



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

**PROVINCIAL STANDARDISED
ASSESSMENT**

GRADE 11

MATHEMATICAL LITERACY P1

JUNE 2026

MARKS: 75

TIME: 1 $\frac{1}{2}$ hours

This question paper consists of 7 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
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 the calculations clearly.
6. Round off ALL the final answers appropriately according to the given context, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

QUESTION 1

- 1.1 Glass-door services employees TWO staff members. Table 1 below shows the monthly salaries of the two employees.

TABLE 1: EMPLOYEES' MONTHLY SALARY

Employee	Gross monthly salary
Mvuzo	R8 000
Ntombi	R20 000

Note: UIF monthly contribution is R17 712 as maximum, the employee contributes 1%, and the employer contributes 1% to the fund.

[Adapted from ufiling.labour.gov.za/uif/]

Use TABLE 1 and the information above to answer the questions that follow.

- 1.1.1 Show by calculations how the UIF contribution of R177,12 was calculated. (2)
- 1.1.2 Mvuzo contributes R80 per month towards the Unemployment Insurance Fund. Calculate the annual total combined UIF contribution by both the employer and the employee. (2)
- 1.1.3 Give ONE benefit for contributing towards Unemployment Insurance Fund. (2)

- 1.2 Mt Lodge has 80 employees. The lodge management intends to improve the canteen menu and asked 20 employees, randomly selected as they report for duty in the morning.

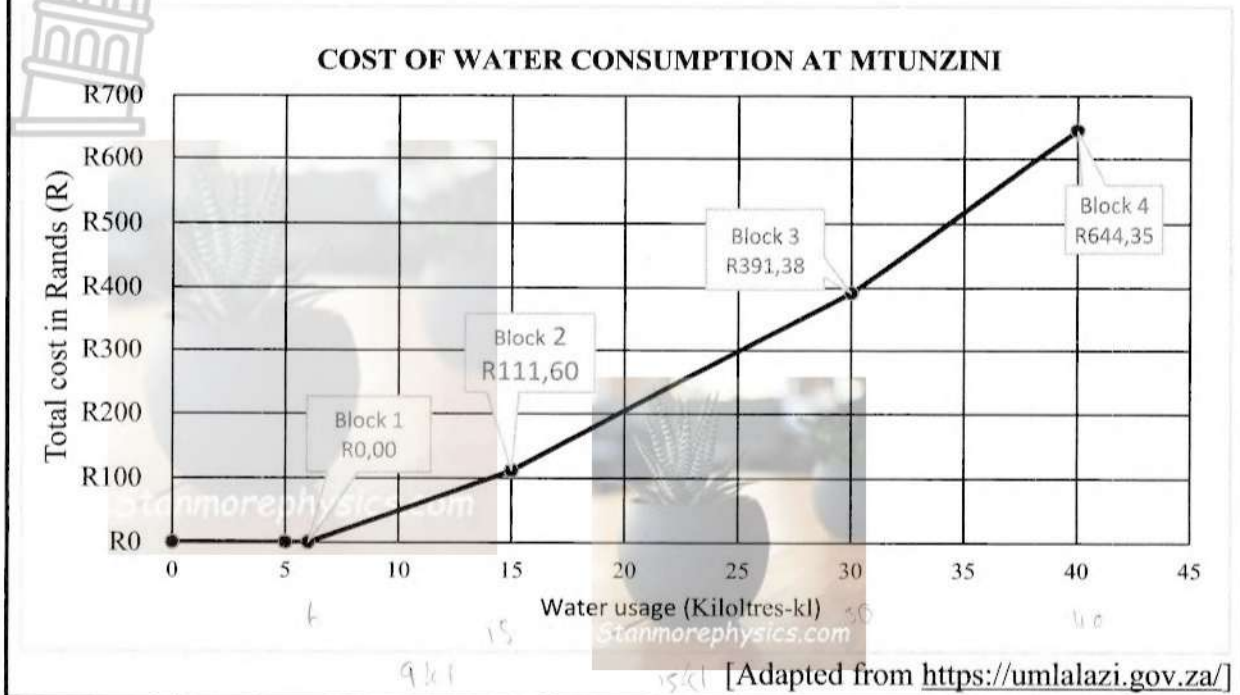
Use the information above and answer the questions that follow.

- 1.2.1 Define the term *Population* in the given context (2)
- 1.2.2 Write down the simplified ratio of a sample to a population group of employees. (2)
- 1.2.3 Mt Lodge has 48 female employees, determine the probability, as a decimal, of randomly finding a female employee in the lodge. (2)
- 1.2.4 If the number of employees increases by 10%. Calculate the number of new employees after the 10% increase. (2)

[14]

QUESTION 2

- 2.1 The graph below represents the cost (excluding 15% VAT) of water consumption in Mtunzini for the 2025/2026 financial year. The municipality subsidises the residential consumers with 6 kilolitres of water for free.



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

- 2.1.1 Explain why the municipality provides the first 6kl of water for free to its residential customers. (2)
- 2.1.2 The household was billed R644,35 for using 40kl. Calculate the VAT amount to be charged on this bill. (2)
- 2.1.3 Write down (excluding VAT), the estimated total cost of using 25kl. (2)
- 2.1.4 Show by calculation that the tariff charge for the second block is R14,26 including VAT. (4)
- 2.1.5 The municipality manager at Mtunzini stated that, if a household uses the daily average water of 0,645 kl, they will pay more than R391,38 excluding VAT in the month of July. Verify his statement by showing all calculations. (3)

- 2.2 TABLE 2 below shows the sliding scale method for charging water costs in Mtunzini during water restrictions. Some values have been omitted.

TABLE 2: MTUNZINI WATER TARIFF STRUCTURE EXCLUDING 15% VAT

Block	Usage (in kl)	Tariff per kl
1	0 – 6	R12,40
2	6,1 – 15	R18,65
3	15,1 – 30	R25,30
4	Above 30	R33,50

[Adapted from <https://umlalazi.gov.za/>]

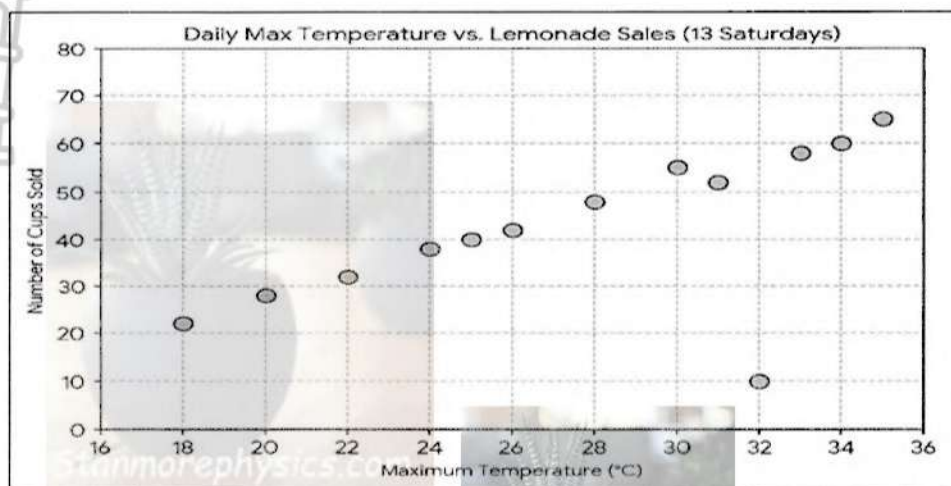
Use TABLE 2 above to answer the questions that follow.

- 2.2.1 Determine the maximum number of kilolitres of water charged in block 3 (2)
- 2.2.2 Write down the formula to be used to calculate the total consumption cost excluding VAT, if a household has consumed between 15,1kl – 30kl, in the form: (2)
- Total consumption cost = R242,25 +**
- 2.2.3 Shemi's household used 22kl of water in one month during water restrictions. Calculate, including VAT, the total cost for the water bill. (5)
- 2.2.4 The municipality charges a monthly flat rate of 70% of the total water used by a household for sanitation.
- a) Use information in 2.2.3 to calculate the sanitation cost, including VAT, for Shemi's household. (2)
- b) Determine Shemi's combined total monthly bill for water and sanitation, including VAT. (2)
- c) Suggest TWO possible ways in which Shemi's household can reduce the water bill. (4)

[30]

QUESTION 3

- 3.1 The scatter plot below shows the relationship between the maximum temperature ($^{\circ}\text{C}$) and the lemonade cups sold by Lindiwe on Saturdays.



[Adapted from: <https://mrsmolina.com/>]

Use the graph above to answer the questions that follow.

- 3.1.1 Identify the temperature and the number of cups of an outlier in the given graph. (2)
- 3.1.2 Describe the type and overall correlation of the data above, excluding the outlier value. (3)
- 3.1.3 Calculate the difference between the number of cups of lemonade at 25°C and 34°C . (3)
- 3.1.4 Provide a possible reason why Lindiwe could only sell less than 10 cups on a very hot Saturday. (2)
- 3.2 Table 3 below compares Lindiwe's lemonade sales and her sister's ice tea sales over four weekends.

TABLE 3: LEMONADE SALES AND ICE-TEA SALES

WEEKS	Week 1	Week 2	Week 3	Week 4
Lemonade sales	45	56	63	50
Ice tea	30	40	60	54

Use TABLE 3 above and answer the questions that follow.

- 3.2.1 Calculate the total number of cups of lemonade and ice tea sold during week 2. (2)
- 3.2.2 Lindiwe's sister sold peach-flavoured to mint-flavoured cups of iced tea in a ratio of 3:2. Calculate the number of cups of peach-flavoured iced tea in week 1 (2)
- 3.2.3 Name ONE type of graph that will be best to represent the data above. (2)

[16]

QUESTION 4

- 4.1 Lerato runs a small business Ken-L-Tech Solutions in Richards Bay. She recently imported a high-end laptop from suppliers in Germany.

Below is the official tax invoice received, followed by her bank fees structure.

TABLE 4: LERATO'S TAX INVOICE

Ken-L-Tech Solutions		
Supplier: Deutch- Tech-Gmbh	Invoice number	GER – 990 15 March 2026
Description		Price in euro -€
1 X Pro-book 500 laptop		€1 150
Shipping & insurance		€75
Total due		A
BANK FEE'S STRUCTURE		
Bank Service		Rate/fee
Exchange rate		€1 = R20,48
International SWIFT fee		R212,75 VAT incl.
Commission		0,60% of the total Rand value

[Adapted from <https://www.globalvatcompliance.com/>]

Use TABLE 4 above to answer the questions that follow.

- 4.1.1 Calculate the value of A, the total amount due in euros. (2)
- 4.1.2 Convert the total amount due to South African Rand. (2)
- 4.1.3 Lerato states that the total bank fees with commission will be less than R363,28 for the purchase. Verify, showing ALL calculations if the statement is correct. (4)

- 4.2 Lerato tracks her business electricity monthly costs for the first seven months.

Lerato's monthly electricity costs

R1 450; R1 800; R1 250; R2 100; R1 800; R1 250; R1 890.

Use the information above and answer the following questions.

- 4.2.1 State whether the electricity monthly cost is discrete or continuous. Explain your answer (2)
- 4.2.2 Calculate the mean monthly electricity cost in rand. (3)
- 4.2.3 Determine the median of the monthly electricity cost. (2)

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TOTAL MARKS:[75]

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MARKING GUIDELINE

MARKS: 75

SYMBOL	EXPLANATION
MA	Method with accuracy
MCA	Method with Consistent accuracy
CA	Consistent accuracy
A	Accuracy (Answer)
C	Conversion
RT	Reading from a table/ graph/ diagram/ document
SF	Correct substitution in a formula
O	Opinion/ explanation/ reason/deduction/example
P	Penalty e.g. for no units, incorrect rounding off
S	Simplification
R	Rounding off
NPR	No penalty for correct rounding
NPU	No penalty for omitting units, but wrong unit is penalised
AO	Answer only full marks

This marking guideline consists of 6 pages.

NOTE:

- If a learner answers a question *TWICE*, only mark the *FIRST* attempt.
- If a learner has crossed out (cancelled) an attempt to a question and *NOT* redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in *ALL* aspects of the marking guidelines; however, it stops at the second calculation error.
- If the learner presents extra solution when reading from the graph, table, layout plan and map, then penalise for every extra item presented.
- Rounding is an independent mark.
- General principle of marking, if the candidate makes one mistake one mark is deducted.
- A conclusion mark can only be given if relevant calculations precedes it, (at least $\frac{1}{3}$ of the marks before conclusion).
- No penalty for rounding (NPR) if the first decimal is correct.

QUESTION 1 [14 MARKS]		ANSWER ONLY FULL MARKS	
QUE	SOLUTION	EXPLANATION	T&L
1.1.1	$\checkmark$ MA $\checkmark$ RT $\text{UIF} = 1\% \times \text{R17 712}$ $= \text{R177,12}$	1RT R17 712 1MA multiplying by 1% (2)	F L1 E
1.1.2	$\checkmark$ MA Total UIF annual contribution = $\text{R80} \times 2 \times 12$ months $= \text{R1 920}$ $\checkmark$ A	1MA multiplying by both 2 and 12 1A answer (2)	F L1 M
1.1.3	Retrenchment benefit $\checkmark\checkmark$ O OR Short illness benefit $\checkmark\checkmark$ O OR Maternity/Adoption benefit $\checkmark\checkmark$ O OR Reduced time work benefit $\checkmark\checkmark$ O OR Death benefit $\checkmark\checkmark$ O OR Unemployment benefit $\checkmark\checkmark$ O	2O opinion (2)	F L1 E
1.2.1	Total number of workers/employees/staff members at Mt Lodge. $\checkmark\checkmark$ O	2O explanation (2)	DH L1 E
1.2.2	$20 : 80$ $\checkmark$ MA $1 : 4$ $\checkmark$ S	1MA correct ratio and order 1S simplification (2)	DH L1 E
1.2.3	$\text{P (female worker)} = \frac{48}{80}$ $\checkmark$ MA $= 0,6$ $\checkmark$ A	1MA correct fraction 1A answer (2)	P L1 E
1.2.4	No of new employees = $10\% \times 80$ workers $\checkmark$ MA $= 8$ workers $\checkmark$ A	1MA multiplying 10% by 80 1A answer (2)	DH L1 E
			[14]

QUESTION 2 [30 MARKS]			
QUE	SOLUTION	EXPLANATION	T&L
2.1.1	To provide a basic amount of water for essential human needs. ✓✓O OR Provide free water for low-income households. ✓✓O OR To ensure everyone has access to clean water. ✓✓O	2O opinion (2)	F L4 D
2.1.2	VAT Amount = $15\% \times R644,35$ ✓MA = R96,65 ✓A	1MA concept of VAT 1A simplification (2)	F L2 E
2.1.3	R300 ✓✓RT	2RT correct amount (2)	F L2 M
2.1.4	No. of kl in block 2 = $15\text{kl} - 6\text{kl}$ = 9kl ✓A Tariff charge = $\frac{R111,60}{9\text{kl}}$ ✓MA = R12,50 ✓CA = $R12,50 \times 115\%$ ✓MA = R14,26 OR No. of kl in block 2 = $15\text{kl} - 6\text{kl}$ = 9kl ✓A Tariff charge = $\frac{R111,60}{9\text{kl}}$ = R12,50 ✓CA = $R12,50 \times 15\%$ ✓MA = R1,76 = $R12,50 + R1,76$ ✓MA = R14,26 OR No. of kl in block 2 = $15\text{kl} - 6\text{kl}$ = 9kl ✓A Tariff charge = $R111,60 \times 115\%$ ✓MA = R128,34 ✓CA 9 ✓MA = R 14,26	1A number of kl in block 2 1MA dividing R111,60 by 9kl 1CA simplification 1MA multiplying by 115% OR 1A number of kl in block 2 1CA simplification 1MA multiplying by 15% 1MA adding to R12,50 OR 1A number of kl in block 2 1MA 1CA simplification 1MA dividing by 9 (4)	F L3 D
2.1.5	Total monthly kl = $0,645\text{kl} \times 31\text{ days}$ ✓MA = 19,995 kl ✓A Invalid. 19,995kl is less than 30kl ✓O	1MA multiplying by 31 days in July 1A simplification 1O justification with comparison (3)	F L3 M
2.2.1	Maximum charged in block 3 = $30\text{kl} - 15\text{kl}$ ✓MA = 15kl ✓A	1MA subtracting correct values 1A maximum kl AO (2)	F L2 E
2.2.2	Total consumption cost ✓A ✓A = $R242,25 + R25,30 \times \text{number of kl used in block 3}$ OR ✓A ✓A = $R242,25 + R25,30 \times (\text{total number of kl used} - 15\text{kl})$	1A adding correct block 3 tariff 1A independent variable OR 1A adding correct block 3 tariff 1A independent variable (2)	F L2 D

QUE	SOLUTION	EXPLANATION	L&T
2.2.3	Total cost = R242,25 + R25,30 × 7kl ✓MCA = R242,25 + R177,10 = R419,35 ✓CA Total cost including VAT VAT = 15% × R419,35 ✓MA = R62,90 = R419,35 + R62,90 ✓MCA = R482,25 ✓CA OR Total costs ✓MCA = (6kl × 12,40) + (9kl × R18,65) + (7kl × R25,30) = R74,40 + R167,85 + R177,10 ✓S = R419,35 ✓CA Total cost including VAT = R419,35 × 115% ✓MCA = R482,25 ✓CA	CA from 2.2.2 1MCA multiplying tariff by 7kl 1CA simplification 1MA multiplying by 15% 1MCA adding VAT amount 1CA answer OR 1MCA multiplying tariff by 7kl 1S simplification 1CA simplification 1MCA VAT concept 1CA answer (5)	F L3 M
2.2.4a)	Sanitation cost = 70% × R482,25 ✓MCA = R337,58 ✓CA	CA from 2.2.3 1MCA multiplying by 70% 1CA answer (2)	F L2 E
2.2.4 b)	Total bill = R482,25 + R337,58 ✓MCA = R819,83 ✓CA	CA from 2.2.3 & 2.2.4a 1MCA adding correct values 1CA simplification (2)	F L2 E
2.2.4 c)	Fix water pipes/taps leaks ✓✓O Take shorter showers/use less bath water ✓✓O OR Reduce flush cistern/tank water volume ✓✓O Re-use of water ✓✓O OR Collect rain water ✓✓O	2O opinion 2O opinion (4)	F L4 M
			[30]

QUESTION 3 [16 MARKS]			
QUE	SOLUTION	EXPLANATION	T&L
3.1.1	Temperature = 32 °C ✓RT Number of cups = 10 ✓RT	1RT correct temperature 1RT correct number of cups (2)	DH L1 E
3.1.2	✓A Positive correlation, as the temperature increases, the number of lemonade cups sold also increases. ✓✓O	1A correct correlation 2O explanation Description without correlation full marks (3)	DH L4 E
3.1.3	✓RT ✓RT Difference = 60 cups – 40 cups = 20 cups ✓CA	1RT 60 cups 1RT 40 cups 1CA answer (3)	DH L3 M
3.1.4	Poor marketing strategy. ✓✓O OR Heavy competition. ✓✓O OR Business sabotage. ✓✓O OR Water /other beverages preference. ✓✓O OR People prefer to be indoors. ✓✓O OR Insufficient stock/material. ✓✓O OR Malfunctioning of equipment. ✓✓O	2O opinion  (2)	DH L4 D
3.2.1	Total = 56 + 40 ✓MA = 96 cups ✓A	1MA adding correct values 1A answer AO (2)	DH L1 E
3.2.2	Number of peach-flavoured = $\frac{3}{5} \times 30$ ✓MA = 18 cups ✓A	1MA correct ratio concept 1A correct number of cups (2)	DH L2 M
3.2.3	Double bar graph ✓✓A OR Stacked bar graph ✓✓A	2A correct graph Give 1 mark for bar graph (2)	DH L1 E
			[16]

QUESTION 4 [15 MARKS]			
QUE	SOLUTION	EXPLANATION	T&L
4.1.1	$A = €1\,150 + €75 \checkmark \text{MA}$ $= €1\,225 \checkmark \text{A}$	1MA adding correct values 1A answer (2)	F L2 E
4.1.2	$\text{Total due in Rands} = €1\,225 \times R20,48 \checkmark \text{MCA}$ $= R25\,088 \checkmark \text{CA}$	CA from 4.1.1 1MCA multiplying correct values 1CA amount in Rands (2)	F L2 E
4.1.3	$\checkmark \text{MCA} \quad \checkmark \text{MA}$ $\text{Total fees} = 0,60\% \times R25\,088 + R212,75$ $= R150,53 + R212,75$ $= R363,28 \checkmark \text{CA}$ Invalid statement $\checkmark \text{O}$	CA from 4.1.2 1MCA multiplying by 0,60% 1MA adding R212,75 1CA simplification 1O justification (4)	F L4 E
4.2.1	Discrete data. $\checkmark \text{A}$ Cost Money can only be counted. $\checkmark \text{O}$	1A Discrete 1O explanation (2)	DH L1 E
4.2.2	Mean $\checkmark \text{MA}$ $= \frac{R1\,450 + (R1\,800 \times 2) + R2\,100 + (R1\,250 \times 2) + R1\,890}{7} \checkmark \text{MA}$ $= R1\,648,57 \checkmark \text{CA}$	1MA adding all correct values 1MA dividing total by 7 1CA answer (3)	DH L2 E
4.2.3	$\checkmark \text{MA}$ R1250; R1250; R1450; R1800; R1800; R1890; R2100 Median = R1800 $\checkmark \text{A}$	1MA arranging values correctly 1A answer (2)	DH L2 E
			[15]
		TOTAL MARKS:	75