



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY P1
MAY/JUNE 2025

MARKS: 75

TIME: 2 HOURS

This question paper consists of 10 pages and an answersheet.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the **ANSWERSHEET** attached to answer **QUESTION 2.1.3**.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round ALL the final answers appropriately according to the context, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Maps and diagrams are NOT necessary drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

QUESTION 1

1.1

In TABLE 1 below is a list of explanation and definitions of concepts used in Mathematical Literacy.

TABLE 1: EXPLANATIONS AND DEFINITIONS OF CONCEPTS

A	The amount of money that is owed by the client due to the money being taken out of the account
B	The data value (s) that occur (s) most frequently in a data set
C	The point at which the income equals the expenses
D	Rate of charge for the service
E	The surface enclosed by the boundary lengths of a two-dimensional figure
F	The price of a product/service where VAT has not yet been added to it
G	Money paid into a bank account

Use the information above to write down the letter of the explanation or definition (A to G) of each of the following concepts:

1.1.1 Mode (2)

1.1.2 Tariff (2)

1.1.3 Break-even point (2)

1.2

TABLE 2 below shows the Trans African Concessions toll tariff adjustments on the N1 Toll route that came into effect on 1 March 2025.

TABLE 2: 2025 TRANS AFRICAN CONCESSIONS TOLL TARIFFS

Toll gate	Operator	Class 1	Class 2	Class 3	Class 4
Phumulani	Bakwena	R16,00	R40,00	R46,00	R55,00
Carousel	Bakwena	R73,00	R196,00	R216,00	R249,00
Kranskop	Sanral	R60,00	R152,00	R203,00	R249,00
Nyl	Sanral	R77,00	R144,00	R174,00	R233,00
Capricorn	Sanral	R62,00	R170,00	R198,00	R248,00
Baobab	Sanral	R60,00	R163,00	R224,00	R269,00

[Source: www.google]

Use TABLE 2 above to answer the questions that follow.

1.2.1 State whether the tariffs for the different classes in TABLE 2 are discrete or continuous. (2)

1.2.2 The amount payable for the Baobab (class 4) is R269, 00. Round off the tariff to the nearest 100. (2)

1.2.3 Determine the difference between the tariffs of Phumulani and Carousel in class 3. (2)

[12]

QUESTION 2

- 2.1 Heritage day will be celebrated on the 24th September 2025. On the day Risimati will be conducting his business of selling bead necklaces. It costs him R15,00 to make ONE bead necklace.
- He calculated that the daily fixed cost would be R100,00 and he would be able to sell 100 bead necklace per day. He will sell each bead necklace at R24,00.

Use the above information to answer questions that follow.

- 2.1.1 TABLE 3 shows the income from the sale of bead necklaces.

TABLE 3: INCOME FROM THE SALE OF BEAD NECKLACES

Number of bead necklaces (n)	0	20	30	40	80	100
Income in rand (R)	0	480	720	A	1 920	2 400

- (a) Determine the value of **A** in TABLE 3 above. (2)
- (b) Write down an equation that can be used to calculate the income. (3)

- 2.1.2 Risimati uses the following formula to determine the cost price of the bead necklace.

$$\text{Cost} = \text{R}100,00 + \text{R}15,00 \times n, \text{ where } n = \text{number of bead necklace(s)}$$

TABLE 4 shows the cost price for a number of bead necklace.

TABLE 4: COST PRICE OF A NUMBER OF BEAD NECKLACES

Number of bead necklaces (n)	0	B	30	55	80	100
Cost in rand (R)	100	250	550	935	1 300	1 600

Calculate the value of **B** in TABLE 4 above. (2)

- 2.1.3 The graph on ANSWER SHEET 1 shows the total income for selling up to 100 bead necklaces. Use the information in TABLE 4 to draw another graph representing the cost from the selling of up to 100 bead necklaces. (5)
- 2.1.4 Use the tables or graphs on ANSWER SHEET 1 to answer the questions that follow:
- If the selling price is increased, write down, with a reason whether the break-even point will be lower or higher. (4)

2.2

Rito needs the following materials to produce face masks in her factory to sell on Heritage day also. For every mask she needs a double layer material and one lining in between. The masks will be sold for R35 per mask.

TABLE 5: COST PER MASK

	COST PER METRE	MAKES	COST PER MASK
Material	P	9 masks	R5,00
Elastic	R4	4 masks	R1,00
Lining	R12	Q	R0,50
Toll of tread	R10 per toll	40	R0,25
Printing			R8,00
TOTAL COST PER MASK			R

Use the information above to answer the questions that follow.

2.2.1 Calculate the values of **P**, **Q** and **R**. (3)

2.2.2 Rito received an order from one of the local schools for 580 masks. Calculate the total amount the school must pay for the order. (3)

2.2.3 Due to the large order from the local school, Rito gave a 15% discount on the order. Calculate the new total amount for the order after discount. (3)

[25]

QUESTION 3

3.1

The data in the following table (TABLE 6) show to the usage of solar geysers per province as found on 3 May 2024

TABLE 6: NUMBER OF SOLAR GEYSERS IN USE PER PROVINCE

Number of households per province using a solar geyser	
Gauteng	5 937 471
Limpopo	2 436 112
Mpumalanga	1 827 935
Northern Cape	584 830
Eastern Cape	3 161 535
Western Cape	2 900 567
North West	1 651 242
Free State	1 418 288
Kwazulu Natal	5 056 518
TOTAL NUMBER OF HOUSEHOLDS	K

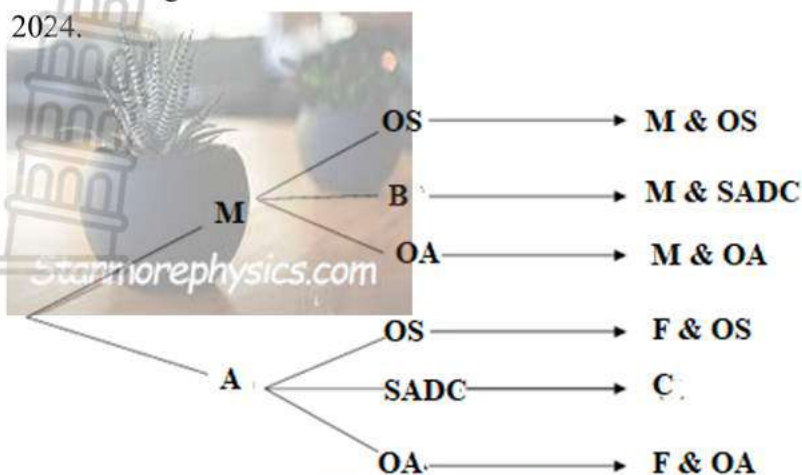
[Source: www.CSIR.com]

Refer to TABLE 6 and answer the questions that follow:

- 3.1.1 Calculate the total number of households using solar geysers in South Africa. (3)
- 3.1.2 Which Province had the second highest usage of solar geysers? (2)
- 3.1.3 If 60% of the total users of solar geysers in South Africa (SA) are male home owners, calculate the total number of female home owners in SA that makes use of solar geysers. (4)

3.2

The tree diagram below shows all the combinations of tourists visiting the country in March 2024.



M: Male F: Female OS: Overseas OA: Other Africans SADC: Southern African Development Community

Use the tree diagram above to answer the questions that follow.

3.2.1 Complete the tree diagram by writing down the missing information for A, B and C. (3)

3.2.2 Determine the probability, as a simplified fraction, of randomly choosing a tourist from SADC. (2)

[14]

QUESTION 4

4.1

Makhado Private College compared the income from school fees over the past two years. The school fee per learner is R16 580 per year. The amount is paid in 10 even monthly payments throughout the year. The first two months must be paid in full before school reopens for the year.

TABLE 7: INCOME FROM SCHOOL FEES FOR 2023 AND 2022

Month	2023		2022	
	No of learners enrolled per month	Amount received per month	No of learners enrolled per month	Amount received per month
January	736	R 1 220 288	725	R 1 202 050
February	736	R 1 220 288	726	R 1 203 708
March	734	R 1 192 632	730	R 1 198 236
April	733	R 1 178 854	730	R 1 186 133
May	730	R 1 137 719	730	R 1 186 133
June	724	R 1 128 368	729	R 1 172 421
July	721	R 1 061 531	733	R 1 191 007
August	723	R 1 102 835	733	R 1 191 007
September	722	R 1 137 222	734	R 1 204 802
October	716	R 1 127 771	736	R 1 208 085
Total Per Year	7275	R11 507 508	7306	R11 943 582

Stanmorephysics.com

[Adapted from: www.tutong]

Stanmorephysics.com

Use the table above to answer questions that follow.

4.1.1 Determine the total amount received for August, September and October in 2022. (3)

4.1.2 Show how the amount received for January 2023 was determined if all the learners' school fees were paid in full. (3)

4.1.3 Determine the percentage difference between the actual total income for 2022 and 2023.

You may use the following formula:

$$\% \text{ difference} = \frac{2023 \text{ income} - 2022 \text{ income}}{2022 \text{ income}} \times 100\% \quad (4)$$

4.1.4 The principal predicted that the school received 13% less school fees than what was expected for July 2023. Verify, showing ALL calculations if the prediction was correct. (6)

4.2

Mrs Le Roux, an SGB member analyzed the annual income of Makhado Private College in order to decide whether to adjust the school fees.

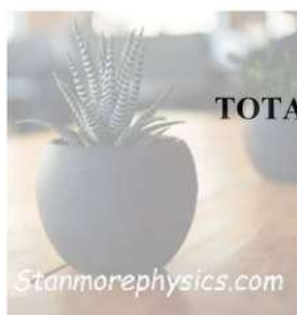
Use the information in TABLE 7 to answer the questions that follow.

4.2.1 Arrange the monthly amount of school fees received in 2022 in ascending order. (2)

4.2.2 Determine the mode of the amount of school fees in 2023. (2)

4.2.3 Calculate and compare the ranges of the school fees in 2022 and 2023. (4)

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TOTAL MARKS: 75

ANSWERSHEET**QUESTION 2.1.3****NAME OF LEARNER:****Income and cost of making bead necklaces**