education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 11

MATHEMATICAL LITERACY P1

JUNE 2024

MARKS: 75

TIME: 1½ hours

This question paper consists of 9 pages and an answer sheet.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Answer QUESTION 3.2 on the given ANSWER SHEET. Write your name on the space provided and hand in the ANSWER SHEET with your ANSWER BOOK.
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

1.1 Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question numbers (1.1.1 to 1.1.4), e.g. 1.1.5 C.

1.1.1 A variable whose values depend on the values of another variable.

A Independent variable
B Discrete data
C Dependent variable (2)

1.1.2 Expenses that stay that same amount every month.

A Fixed expenses
B Irregular expenses
C Variable expenses (2)

1.1.3 Conducting research by carefully watching and recording behaviour or some characteristic.

A Interview
B Observation
C Questionnaire (2)

1.1.4 This type of graphs is useful for comparing the type of relationship that exists between two different variables or quantities for which no obvious pattern is visible.

A Histogram
B Line graph
C Scatter plot graph (2)

1.2

Z5Z COMPUTERS

EMPLOYEE: Mr. AB Combrink

ID: 890430 1234 567

EMPLOYEE NO.: C159

OCCUPATION: Sales Manager

PAYMENT PERIOD: 1 October – 31 October 2023

PAYMENT SUMMARY

INCOME		DEDUCTIONS	
Basic salary	R14 000,00	PAYE Tax	R2 385,00
Commission	R11 500,00	UIF	R140,00
		Pension	R1 125,00
		Medical aid	R1 850,00
GROSS INCOME		TOTAL DEDUCTIONS	R5 500,00
NET INCOME	**R20 000,00**		

Use the salary slip above to answer the questions that follow.

1.2.1 Calculate Mr. Combrink's gross income. (2)

1.2.2 UIF stands for ...

A Unemployment Insurance Federation
B Unemployment Insurance Fund
C Unemployment Insurance Fundraising (2)

1.2.3 Name the income paid to the employee after all the deductions have been made. (2)

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QUESTION 2

2.1 Mrs. Joan Botha is looking for a cell phone to purchase. She does some research and gets the following quote for a cell phone from Super Save Cell Phones.

Super Save Cell Phones

SS Cell Phones

Date: 15 March 2024

FOR: Mrs. Joan Botha
159 Doring Street
Wonderfontein
1101

Thank you for your enquiries

PRODUCT: Samsung A52		R2 607,83
	SUBTOTAL	R2 607,83
	VAT @ 15%	R391,17
	TOTAL	R2 999,00

Please take note of the following:

- Ordering does not guarantee the specific colour of the phone.
- Price valid for 14 days.

Use the information above to answer the questions that follow.

2.1.1 Name the make of the cell phone for which Mrs. Botha got a quote. (2)

2.1.2 Show how the VAT amount was calculated. (2)

2.1.3 Write out the total amount for the cell phone in words. (2)

2.1.4 a) Until when is this quotation valid? (2)

b) Explain why quotes are only valid for a certain time period. (2)

2.2 Betty and John Botha are sister and brother. Their parents gave each of them a cell phone because they are going to high school. Betty received a prepaid price plan option and John received a monthly contract price plan option. The graph below shows the two price plan options of Betty and John.

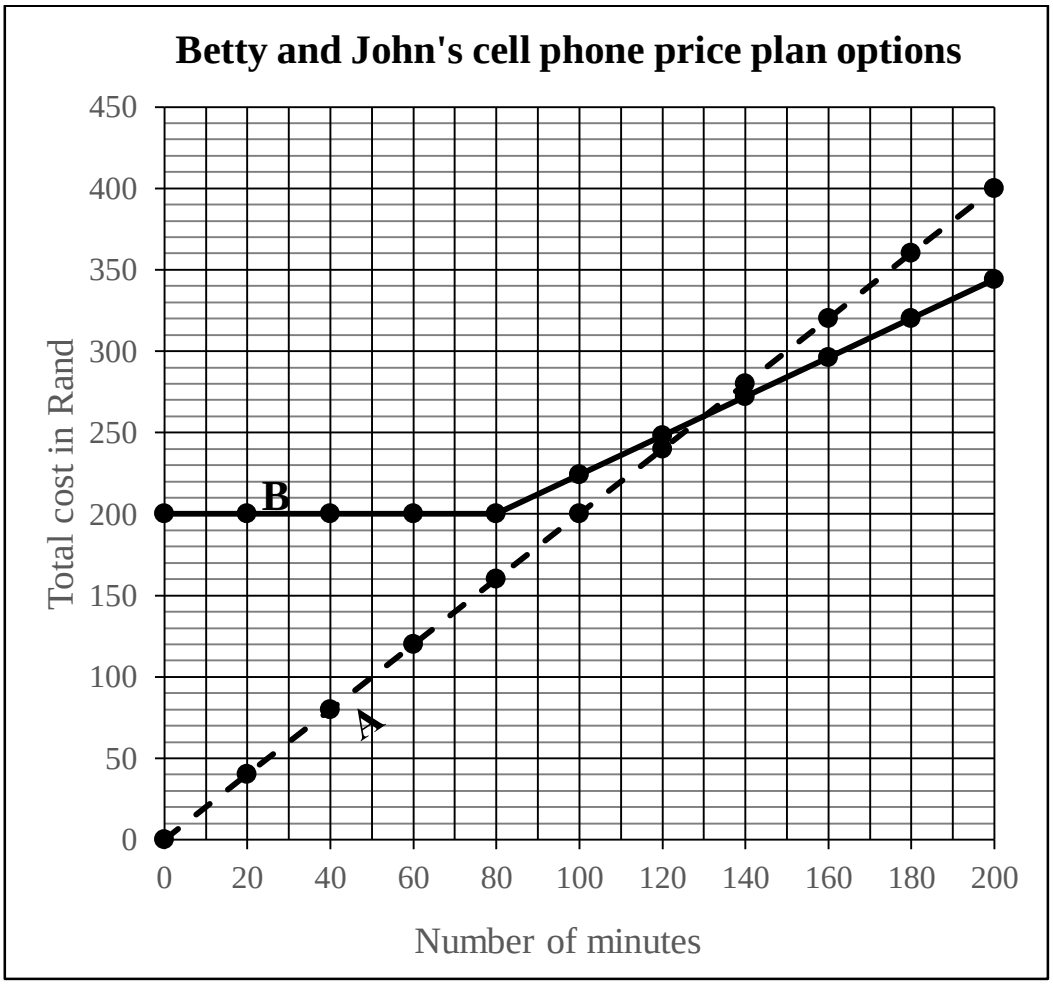

TABLE 1: BETTY AND JOHN'S CELL PHONE PRICE PLAN OPTIONS

Number of minutes	**0**	**20**	**60**	**80**	**100**	**150**	**160**	**200**
Prepaid price plan option (A) – Betty	R0	R40	R120	R160	R200	R300	R320	R400
Contract price plan option (B) – John	R200	R200	R200	R200	R224	R284	R296	R344

Use the information above to answer the questions that follow.

2.2.1 Name the independent variable on the graph. (2)

2.2.2 What are the fixed cost for the contract price plan option? (2)

2.2.3 Use the table and graph A to write a formula to calculate the total cost of Betty's price plan in the form:

$$\boldsymbol{Total\ cost} = \ldots$$ (3)

2.2.4 According the graphs, at how many minutes will the total cost for both Betty and John's price plan options be the same? (2)

2.2.5 Calculate the cost per minute for the contract price plan option. (3)
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QUESTION 3

3.1 Mr. Johan Botha sells second-hand cars. He mainly sells white cars and minimally other coloured cars. Below is the calendar showing the colour and number of cars he sold during January to June months.

TABLE 2: NUMBER OF CARS SOLD FROM JANUARY TO JUNE

JANUARY	**FEBRUARY**	**MARCH**
7 white cars 2 other colour cars	9 white cars 3 other colour cars	12 white cars 5 other colour cars
APRIL	**MAY**	**JUNE**
8 white cars 2 other colour cars	13 white cars 4 other colour cars	11 white cars 2 other colour cars

Use the information above to answer the following questions.

3.1.1 How many other colour cars did Mr. Botha sell during the first six months of the year? (2)

3.1.2 Calculate the average number of white cars per month that he sold from January to June. (3)

3.1.3 Determine the median number of white cars sold in the six months. (3)

3.1.4 In the next month (July) the largest number of other colour cars is sold. Determine this number of other colour cars that is sold during the month of July if the range of the other colour cars is 8. (3)

3.1.5 Determine the probability of selling a white car in the month of March out of all the white cars sold in the six months. Give your answer as a decimal number. (3)

3.2 On the given ANSWER SHEET, complete the compound bar graph to indicate the number of cars sold by Mr. Botha during the first six months of the year. (4)

3.3 Except for the colour of a car, name ONE other factor that a person will look at when deciding to buy a car. (2)
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QUESTION 4

The Botha family keeps a record of their water consumption for the month of June. Below is the number of kilolitres water used during the month.

TABLE 3: NUMBER OF KILOLITRES USED

WATER USAGE	KILOLITRES
Dish washing and laundry	5,5
Cleaning of the house	2,5
Shower and bath	4,8
Toilet	1,3
Outside water usage	5,9

The table below shows the water tariffs charged by die municipality in the town where the Botha family lives.

TABLE 4: WATER TARIFFS

BLOCKS	CENTS / kℓ EXCLUDING 15% VAT
Block 1: 0 – 6 kℓ	0,00c
Block 2: 7 – 15 kℓ	1 095c
Block 3: 16 – 25 kℓ	1 248c
Block 4: 25 – 50 kℓ	1 645c
Block 5: 51 kℓ and more	2 103c

Use the information above to answer the following questions.

4.1 Calculate the percentage of the total water consumption for the month spent on cleaning the house? (3)

4.2 If 2,8 kilolitres of water are used to bath and the rest to shower, determine the probability to use bath water during the month of June. Give your final answer as 'n simplified fraction. (3)

4.3 Mr. Botha claims that the month's total water bill (VAT included) for the family will be more than R200.

Verify showing all calculations, whether Mr. Botha's claim is VALID. (7)

4.4 Is the data displayed in TABLE 3 discreet or continuous? Motivate your answer. (3)

4.5 Betty wants to display the data in TABLE 3 in a graph. Give her advice on the type of graph to use and whether she must use the actual values or percentages to draw the graph. (3)

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GRAND TOTAL: 75

ANSWER SHEET

Name and surname: _____

QUESTION 3.2