional dependent	R246

Copyright reserved