JOHANNESBURG WEST DISTRICT

GRADE 11

CONTROLLED TEST



MATHEMATICAL LITERACY

04 SEPTEMBER 2024

MARKS: 50

TIME: 1 hour

This question paper consists of 6 pages.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Number the answers correctly according to the numbering system used in this question paper.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
7. Indicate units of measurement, where applicable.
8. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.



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QUESTION 1

1.1 Define the term **"floor plan"**. (2)

1.2 Write down the name of the symbol (below) commonly used on maps.



(2)

1.3 Identify the type of map shown below.



(2)

1.4 Interpret the scale 1: 100 000. (2)

1.5 State whether the following statement is true or false.

"When analyzing the best packaging arrangement and material always keep the following in mind, practicality, optimal use of space and cost-effectiveness".

(2)
[10]

QUESTION 2

Gwen borrowed R50 000 from a financial institution at an interest rate of 10% p.a, compounded half-yearly for a period of 2 years. Calculate the final amount she will have to pay back at the end of the loan period.

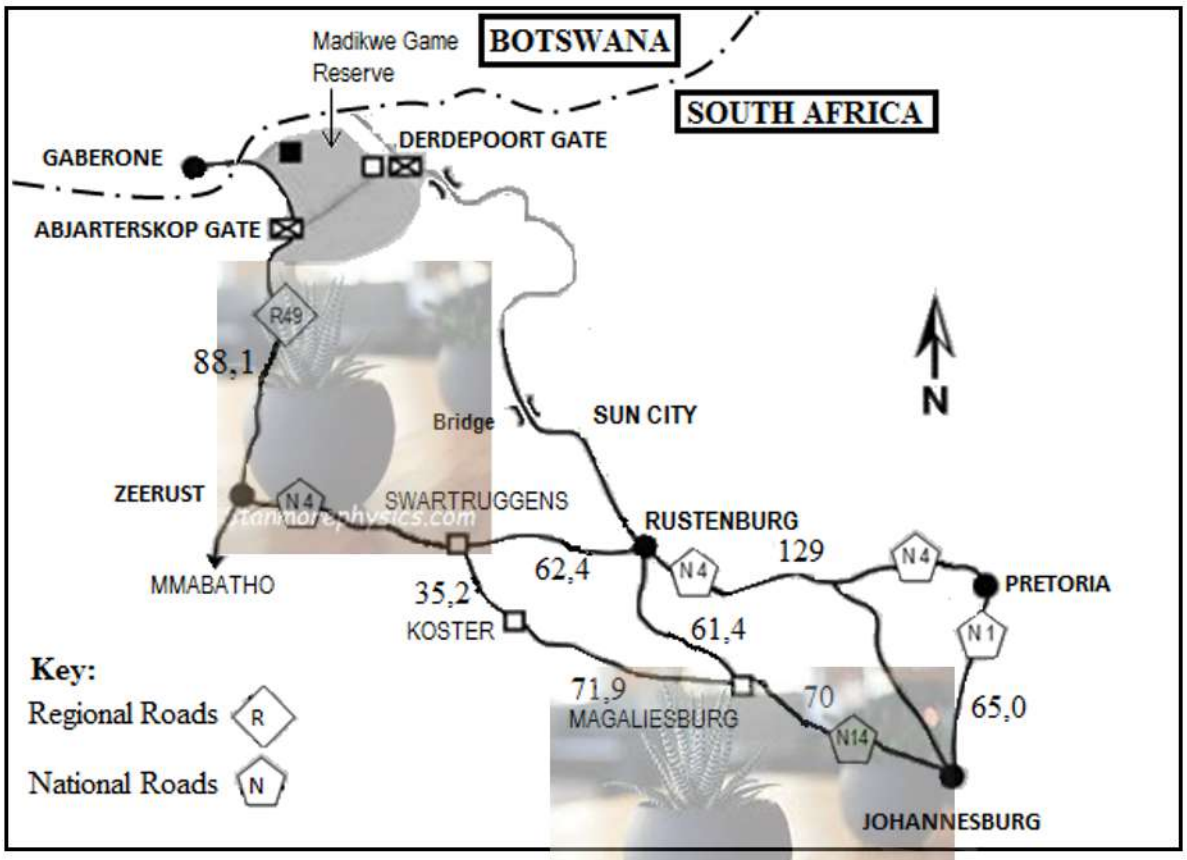
[5]

QUESTION 3

Mr. Adams took his Life Sciences learners on an excursion to the Madikwe Game Reserve. They drove from Johannesburg to the Madikwe Game Reserve and planned to enter the game reserve at the Abjarterskop Gate.

The map (below) indicates the routes, cities or towns and distances (in kilometers) between the places.

ROUTE MAP FROM JOHANNESBURG TO THE MADIKWE GAME RESERVE



Use the given information and the route map to answer the questions that follow.

3.1 Give the general direction of the Madikwe Game Reserve from Johannesburg. (2)

3.2 Explain the shortest route that could be used to drive from Johannesburg to the Abjaterskop Gate. (2)

3.3 Calculate the distance between Zeerust and Swartruggens if the total route distance from Rustenburg to the Abjaterskop Gate is 221,2 km. (3)

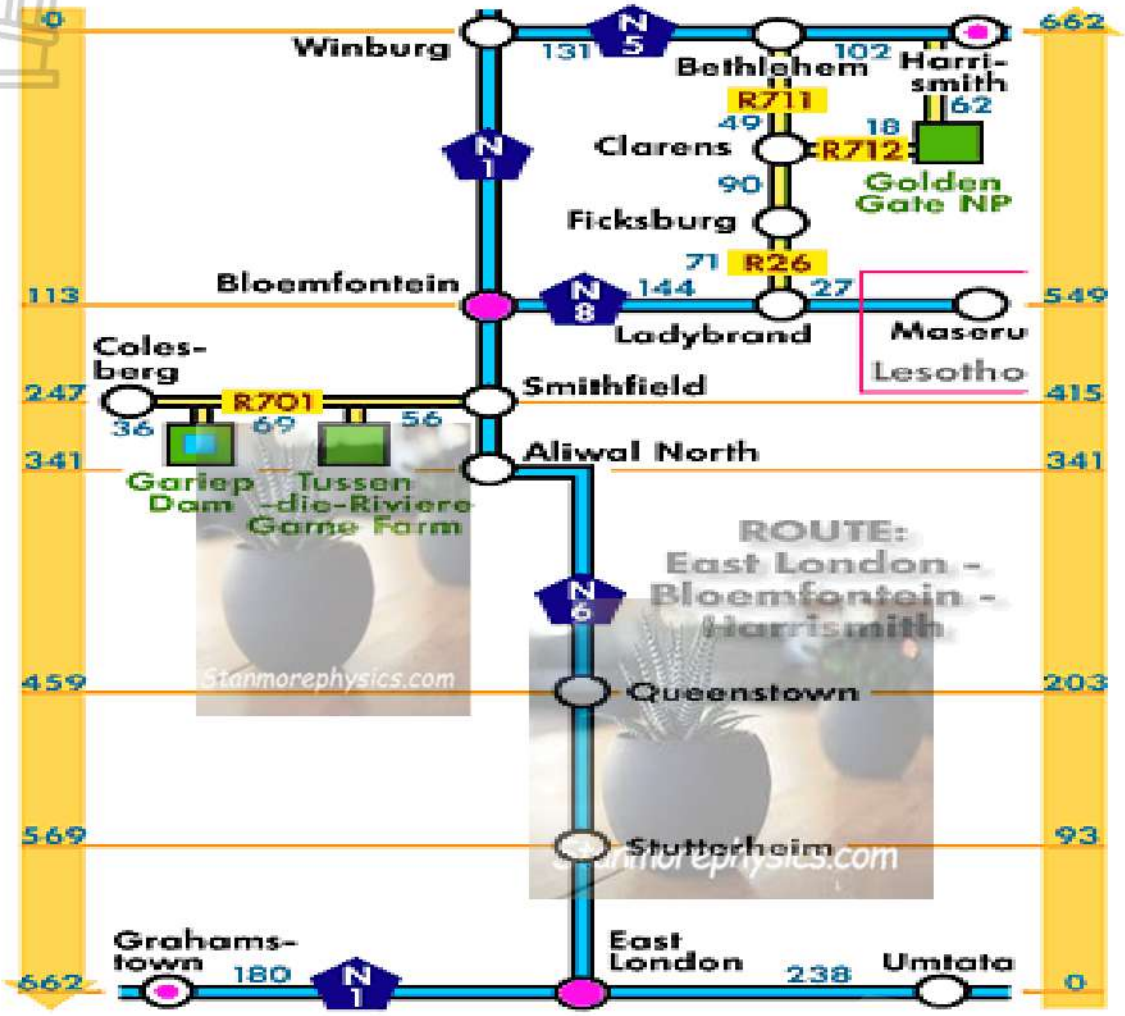
3.4 Determine the shortest route distance from Johannesburg to Swartruggens. Show ALL calculations. (2)

[9]

QUESTION 4

The Adams' family is travelling from Umtata to Harrismith to attend the wedding of one of their relatives.

Use the strip route map between Umtata and Harrismith to answer the questions that follow.



4.1 The Adams family is travelling to Harrismith on the N6. Do they have to turn left or right to get to Aliwal North? (2)

4.2 Determine how long it will take Mr. Adams to complete this journey if he travels at an average speed of 120 km/h. Write your final answer in hours and minutes.

You may use the formula: **D = S × T** (6)

4.3 Mr. Adams claims that their return trip will cover 1 375 km. Verify, showing ALL calculations, whether his claim is valid or not. (5)

4.4 The minibus that Mr Adams will be travelling in has a fuel consumption of 7,8 *litres*/100 km. Calculate how much he will pay for petrol, for a return trip, if the cost of petrol is R23,11 per liter. (4)

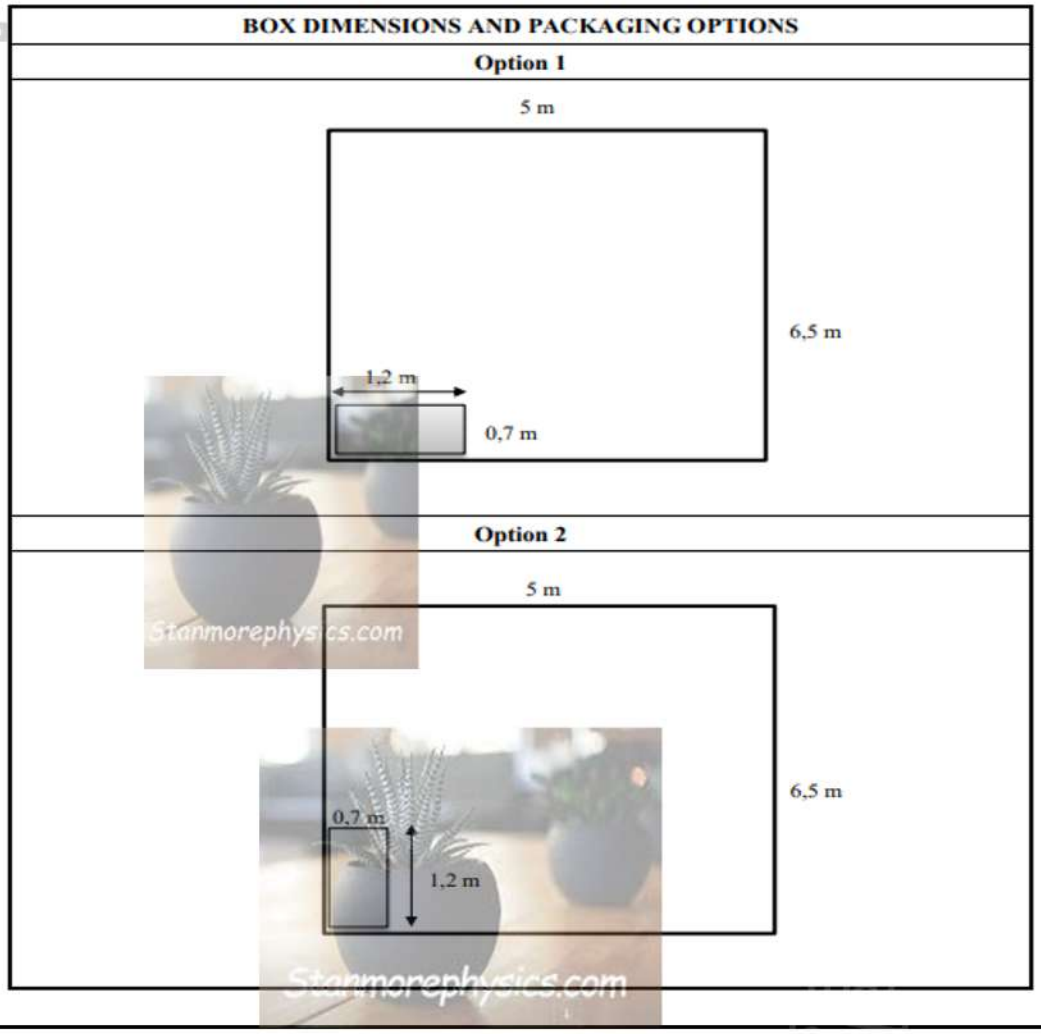
[17]

QUESTION 5

Mr. de Beer is planning on storing food parcels in a storeroom. Study the diagram below and answer the questions that follow.

NOTE:

Dimensions of storeroom 6,5m by 5m (5)



5.1 How many boxes may be stored on the floor of the storeroom if Mr. de Beer uses Option 1?

Show ALL your calculations. (4)

5.2 Mr. de Beer claims that he could pack more boxes on the floor of the storeroom if he used Option 2.

Verify his claim by means of calculations. (5)
[9]

TOTAL: 50

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