education

MPUMALANGA PROVINCE

REPUBLIC OF SOUTH AFRICA

NATIONAL

SENIOR CERTIFICATE

BOHLABELA

MATHEMATICAL LITERACY

GRADE 12

FEBRUARY 2025

TEST

MARKS: 70

TIME: 1,5 HOUR

This question paper consists of 08 pages including the ANSWER SHEET.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. Use the attached ANSWER SHEET to answer QUESTION 1.2.2.
4. Write your name and grade in the spaces provided on the ANSWER SHEET and hand in with your Script
5. Start EACH question on a NEW page.
6. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
7. Show ALL calculations clearly.
8. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
9. Indicate units of measurement, where applicable.
10. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
11. Write neatly and legibly.

QUESTION 1

1.1 TABLE 1 below gives definitions of terminologies used in mathematical literacy.

TABLE 1: TERMINOLOGIES USED IN MATHEMATICAL LITERACY.

LETTER	DEFINITION
A	The maximum amount of money that an individual must earn per year for them to qualify to pay tax.
B	A payment made into a bank account. The total amount of all an individual's income before deductions.
C	A discount on tax.
D	The amount an employee "takes home" after income tax has been deducted.
E	The total amount of money earned by an individual in a year before any deductions or taxes

Use TABLE 1 above and match the definitions with the terminologies below.

Write only the letter (A – E) next to the question numbers (1.1.1 to 1.1.3)

1.1.1 Rebate (2)

1.1.2 Annual gross income (2)

1.1.3 Threshold (2)

1.2 Shaun is planning to start a gym membership but needs to choose the most cost-effective option based on how often he will visit the gym each month. The gym options available to him are:

- **Gym A:** A **fixed monthly fee of R400**, allowing unlimited visits.
- **Gym B:** A **base fee of R200**, plus **R20 per visit**.

Use the information above to answer the questions that follow.

1.2.1 Table 2 below represent the membership Cost for options A and B

TABLE 2: COST OF MEMBERSHIP PER VIST

Number of visits per month	0	5	7	10	15	20
Cost for Option A (R)	400	400	400	**P**	400	400
Cost for Option B (R)	200	300	**Q**	400	500	

(a) Write a formula to calculate the cost for option B in the form : (3)

Cost = ……

(b) Complete the table by calculating the missing values P and Q. (4)

(c) Identify the independent variable. (2)

1.2.2 The graph showing the cost for Option A is drawn on the attached ANSWER SHEET.

Use TABLE 2 to the draw the graph for option B on the same grid on the ANSWER SHEET. (5)

1.3 Mr. Makhosi is a Mathematical Literacy teacher at Mandla High School. His Grade 12 class consists of 45 learners. In January, the learners wrote an entry test out of 80 marks. Mr. Makhosi recorded the marks of the learners who scored below 50% on the test. TABLE 3 below shows the marks of the learners whose marks were below 50%

TABLE 3: LEARNERS WHO SCORED BELOW 50%

Names of learners	Norma	Mbali	Kate	Jack	Maureen	Phumzile	Ashley
Scores (in %)	21	4	24	38	19	25	30

Use TABLE 3 and the information above to answer the questions that follow.

1.3.1 Write down the number of learners that represent the sample size and the number of learners that represent the population size. (3)

1.3.2 Which type of graph would best represent the data above? (2)

1.3.3 Give a reason why the score of 4% is considered to be an outlier. (2)

1.3.4 State whether the data is discrete or continuous. (2)

1.3.5 Arrange the data in ascending order. (2)

1.3.6 Determine, as a decimal, the probability of randomly selecting a learner who scored less than 30% from TABLE 3 above. (3)

1.3.7 Write down the unit ratio, in the form **1: ...** for the number of learners who scored less than 50% to the total number of the learners who wrote the entry test. (3)

[37]

QUESTION 2

2.1 Peter is a sales person. He is 37 years old and earns a monthly gross salary of R32 750. He does not belong to a medical or pension fund.

TABLE 4 below shows the annual tax table for individuals for the 2024/2025 tax year.

TABLE 4 : 2024/2025 TAX YEAR IN SOUTH AFRICA

Taxable Income (R)	Rates of Tax
A. 1 – 237,100	18% of taxable income
B. 237,101 – 370,500	R42,678 + 26% of taxable income above R237,100
C. 370,501 – 512,800	R77,362 + 31% of taxable income above R370,500
D. 512,801 – 673,000	R121,475 + 36% of taxable income above R512,800
E. 673,001 – 857,900	R179,147 + 39% of taxable income above R673,000
F. 857,901 – 1,817,000	R251,258 + 41% of taxable income above R857,900
G. 1,817,001 and above	R644,489 + 45% of taxable income above R1,817,000

Rebates	
Primary Rebate	R17,235 (available to all individual taxpayers)
Secondary Rebate:	R9,444 (for individuals aged 65 and older)
Tertiary Rebate	R3,145 (for individuals aged 75 and older)

Thresholds:	
Below age 65	R95, 757
Age 65 to below 75	R148,217
Age 75 and older	R165,689

[Adapted from : sars.gov.za]

Use TABLE 4 and the information above to answer the questions that follow.

2.1.1 State whether tax brackets use monthly income or annual income. (2)

2.1.2 Determine peter's annual salary. (2)

2.1.3 Identify the tax bracket that Peter will use to calculate his income tax. (2)

2.1.4 Calculate Peter's annual tax payable for the 2024/2025 tax year. (5)

2.2 Mbombela municipality used the table below to bill its residents for water consumption in 2024.

Mrs Mango lives with his family at Kabokweni under Mbombela municipality. They used an average of 28 kl of water in the month of December 2024.

TABLE 5: KABOKWENI DOMESTIC WATER TARIFFS FOR 2024.

Household **All tariffs are 15% VAT exclusive**		
BLOCK	**CONSUMPTION (KL)**	**TARIFF (R/KL)**
Block 1	Up to and including 6kl	Free
Block 2	Over 6kl up to and including 12kl:	R 19.07
Block 3	Over 12kl up to and including 40kl:	R 24.65
Block 4	Over 40kl:	R 30.93

[Adapted from : https://www.mbombela.gov.za]

Use TABLE 5 and the information above to answer the questions that follow.

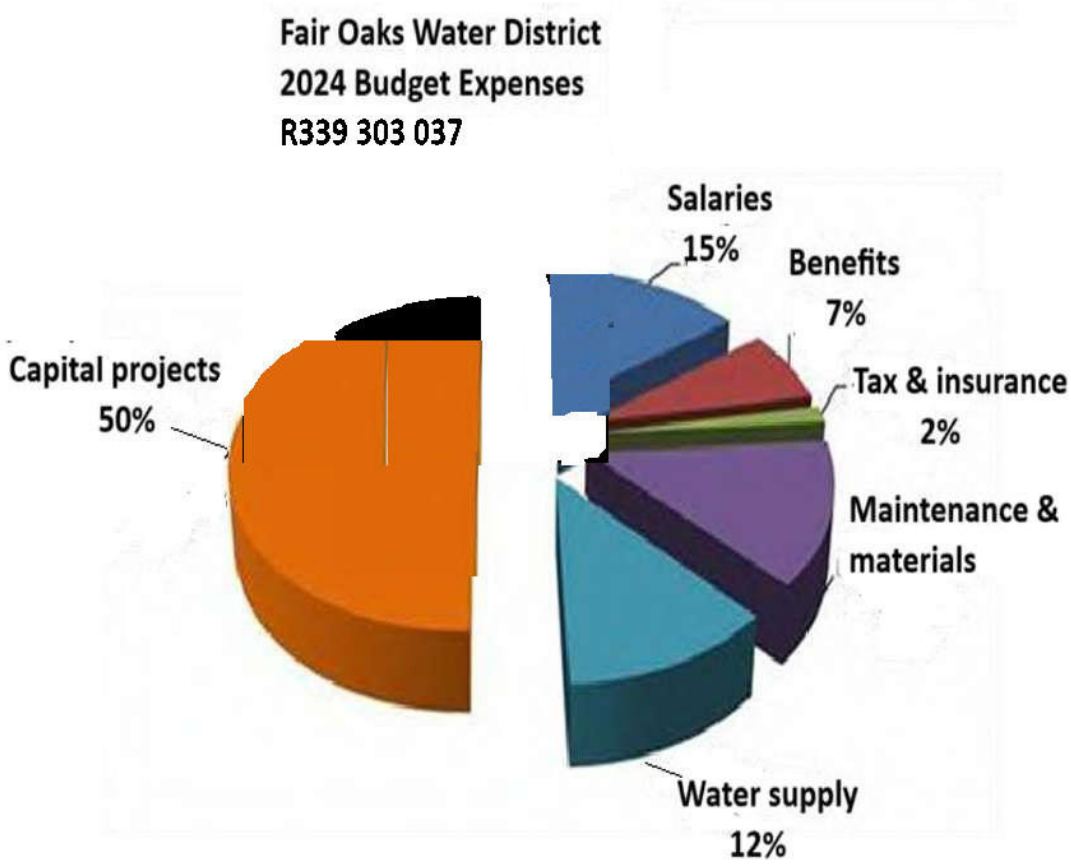
2.2.1 Determine the amount to be paid by Mrs. Mango. (6)

2.2.2 The municipality announced that there's a shortage of water at Kabokweni. Write down two suggestions on how the Mango family can save water, (4)

[21]

QUESTION 3

The graph below shows the budget of the Fair Oaks Budget District for the year 2024.



Source: www.treasury.gov.za

Use the graph and the information above to answer the questions that follow.

3.1 Name the type of graph used to represent the above budget (2)

3.2 Write the total budget expenses amount in words. (2)

3.3 Calculate the missing percentage for maintenance and materials. (3)

3.4 Gabi calculated the total amount(R) spent on Capital projects and salaries. She stated that the amount is more than 220 million.

Verify, showing ALL calculations, whether her statement is valid. (5)

[12]

TOTAL : 70

QUESTION 1.2.2

NAME:_____ **GRADE:** _____

