education

Department of Education
FREE STATE PROVINCE

JUNE EXAMINATION

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GRADE 11

MATHEMATICAL LITERACY

PAPER 2

JUNE 2025

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MARKS: 75

TIME: 1,5 HOURS

This question paper consists of 8 pages including 1 ANNEXURE.

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INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. ANNEXURE A is attached to this question paper:

   Use ANNEXURE A to answer QUESTION 4.
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.

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QUESTION 1

1.1 Tweeling Combined School learners plan to raise funds for their 2025 matric farewell. They decide to bake and sell sponge cakes.

PICTURE OF SPONGE CAKE	Ingredients
	¾ cup of all-purpose flour (90 g) 2 large of eggs ½ cup of castor sugar (100 g) 1 tsp of baking powder ½ cup of refined cooking oil ¼ cup of milk. 2 tsp of vanilla extract It takes10 min to prepare the recipe for one pan. The cake will be baked at a temperature of 180 °C. **NOTE**: 1 cup = 250 mℓ 1 teaspoon (tsp) = 5mℓ 1tablespoon (tbsp) = 15 mℓ

(Source: www.yummytummyaarthi.com/sponge-cake)

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Use the information above to answer the following questions.

1.1.1 Determine the number of eggs needed for the recipe. (2)

1.1.2 Write down the quantity of baking powder in mℓ. (2)

1.1.3 500 mℓ is equal to how many cups? (2)

1.1.4 Calculate in minutes, the time it takes to prepare two pans of sponge cake, if pans are prepared one at a time. (2)

1.1.5 Convert the oven temperature to °F.

You may use the following formula: $°F = (° \times \frac{9}{5}) + 32$ (2)

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1.2 Table 1 below shows a list of explanations and definitions in **COLUMN B**, and mathematical terms and concepts in **COLUMN A**.

TABLE 1: TERMS AND CONCEPTS WITH EXPLANATIONS AND DEFINITIONS

COLUMN A	COLUMN B
1.2.1 Layout plan	**A.** A number scale.
1.2.2 Ratio scale	**B.** A map of a town or city, showing all the street names and also buildings of interest.
1.2.3 Street map	**C.** The line drawn from the centre of a circle to the circumference of a circle.
1.2.4 Radius	**D.** A map showing a specific route/ path from one place to another.
	E. A plan that shows the layout of a building or facility, as seen from above.
	F. The line drawn from one side of the circle to the other side through the centre of the circle.
	G. A bar scale
	H. A plan that shows how items are arranged in a certain space.

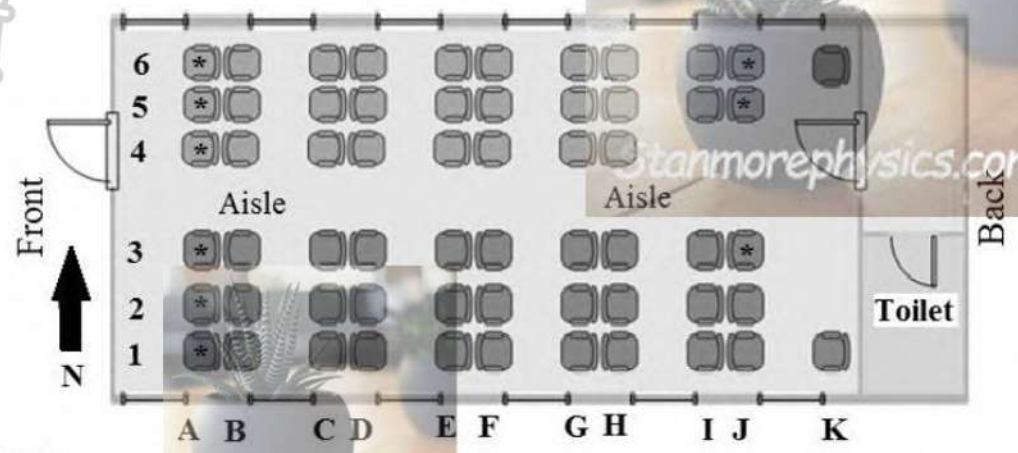
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Use TABLE 1 above and choose an explanation or definition from COLUMN B that matches the term or concept in COLUMN A. Write ONLY (A - E) next to the question number (1.2.1 to 1.2.4) in your answer book e.g. 1.2.5 I. (8)

[18]

QUESTION 2

The seating plan below represents the seating arrangement in a coach of a train.



KEY:

	Window
	Door
	Seat without power socket
*	Seat with a power socket

SCALE 1 : 150

Use the seating plan above to answer the questions that follow.

2.1 How many windows does the coach have? (2)

2.2 Write down the number of the seats having a power socket. (2)

2.3 In which general direction is the front door from seat K1? (2)

2.4 Explain the meaning of the given scale. (2)

2.5 Determine the ratio of toilet doors to coach doors. (2)

2.6 Give a set of directions for the shortest route from B5 to H1. (4)

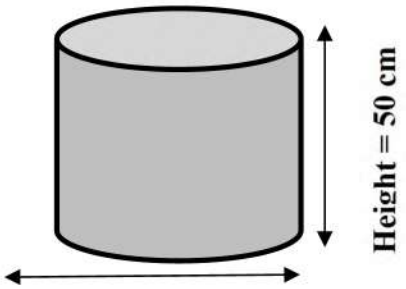
2.7 A length of 6 cm is measured on the plan. Calculate what this length will be in real life. Give your answer in m. (4)

2.8 Determine the probability (as a percentage) of randomly selecting a seat without a power socket out of all the seats on this coach. (3)

[21]

QUESTION 3

3.1 Lehlohonolo needs a coffee table that he can use as a table and as a storage. He went shopping and found a fluted marble storage coffee table

PICTURE OF THE TABLE	DIMENSIONS OF THE COFFEE TABLE
	 Diameter = 40 cm

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Use the information above to answer the questions that follow.

3.1.1 Calculate the radius of the coffee table. (2)

3.1.2 Write down the ratio (rounded to one decimal place) of the diameter to the height in the form: (3)
1 : ….

3.1.3 Calculate the area of the bottom part of the table.

You may use the formula : **rea = × radius²** waar = , (2)

3.1.4 Lehlohonolo decides to use spray paint to cover the top of the table using 3 coats. He claims that he will need 2 cans of spray paint.

Verify showing all calculations, if he is correct.

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Note:
- 1 can of spray paint = 400 mℓ
- 400 mℓ can cover an area of 0,2 m² (5)

3.1.5 Give two reasons why it is important to paint the top of the table. (4)

3.2 Lehlohonolo is going to use the storage to store canned food that has a diameter of 6 cm. Calculate the circumference of one can in cm.

You may use the formula: **Circumference** = × × **where** = , (3)
[19]

QUESTION 4

4.1 Jane is travelling from Senekal to Smithfield via Bloemfontein to visit her.

ANNEXURE A shows a map of the Free State province.

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

4.1.1 Identify one country shown as a whole on the map. (2)

4.1.2 Write down the national roads that Jane will use for her trip. (3)

4.1.3 Identify two towns that Jane passes through on her journey from Senekal via Bloemfontein to Smithfield (2)

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4.2 Jane is travelling at an average speed of 120 km/h. She left Senekal at 04:00 a.m. to Smithfield, which is 313 km away.

Use the information above to answer the questions that follow.

4.2.1 Calculate the time she will arrive at her brother's place.

You may use the following formula:

$$= \text{————}$$

(5)

4.2.2 Jane claimed that the total amount of money that she will spend on petrol for a return trip, will be less than R750. The cost of one liter of petrol is R 23,26 and her car's fuel consumption is 100km/5ℓ.

Verify, showing all calculations, if her statement is correct. (5)

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TOTAL [75]

ANNEXURE A

QUESTION 4



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