



# education

Department of  
Education  
FREE STATE PROVINCE

**GRADE 10**

**MATHEMATICAL LITERACY**

**JUNE 2022**

**PAPER 1**

**MARKS: 50**

**TIME: 1 HOUR**

**This question paper consist of 6 pages**

## INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Number the questions correctly according to the numbering system used in this question paper.
3. An approved calculator (non-programmable and non-graphical) may be used unless stated otherwise.
4. Show ALL calculations clearly.
5. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Start EACH question on a NEW page.
8. Write neatly and legibly.



**QUESTION 1**

Neo is a third-year college student who receives a monthly allowance of R3 800,00 from her parents. She also works at a supermarket on weekends and receives a monthly wage of R1 800. TABLE 1 below show Neo’s monthly budget.

**TABLE 1: NEO’S MONTHLY BUDGET**

INCOME		EXPENDITURE	
Allowance	R3 800	Rent	R1 500
Wage	R1 800	Food	R1 700
		Clothes	R300
		Entertainment	R250
		Others	R700
<b>Total</b>	<b>A</b>		<b>R4 450</b>

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

- 1.1 Write down the amount that Neo spends on entertainment. (2)
- 1.2 Identify an expenditure item that can be classified as a *fixed expense*. (2)
- 1.3 Calculate the value of **A**, her total monthly income. (2)
- 1.4 Arrange the expenditure amounts in ascending order. (2)
- 1.5 Determine the median of the expenditure amounts. (2)

**[10]**

**QUESTION 2**

Below is a till slip that Priscilla received after shopping for clothes.

28/11/2021 15:22:06 Transaction Number:108 005 Tax invoice no:1122346	Store No: 362 Cashier Name: Palesa
<b>Item</b>	<b>Amount</b>
Plain Skirt	550,00
Plain Top	499,00
Plain Top discount @ 33%	<b>B</b>
<b>SUBTOTAL (EXCLUDING) VAT</b>	768,98
VAT (15%)	...
<b>TOTAL AMOUNT PAID</b>	884,33

[Source: adapted from an actual till slip]

Use the TILL SLIP above to answer the questions that follow

- 2.1 Write down the name of the cashier. (2)
- 2.2 Determine the number of items bought at this store. (2)
- 2.3 Calculate the value of **B**, the discount on the ordinary top. (3)
- 2.4 Determine the probability (as a decimal) of buying an item that cost more than R500,00. (2)
- 2.5 Show, with calculations how the total amount of R884,33 was calculated. (4)
- 2.6 Priscilla stated that the unit ratio of the plain top to the total amount paid is **1 : 1,6**. Verify, showing all calculations if her statement is correct. (3)

**[16]**

**QUESTION 3**

A survey was done on all the learners at Bluegumbosch Secondary School to determine the number of boys and girls who enjoy reading. The results are provided in table 2 below.

**TABLE 2: NUMBER OF BOYS AND GIRLS WHO ENJOY READING.**

	<b>ENJOY READING</b>	<b>DO NOT ENJOY READING</b>	<b>TOTAL</b>
<b>BOYS</b>	<b>C</b>	212	327
<b>GIRLS</b>	375	101	476
<b>TOTAL</b>	490	313	803

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

- 3.1 Is the data above regarded as a sample or a population? (2)
- 3.2 Determine the missing value of **C** in the table. (2)
- 3.3 Identify the gender that enjoys reading the LEAST. (2)
- 3.4 What advice would you give to the principal of the school to encourage more reading amongst the group mentioned in 3.3 above? (2)
- 3.5 Give an example of a business that will find the above data useful. (2)

**[10]**

**QUESTION 4**

Jabu opened a current account at BRON bank Silverton branch. TABLE 3 below indicates transactions made by Jabu using his current account card.

**TABLE 3: JABU'S BANK STATEMENT FOR THE MONTH OF JUNE**

DATE	TRANSACTION	DEBIT (IN RANDS)	CREDIT (IN RANDS)	BALANCE
	<b>Opening Balance</b>			154,69
01 June	Cash deposit		5 000,00	5154,69
02 June	ATM Cash	100,00		5 054,69
02 June	ATM fee	5,25		5 049,44
04 June	Card Payment Lagoon supermarket	<b>D</b>		4 929,44
12 June	Card POS Purchase BHE uncapped data	1004,00		3 925,44
17 June	Debit card POS Purchase Hardware store	2840,00		1 085,44
29 June	#Monthly account fee	125		960,44
	<b>TOTAL</b>	<b>4 194, 25</b>		
	<b>Closing balance</b>			955,19

Source: www.thebalance.com

Use information in TABLE 3 to answer the questions that follow:

- 4.1 Explain the meaning of the term *credit* in this context of the question. (2)
- 4.2 Calculate the value of **D**. (2)
- 4.3 Show with calculations that the monthly account fee is 2,98% of the total debits. (3)
- 4.4 Provide a possible reason why banks charge monthly account fee. (2)
- 4.5 Determine the range for the debit transactions. (2)
- 4.6 Jabu claimed that the mean for the debit column is less than a thousand rands. Verify, showing all calculations if his claim is valid. (3)

**TOTAL [14]**  
**[50]**



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## PAPER 1

## GRADE 10

# MATHEMATICAL LITERACY

## MARKING GUIDELINE

### JUNE 2022

### MARKS: 50

Stanmorephysics.com

Symbol/Simbool	Explanation/Verduideliking
M	Method/Metode
M/A	Method with accuracy/Metode van akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/diagram/Lees vanaf tabel/grafiek/diagram
SF	Correct substitution in a formula/Korrekte vervanging in formule
O	Opinion/Example/Definition/Explanation/Opinie/Voorbeeld/Definisie/Verduideliking
P	Penalty, e.g., for no units, incorrect rounding off, etc./Penalisasie, bv. vir geen eenhede/verkeerde afronding ens.
R	Rounding off/afronding
NPR	No penalty for correct rounding/Geen penalisering vir korrekte afronding nie
NPU	No penalty for the units/Geen penalisering vir eenhede nie
AO	Answer only, if correct, full marks/Slegs antwoord, indien korrek, volpunte
MCA	Method with consistent accuracy/Metode met volgehoue akkuraatheid

This marking guideline consists of 06 pages

**QUESTION 1 [10 marks] ANSWER ONLY FULLY MARKS**

Item	Solution	Explanation	T/L
1.1	R250 ✓✓RT	2RT correct value NPU	F1 (2)
1.2	Rent ✓✓a	2A correct expense	F1 (2)
1.3	Total income = R3 800 + R1 800 ✓MA = R5 600 ✓A	1MA adding correct values 1A simplification NPU	F1 (2)
1.4	✓RT R250; R300; R700; R1 500; R1 700 ✓MA	1RT correct values 1A ascending order NPU	D1 (2)
1.5	R700 ✓✓A	<b>CA from 1.4</b> 2CA median NPU	D1 (2)

**QUESTION 2 [16 marks]**

Item	Solution	Explanation	T/L
2.1	Palesa ✓✓RT	2 RT correct name  (2)	F1
2.2	2 ✓✓A	2A correct answer  (2)	F1
2.3	$B = \frac{\checkmark RT}{100} \times R499 \checkmark MA$ $= R164,67 \checkmark CA$	1RT correct percentage 1MA multiplying correct amount  1CA value of B AO NPU  (3)	F2
2.4	$\text{Probability} = \frac{1}{2} \checkmark A$ $= 0,5 \checkmark CA$	1A numerator and denominator 1CA probability as a decimal  AO (2)	P2
2.5	$\text{VAT amount} = \frac{\checkmark MA}{100} \times R768,98 \checkmark RT$ $= R115,35 \checkmark A$ $\text{Total amount} = R768,98 + R115,35 \checkmark MA$ $= R884,33$ <p style="text-align: center;"><b>OR</b></p> $\text{Total amount} = R768,98 \times \frac{\checkmark RT \checkmark M}{100} \checkmark A$ $= R768,98 \times 1,15 \checkmark MA$ $= R884,33$	1RT reading R768,98 1MA multiplying by 15% 1A VAT amount  1MA adding values  (No mark for answer)  1RT reading R768,98 1A for 115 1MA dividing by 100 1M multiplying amount by percentage  (4)	F3



3.5	Any company that sells books ✓✓O <b>OR</b> Library ✓✓O <b>OR</b> Publishers ✓✓O <b>OR</b> Book club ✓✓O <b>OR</b> Name of publishers ✓✓O  Note: If learners name publishers e.g. Macmillan, Pearson etc. or bookstores e.g. CNA, PNA etc. give two marks.	20 explanation  20 explanation  20 explanation  20 explanation  20 explanation	D4
(2)			

QUESTION 4 [14 marks]			
Item	Solution	Explanation	T/L
4.1	Money deposited into Jabu's bank account. ✓✓O	20 explanation	F1
(2)			
4.2	$D = R5\ 049,44 - R4\ 929,44$ $= R120$ <b>OR</b> $D = 4\ 194,25 - (R100 + R5,25 + R1004 + R2\ 840 + R125)$ $= 4\ 194,25 - R4\ 074,25$ $= R120$	1MA subtraction values 1 CA answer if at least one value is correct  1MA adding and subtraction values  1CA simplify and answer <b>AO</b>	F2
(2)			
4.3	$\text{Monthly account fee} = \frac{R125}{R4\ 194,25} \times 100$ $= 2,98\%$ <b>OR</b> $\text{Monthly account fee} = \frac{2,98}{100} \times R4\ 194,25$ $= R125$	1A numerator 1A denominator 1M multiplying by 100  1RT total debits 1MA multiplying correct percentage 1CA answer	F3
(3)			

4.4	<p>Banks have to pay salaries ✓✓O</p> <p style="text-align: center;"><b>OR</b></p> <p>Banks have to pay rent, electricity, water and security. ✓✓A</p> <p style="text-align: center;"><b>OR</b></p> <p>To make profit/money.</p> <p style="text-align: center;"><b>OR</b></p> <p>Any other relevant answer.</p>	<p>2O explanation</p> <p>2O explanation</p> <p>2O explanation</p> <p>2O explanation</p> <p style="text-align: right;">(2)</p>	F4
4.5	<p>Range = R2 840 – R5,25 ✓MA</p> <p style="text-align: center;">= R2 834,75 ✓CA</p>	<p><b>CA from 4.2 if D &lt; 5,25</b></p> <p>1MA subtracting correct values</p> <p>1CA answer</p> <p><b>AO</b></p> <p style="text-align: right;">(2)</p>	D2
4.6	<p>Mean = <math>\frac{100+120+1\ 004+2\ 840+125+5,25}{6}</math> ✓MCA</p> <p style="text-align: center;">= 886,54 ✓CA</p> <p>Jabu's statement is valid ✓O</p>	<p><b>CA value of D from 4.2</b></p> <p>1MCA adding all values and dividing by 6</p> <p>1CA simplification</p> <p>1O conclusion</p> <p style="text-align: right;">(3)</p>	D4