# education

**Department:**
**Education**
**North West Provincial Government**
**REPUBLIC OF SOUTH AFRICA**

## PROVINCIAL ASSESSMENT

## GRADE 10

## MATHEMATICAL LITERACY P1
## NOVEMBER 2024

**MARKS: 75**

**TIME: 1½ hours**

**This question paper consists of 7 pages and 1 annexure.**

**INSTRUCTIONS AND INFORMATION**

Read the following instructions carefully before answering the questions.

1.      This question paper consists of FOUR questions. Answer ALL the questions.

2.      Use ANNEXURE A to answer QUESTION 2.1.

3.      Number the answers correctly according to the numbering system used in this question paper.

4.      Start EACH question on a NEW page.

5.      You may use an approved calculator (non-programmable and non-graphical), 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.      Diagrams are NOT necessarily drawn to scale, unless stated otherwise.

10.     Write neatly and legibly.

**QUESTION 1**

Jessica and her family are planning to go on holiday to a nearby holiday resort during the December holiday.  The table below shows their budget presented to her dad.

**JESSICA'S FAMILY BUDGET FOR DECEMBER 2024**

| INCOME | | EXPENDITURE | |
|---|---|---|---|
| **Items** | **Amount in Rand** | **Items** | **Amount in Rand** |
| Dad income | 28 000 | Municipality account | 3 600 |
| Mom income (½ day = 4 hours per day) | 5 500 | Cell phone usage | 850 |
| | | Insurance | 2 700 |
| Savings pay-out | 24 000 | Rent payment | 5 500 |
| | | Car payment | 4 700 |
| | | Christmas gifts | 4 000 |
| **TOTAL INCOME** | **57 500** | **TOTAL EXPENDITURE** | **21 350** |

Use the above document to answer the questions that follow.

1.1     Define the term *budget*.                                                             (2)

1.2     Write down the amount of the total expenditure in words (without numerals).                                                                    (2)

1.3     Name one item that is an occasional expenditure.                              (2)

1.4     Determine the mom's monthly salary if she works for 8 hours per day.      (2)

1.5     Write down the name of the most expensive expenditure.                      (2)

1.6     Determine the minimum value (in rand) in the expenditure column.          (2)

1.7     During the planning phase of the holiday, the family came across a document with questions which they had to complete.  In this document a travel agency wanted to determine certain likes and dislikes of clients when traveling.

        Name the type of data collecting instrument described above.              (2)
                                                                                **[14]**

**QUESTION 2**

2.1 | Jessica's dad, Bernard, showed his bank statement for October 2024 to her (ANNEXURE A).
| 
| ANNEXURE A also show an extract of his bank's bank charges structure.
|
| All bank charges will be debited at the end of the month.

Use the information above and ANNEXTURE A to answer the questions that follow.

2.1.1 Write down the branch number as indicated on the statement. (2)

2.1.2 Calculate the balance on the 2$^{nd}$ of October 2024. (4)

2.1.3 Calculate the total amount spent by paying with the debit card for October 2024. (3)

2.1.4 Calculate the bank charges as a percentage of the salary. (3)

2.1.5 By using the debit entries only, calculate the probability to randomly select a debit amount less than R2 500.

Give your answer as a decimal number. (3)

2.1.6 Bernard claims that his bank charge on the cash withdrawal will be less than R20,00.

Verify, showing ALL calculations, if his statement is VALID. (4)

2.2 Jessica is planning to save R2 000 for 18 months at a simple interest rate of 7,5% per year interest.

Calculate the amount that she will receive at the end of the 18 months period. (4)

2.3 The price of fishing gear is R2 400 VAT exclusive. It is expected that the fishing gear will increase by 10% this coming December. John wishes to buy the fishing gear in December after receiving his saving's pay-out of R3 000. He claims that he will have enough money to buy this fishing gear with his savings amount.

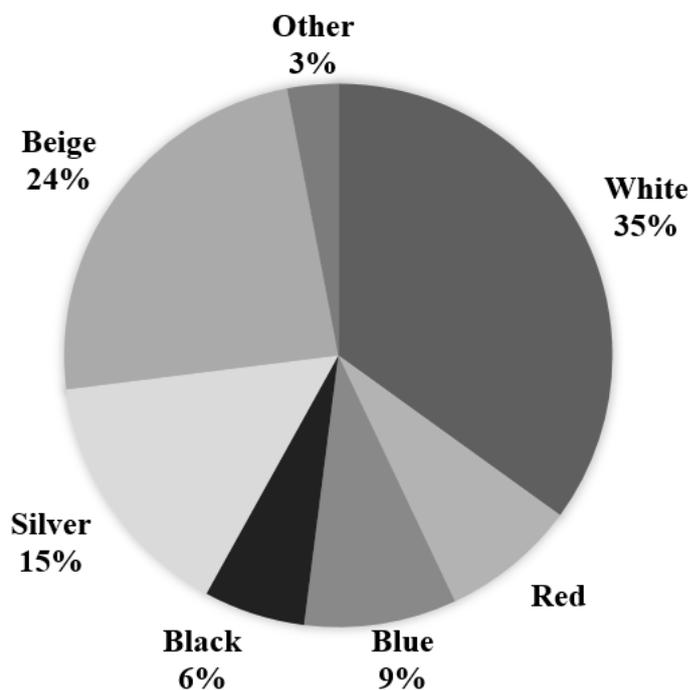Verify, showing ALL calculations, weather his claim is VALID or NOT. (4)

**[27]**

**QUESTION 3**

3.1 | Mr. Bernard planned to buy a new car. He is uncertain about the colour and the model of the car. He decided to do some research before he makes a decision.

He came across the following chart that showed the different colour cars sold in the previous month.

**CAR SALES DURING A SPECIFIC MONTH**



Use the information above to answer the questions that follow.

3.1.1 Name the type of chart shown above. (2)

3.1.2 State weather the above data is categorical or numerical. (2)

3.1.3 Calculate the percentage of red cars. (3)

3.1.4 During this specific month, 350 cars were sold.

Calculate the number of beige cars sold. (2)

3.1.5 Mr. Bernard claims that a white car doesn't attract dirt easily.

Give another valid reason why a white car might be a better option to buy. (2)

3.2

| Mr. Bernard came across the different lengths of cars in South Africa. |
|---|

The different lengths, in metres, are as follow:

| 4,1 | 4,3 | 5,8 | 4,1 | 2,9 | 5,1 |
|---|---|---|---|---|---|
| 3,6 | 2,5 | 4,7 | 4,4 | 4,2 | 5,0 |

Use the information given above to answer the questions that follow.

3.2.1    Calculate the mean length of the given data in the set.            (3)

3.2.2    Calculate the median of the data.                                  (4)

**[18]**

## QUESTION 4

Mr. Bernard compared the water tariffs of his own town to that of Matlosana. He got the following water tariffs for Matlosana for the 2023/2024 book year.

**TABLE 1: WATER TARIFF FOR MATLOSANA FOR 2023/2024**

| CONSUMPTION | TARIFF IN RANDS (VAT INCLUDED) |
|---|---|
| 0 kl – 6 kl | R27,80 |
| 6 kl – 20 kl | R34,06 |
| 20 kl – 50 kl | R35,14 |
| 50 kl – 100 kl | R36,34 |
| 100 kl – 200 kl | R38,34 |
| 200 kl – 300 kl | R40,62 |
| 300 kl + | R51,16 |

Adapted from: https://www.matlosana.gov.za

Use the information above to answer the questions that follow.

4.1.1    The amounts in Table 1 above included VAT.

What is the current VAT % in South Africa?                          (2)

4.1.2    The tariffs increased from 2022/2023 to 2023/2024 with 6%.

Calculate the previous tariff for the 0 kl – 6 kl category in
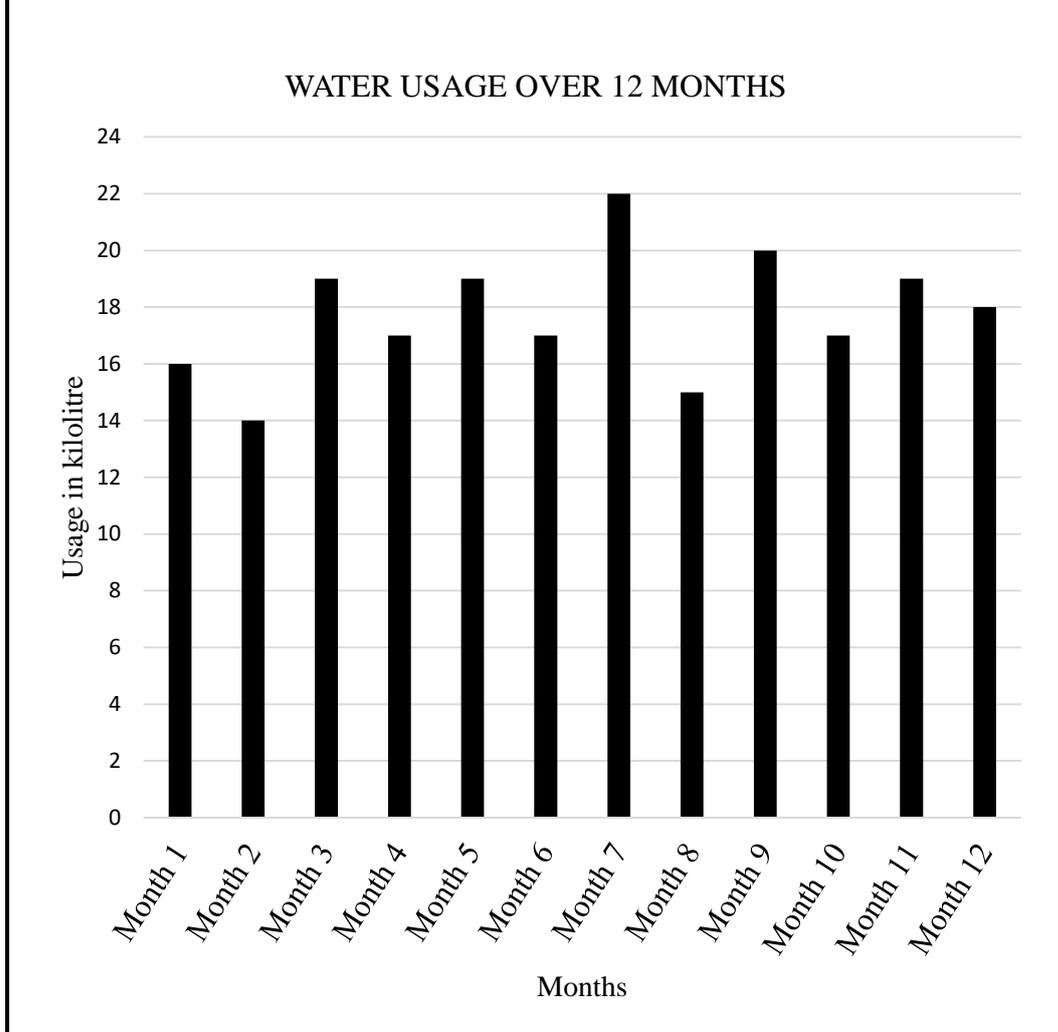2022/2023.                                                          (3)

4.1.3    Mr. Bernard claims that 18 kl of water will cost more than R550 for
2023/2024.

Verify, by calculating the cost of 18 kl, if his statement is
CORRECT.                                                            (5)

4.2 | Over a year's time Mr. Bernard keep record of his family's water usage.

He drew a graph of this records.

Note: The water usage is rounded each month to the nearest whole number.

**WATER USAGE OVER 12 MONTHS**



Use the information above to answer the questions that follow.

4.2.1    Determine the probability of randomly selecting a month with a water usage of less than 12 kilolitre.                                                   (2)

4.2.2    List all the values for water usage over 12 months from the graph and then determine the mode of the data set.                                          (4)

**[16]**

**TOTAL:        75**

**ANNEXURE A**

**QUESTION 2.1**

Jessica's dad, Bernard, showed his bank statement for October 2024 to her. He also gave her an extract of his bank's bank charges structure. All bank charges will be debited at the end of the month.

**MR. BERNARD'S BANK STATEMENT FOR OCTOBER 2024**

**RSA BANK**

**CURRENT ACCOUNT STATEMENT**

**Account name:** Mr. B Jantjies     **Statement date:** 31 October 2024
**Account number:** 236892389275     **Frequency:** Monthly
**Branch:** Orkney (179462)     **Statement period:** 1 Oct 2024 to 31 Oct 2024

| Date | Transaction details | Debit | Credit | Balance |
|---|---|---|---|---|
| 01/10/2024 | Opening balance | | | R14 680,00 |
| 01/10/2024 | Interest on credit balance | | R57,00 | |
| 02/10/2024 | Stop order – NW Insurance | R2 700,00 | | **2.1.2** |
| 05/10/2024 | PnP debit card purchase | R940,00 | | |
| 10/10/2024 | Debit order – Municipality | R3 860,00 | | |
| 14/10/2024 | Cash withdrawal (branch) | R1 300,00 | | |
| 15/10/2024 | Stop order – Toyota SA | R4 700,00 | | |
| 17/10/2024 | Checkers debit card purchase | R1 660,00 | | |
| 20/10/2025 | Stop order – NW properties | R5 500,00 | | |
| 25/10/2024 | Salary – EFT deposit | | R28 000,00 | |
| 30/10/2024 | Bank charges | R577,50 | | |
| | Closing balance | | | ? |

**EXTRACT FROM RSA BANK TRANSACTION FEE STRUCTURE**

| TRANSACTION TYPE | |
|---|---|
| **Payments** | |
| Stop order (internal) | R6,50 + 1,2% of the amount |
| Stop order (external) | R7,50 + 1,35% of the amount |
| Debit order (internal) | R4,85 |
| Debit order (external) | R16,75 |
| **Cash withdrawal** | |
| Own bank ATM | R1,45 per R100 or part of |
| Other bank ATM | R6,80 + R2,60 per R100 or part of |
| Own bank branch | R3,50 + R1,50 per R100 or part of |
| **Debit card payments** | |
| Swipe at counter | R0,50 per R100 or part of |