NOVEMBER EXAMINATION

GRADE 11

MATHEMATICAL LITERACY P1

NOVEMBER 2023

MARKS: 100

TIME: 2 HOURS

This question paper consists of 11 pages including an ANSWER SHEET.

INSTRUCTIONS AND INFORMATION

1.   This question paper consists of FOUR questions and ONE ANSWER SHEET.

2.   Answer ALL the questions.

3.   Use the ANSWER SHEET to answer Question 4.1.7

4.   Number the questions correctly according to the numbering system used in this
        question paper.

5.   An approved calculator (non-programmable and non-graphical) may be used unless
        stated otherwise.

6.   Show ALL calculations clearly.

7.   Round off ALL final answers appropriately according to the given context, unless
        stated otherwise.

8.   Indicate units of measurement, where applicable.

9.   Start EACH question on a NEW page.

10.   Use VAT as 15%, where applicable.

11.   Write neatly and legibly.

QUESTION 1

1.1   Junior received the slip below after purchasing from MMM store.

MMM Store
VAT Reg # 556328
100 Romeo Street
Bedelia
Welkom

Items:	Price
Chicken 5kg	R 310, 99
Brown Bread x 2 @ R16.49	**A***
Carrots 1kg	R 14, 99*
Coffee 250g	R 65, 50
Spring Water 750ml	R 9, 45
Plastic Bag	R 0, 80
Sub-total	R 384, 27
VAT	R 50, 44
Due total	R 434, 71
Cash	R 450, 00
Change	R 15, 30

Rounding to the nearest 10

Cashier: R Ramza

Date: 20/10/2023 17:12:15
(* VAT exempted items)

[Adapted from actual slip]

Use the information above to answer the questions that follow.

1.1.1   Write down the name of the cashier.   (2)

1.1.2   Calculate the value of **A**.   (2)

1.1.3   Write the acronym VAT in full.   (2)

1.1.4   Determine the probability of finding 2ℓ Coke on the above slip, as   (2)
          percentage.

1.1.5   Identify the VAT exempted item(s).   (2)

1.2   The South African weather service provided Matjhabeng local event organisers with the following weather forecast. Below are the temperatures in degree Celsius for 17 days.

| 20 | 7 | 17 | 18 | 12 | 19 | 17 | 7 | 18 | 20 | 18 | 10 | 18 | 15 | 20 | 3 | 18 |

Use the information above to calculate the following.

1.2.1   State whether the data above is **numerical** or categorical.   (2)

1.2.2   Arrange the temperatures in ascending order.   (2)

1.2.3   Find the median of the above data   (2)

1.2.4   Explain the meaning of mode in the given context.   (2)

1.2.5   Identify the outlier from the data above.   (2)

                                                                                              [20]

QUESTION 2

2.1   In TABLE 1, the revenue and expenditure for Matjhabeng Local Municipality for the year 2021/22 are shown:

Table 1: Matjhabeng Local Municipality revenue and expenditure for the year 2021/22 in rands (R)

REVENUE	
Property rates	443 340
Service charges	1 362 833
Investment revenue	**A**
Transfers recognised – operational	569 972
Other income	323 844
Total Revenue	**2 702 379**
EXPENDITURE	
Employees salaries	879 248
Remuneration of councillors	16 349
Depreciation & asset impairment	233 931
Finance charges	173 475
Materials and bulk purchases	1 284 387
Transfers and grants	1 194
Other expenditure	1 472 521
Total Expenditure	**4 061 106**
Surplus / Deficit	**B**

[Adapted from municipalities.co.za]

Use the information above to answer the following questions.

2.1.1   Define the term *expenditure* in the given context.   (2)

2.1.2   Give ONE example of income that can be classified as '*other*'.   (2)

2.1.3   Calculate the missing value **A**, the investment revenue.   (3)

2.1.4   Determine the value of **B** and state whether the amount is a surplus or deficit.   (4)

2.1.5   Write in words the amount spent on '*materials and bulk purchases*'.   (2)

2.1.6   What percentage of the total income is property rates? Give your answer to two decimal places.   (4)

2.1.7   Write down the unit ratio of *transfers and grant*s to *finance charges*. Round off your answer to the nearest whole number.   (4)

2.2

> The following TABLE shows the bank fees/charges for certain transactions of **Bank N** and **Bank M**. Use the table to answer the questions that follows.
>
> **TABLE 2: Bank fees for selected transactions**
>
> | Transaction | Bank N fees | Bank M fees |
> |---|---|---|
> | Withdrawal at Banks Own ATM | R7 per R 1000 or part thereof | R8 per R 1000 or part thereof |
> | Withdrawal at another bank's ATM | R10 + R 2 per R 100 or part thereof | R12 per R1 000 or part thereof |
> | Cash deposit at branch | R30 + R2 per R100 or part thereof | R80 + R2,50 per R100 or part thereof |
> | Cash deposit at own ATM | R1 per R100 | R1,10 per R100 |
> | Cash withdrawal at till point | R2 | R1,20 |

Use Table 2 and the information above to answer the questions that follow.

2.2.1   State whether the following is TRUE or FALSE:

The cash deposit at own ATM for Bank N costs R1,10 per R100.   (2)

2.2.2   Show with calculations that the withdrawal fee for R 3 800 from Bank M own ATM is R 30, 40.   (2)

2.2.3   A bank consultant from Bank N claims that, it would cost less to deposit R 9 500 at the branch of Bank N.

Show with calculations whether the claim is valid.   (5)

[30]

QUESTION 3

3.1 Below is a sample of political parties registered for the South African General National elections that took place between 2004 and 2014.

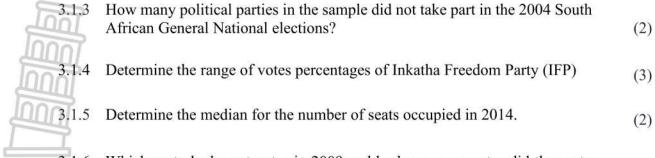**TABLE 3: Sample of political parties registered from 2004 to 2014**

Party		2004	2009	2014
African National congress (ANC)	Percentage	69,69	65,90	62,15
	Seats	279	264	249
	Votes (millions)	10,881	11,651	11,437
Congress of people (COPE)	Percentage	---	7,42	0,67
	Seats	---	30	3
	Votes (millions)	---	1,311	0,123
Democratic Alliance (DA)	Percentage	12,37	16,66	22,23
	Seats	50	67	89
	Votes (millions)	1,931	2,946	4,092
Economic freedom fighters (EFF)	Percentage	---	---	6,35
	Seats	---	---	25
	Votes (millions)	---	---	1,169
Inkatha Freedom Party (IFP)	Percentage	6,97	4,55	2,40
	Seats	28	18	10
	Votes (millions)	1,089	0,804	0,441
National Freedom Party (NFP)	Percentage	---	---	1,57
	Seats	---	---	6
	Votes (millions)	---	---	0,289
New National party (NNP)	Percentage	1,65	---	---
	Seats	7	---	---
	Votes (millions)	0,258	---	---

[Source: statssa.co.za]

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

3.1.1 Write down, IN FULL, the number of votes for the Economic Freedom Fighters party during 2014. (2)

3.1.2 What is the meaning of the dotted lines in the above table? (2)

3.1.3   How many political parties in the sample did not take part in the 2004 South African General National elections?   (2)

3.1.4   Determine the range of votes percentages of Inkatha Freedom Party (IFP)   (3)

3.1.5   Determine the median for the number of seats occupied in 2014.   (2)

3.1.6   Which party had most votes in 2009 and by how many votes did the party win with?   (2)

3.1.7   The next national general elections will be held in 2024. Show with calculations that the elections after 2024 will be held in 2029.   (3)

3.1.8   Calculate the percentage decrease of number of IFP seats from 2009 to 2014. Round your answer off to the nearest whole number.

You may use the following formula:

$$\% \text{ change} = \frac{\text{seats in 2014} - \text{seats in 2009}}{\text{seats in 2009}} \times 100\%$$

   (3)

[19]

QUESTION 4

4.1 Mrs Malebo owns an internet café. She rents a photocopier from Berox company at a fixed cost of R1 600 per month and R0,30 for every copy made thereafter. Mrs Malebo receives an income of R0,50 for every copy made.

TABLE 4: NUMBER OF COPIES MADE, TOTAL EXPENSE AND TOTAL INCOME

No of copies made	0	2 000	4 000	6 000	8 000	10 000	12 000
Total expense (R)	1 600	2 200	2 800	A	4 000	4 600	5 200
Total Income (R)	0	1 000	2 000	3 000	B	5 000	6 000

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

4.1.1 The information above represents a direct proportion relationship. *Explain 'direct proportion'.* (2)

4.1.2 Write down the independent variable. (2)

4.1.3 Write down the formula that Mrs Malebo can use to calculate her total expenses, in the form:

Total Expenses = … (2)

4.1.4 Calculate the value of **A** and **B**. (4)

4.1.5 Identify the break-even point. (2)

4.1.6 Mrs Malebo claims that she will make a profit of more than R 800 if 12 000 copies are made.

Verify, showing ALL calculations, if her statement is correct. (4)

4.1.7 The income graph has already been drawn on the attached ANSWER SHEET.

Use the information from TABLE 4 to draw on the same set of axes a graph representing the cost of making copies. (4)

4.1.8 Mrs Malebo decided to invest her profit of R 800 at an interest rate of 11% p.a., simple interest for two years.

Calculate the final amount at the end of the investment period. (4)

4.2   In the following table, the marks (in percentage) obtained by all Grade 11 learners of Moemedi High School in their Mathematical Literacy test is given.

TABLE 5 Marks obtained for Gr 11 Mathematical Literacy test.

Grade 11 D

54	70	50	92	63	45	48	52	56	A
49	84	56	12	75	83	54	62	67	51

Grade 11 F

64	77	46	50	58	80	81	59	84	75
55	76	73	80	66	71	62	40	83	76

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

4.2.1   The mean of grade 11D is 58. Calculate the value of **A**.   (5)

4.2.2   Use one of the following words to describe the sentence that follow:

Impossible   Likely   Certain

It is ……...to randomly select a learner in grade 11F with a mark greater than 30%.   (2)

[31]

Mathematical Literacy P1   FS/Nov 2022
Grade 11 November Exam.

ANSWER SHEET

QUESTION 4.1.7

NAME AND SURNAME: _____

Mrs Malebo's income / expenditure