Province of the
EASTERN CAPE
EDUCATION

Iphondo leMpuma Kapa: Isebe leMfundo
Provinsie van die Oos Kaap: Department van Onderwys
Porafensie Ya Kapa Botjhabela: Lefapha la Thuto

NATIONAL SENIOR CERTIFICATE

GRADE 11

12 SEPTEMBER 2024

MATHEMATICAL LITERACY
CONTROLLED TEST

MARKS: 50

TIME: 1 HOUR

This question paper consists of 7 pages, including the cover and instructions pages,

and **Annexure**

INSTRUCTIONS AND INFORMATION

1. Write your FULL NAME and SURNAME on the ANSWER SCRIPT.
2. The question paper consists of TWO QUESTIONS. Answer ALL the questions in the ANSWER SCRIPT.
3. Start EACH question on a new page in the ANSWER SCRIPT.
4. Number the answers correctly according to the numbering system used in this question paper.
5. Leave ONE-line open between two sub questions for example between QUESTION 2.1 and QUESTION 2.2.
6. Use ANNEXURE A to answer QUESTION 1.2.4
7. You may use a non-programmable calculator.
8. You may use appropriate mathematical instruments.

QUESTION 1

1.1 Sithembiso is a grade 11 learner who is intending to start a business to sell Hotdogs, Russian and Hot Chips at a local taxi rank during December holidays, so that he can have enough money for his Matric dance in the following year. All his ingredients will be bought in bulk. Sithembiso intends to sell each hotdog for R25.00. TABLE 1 shows the cost of all ingredients he is going to need:

TABLE 1: COST IN RANDS OF ALL INGREDIENTS TO BE USED FOR HOTDOGS, RUSSIAN AND HOT CLIPS.

PRODUCT	COST (IN RANDS)
Sausage per/kg	R74.99
Hotdog buns (Pack of 6)	R17.99
Other ingredients	R95.99

Sithembiso will use Aro Fomo Tray No. 4 when serving his Hotdogs, the Russian and Chips, the Aro Fomo Tray No. 4 is sold in packs for R174.95 each, one pack has 125 pieces.

GLOSSARY	PICTURES
Hotdog is a dish consisting of a grilled, steamed, or boiled sausage served in the slit of a partially sliced bun.	 **Dimensions of Aro Fomo Tray No. 4:** length = 22,5 cm, width = 8,5 cm, height = 10 cm.

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

1.1.1 If the term expense is defined as money spent to make hotdogs, define the term income according to the given context. (2)

1.1.2 If Sithembiso needs approximately 125,5g of sausage to make one hotdog, calculate the cost of the sausage he needs for one hot dog. (3)

1.1.3 Determine the cost for one hotdog with its packaging excluding other expenses. (5)

1.1.4 Show by means of calculations that, the profit for one hotdog and it's packaging without other expenses is R11.19. (2)

1.2 Sithembiso intends to spend R500.00 on fixed expense which is including other ingredients. Table 2 shows the number of hotdogs, total cost and the total income for selling hot dogs.

TABLE 2: INCOME AND COST OF SELLING DIFFERENT NUMBER OF HOTDOGS

No. of Hotdogs	0	20	40	60	80	100	120
Income (R)	0	500	**A**	1 500	2 000	2 500	3 000
Cost (R)	500	776.20	1 052.40	1 328.60	**B**	1 881	2 157.20

Use TABLE 2 and the information above to answer the following questions.

1.2.1 Sithembiso uses the equation below to calculate his total income:

Total Income = R25 × Number of hotdogs sold

Use the equation to determine the value of A. (2)

1.2.2 Use the table above to create an equation to calculate the total cost of selling different number of hotdogs. Hence calculate the value of B. (4)

1.2.3 Define the term fixed cost. (2)

1.2.4 Use TABLE 2 and the same grid on the ANSWER SHEET to draw another line graph representing the cost of different numbers of hotdogs. (3)

1.2.5 Explain the reason why there is no specific number of hotdogs to sell to break-even (2)

1.2.6 Sithembiso secured a contract to supply hotdogs to 30 taxi drivers. He has rectangular boxes measuring (length by breadth by height) 50 cm by 30 cm by 20 cm. The Aro Fomo will be packed lengthwise. Determine how many rectangular boxes must he use to for him to have one trip to the taxi rank. (4)

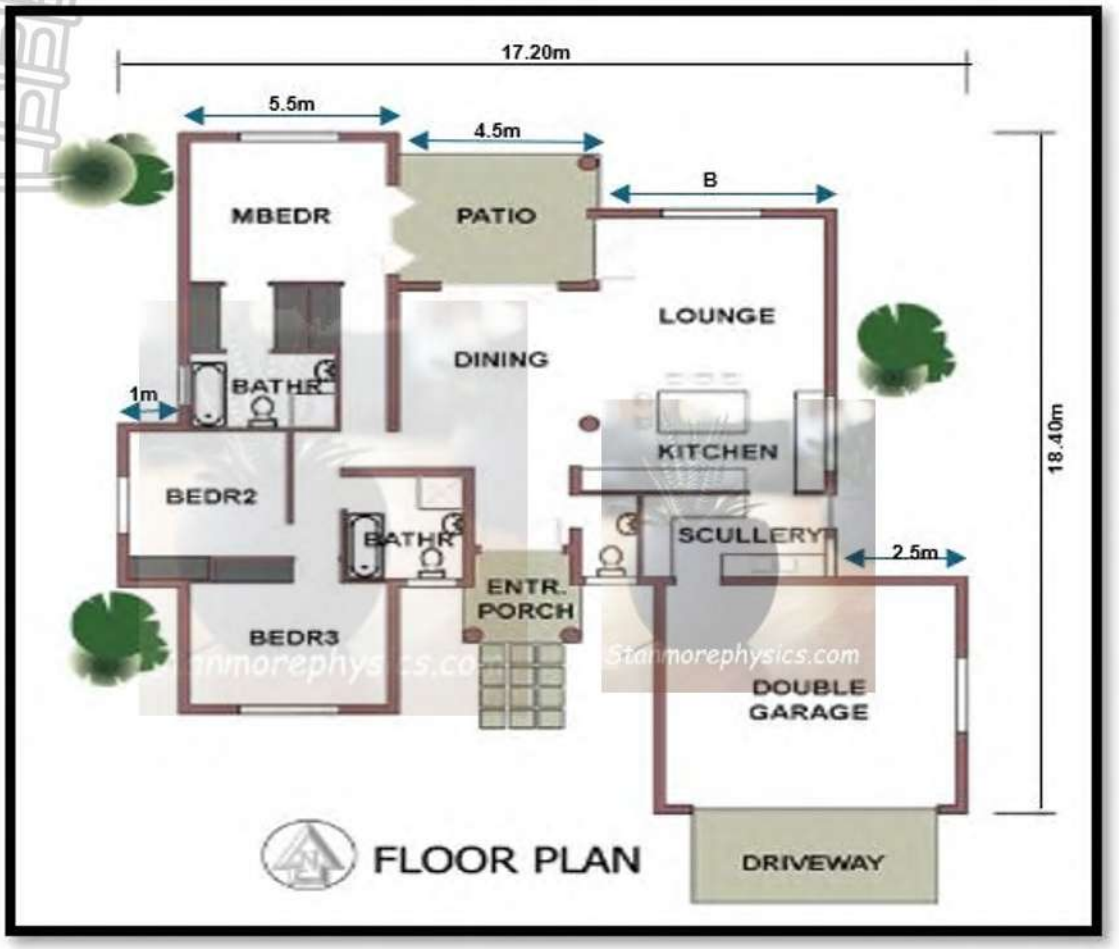
1.2.7 Sithembiso managed to raise a profit of R2 000 at the end of the holidays, he claims that the money would grow to more than R2 500 if he invested the profit at 6,5% compounded monthly for three months.

Verify his claim using all calculations. (4)

[33]

QUESTION 2

2.1 Mr Soms plans to build a house for his family. He approached an architect who presented a plan shown below. Study the given floor plan below and answer the questions that follow:



2.1.1 The architect said an open plan is cheaper to build. Give a reason for this floor plan to be called an open plan? (2)

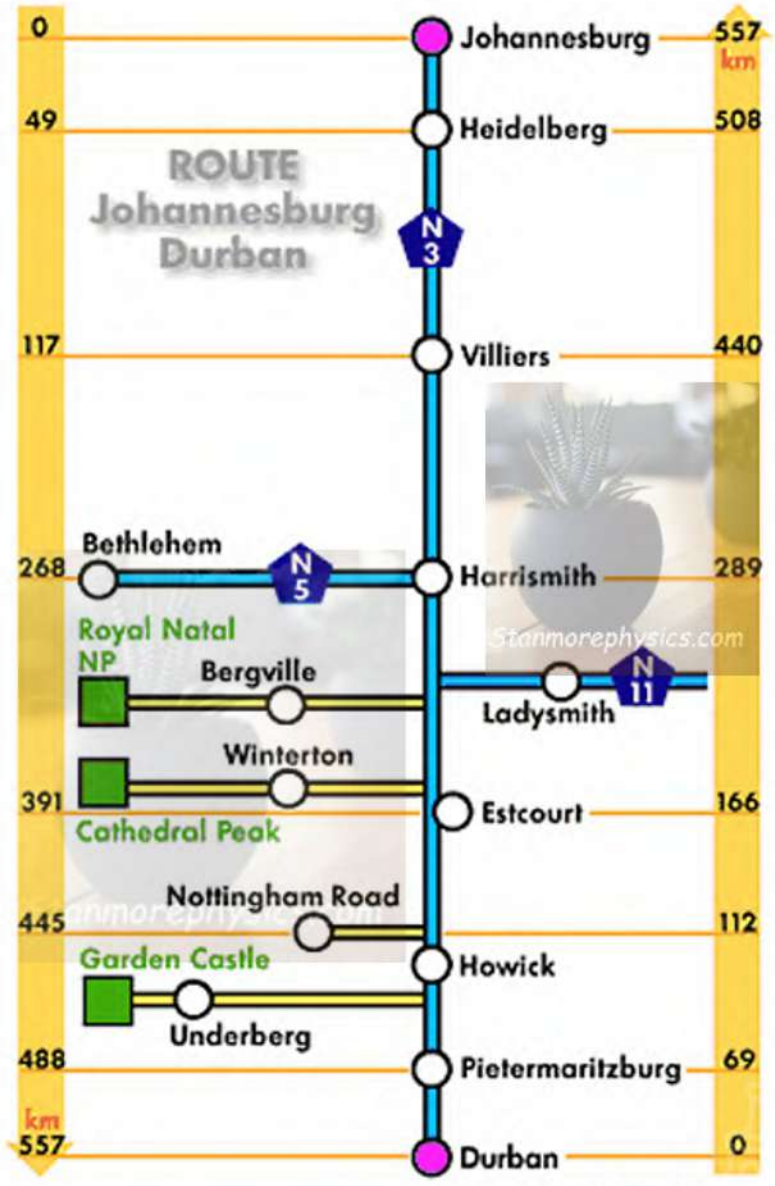
2.1.2 Determine the value of B on the floor plan. (3)

2.1.3 Write down the number of windows facing West. (2)

2.1.4 Give the general direction of the main bedroom from the garage. (2)

2.1.5 According to this floor plan the lounge does not get sunlight in the afternoon, give a possible reason why this is so. (2)

2.2 The map below shows the distance between Durban and Johannesburg. Study the map given and answer the following questions



[Source: mindset]

2.2.1 State the name of the map given above. (2)

2.2.2 Determine the probability (as a percentage) of finding **N5** on the map as a national road. (4)

[17]

[50]

Diagram Sheet

QUESTION 1.2.4

Name:_____