GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

JUNE EXAMINATION
GRADE 12
2026

MATHEMATICAL LITERACY
QUESTION PAPER AND ANSWER BOOK
(PAPER 2)



MATHEMATICAL LITERACY P2

C2602E

X05

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MATHEMATICAL LITERACY

(PAPER 2)

NAME OF SCHOOL	
CANDIDATE'S NAME	

DATE	D	D	M	M	Y	Y	Y	Y	**BOOK NUMBER**		**OF**		**BOOK(S)**

TEACHER		**PAPER NUMBER**	**2**

SUBJECT NAME	**MATHEMATICAL LITERACY**

ANSWER ALL THE QUESTIONS IN THE QUESTION PAPER.

	MARKER				MODERATOR			
QUESTION	**MARKS**			**MARKER'S INITIALS**	**MARKS**			**MODERATOR'S INITIALS**
1	0				0			
2	0				0			
3	0				0			
4	0				0			
5	0				0			
				TOTAL				

TIME: 2 hours

MARKS: 100

26 pages

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

1. This question paper consists of FIVE questions. Answer ALL questions in the spaces provided.
2. Show ALL calculations clearly.
3. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
4. Round-off ALL final answers appropriately according to the given context, unless stated otherwise.
5. Indicate units of measurement, where applicable.
6. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
7. No pages may be torn from this question paper.
8. Candidates may not retain a question paper or remove it from the examination room. Question papers must be returned to the invigilator at the end of the examination session.
9. Answers must be written in blue ink as distinctly as possible. Do NOT write in the margins.
10. Indicate the questions you have answered by drawing a circle around the relevant numbers on the front cover of the question paper where marks are to be recorded.
11. Draw a neat line through any work/rough work that must NOT be marked.
12. In the event that you use the additional space provided:
    - 12.1 Write down the number of the question.
    - 12.2 Leave a line and rule off after your answer.
13. Write neatly and legibly.

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QUESTION 1

1.1 TABLE 1 below shows instruments and scales used in Mathematical Literacy.

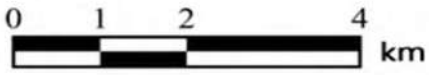
Choose an item labelled A – E that matches the descriptions below. Write only the letter (A – E) of the correct item next to the question numbers (1.1.1 to 1.1.3) in the spaces provided.

TABLE 1: INSTRUMENTS AND SCALES

A



B



C



D



E 1 : 10 000

[Source: *https://www.savvyshoppertech.com/products-p-310418.html*]

1.1.1	The most appropriate instrument to measure the circumference of a person's waist	(2)

1.1.2	The instrument most suited to measure the length of a rugby field	(2)

1.1.3	The scale that remains accurate when a map is resized	(2)

1.2 Study the a recipe for chocolate chip muffins below and use it to answer the questions that follow.

Ingredients (makes 24 muffins)	**Chocolate chip muffins**
• 1 kg chocolate-flavoured muffin mix • 4 large eggs • 1 cup sunflower oil • $1\frac{3}{5}$ cup water **Baking instructions** Pre-heat oven to 180˚C. Bake for 20 minutes or until a skewer, when inserted into the centre of the muffin, comes out clean.	

[Source: *https://www.piesandtacos.com*]

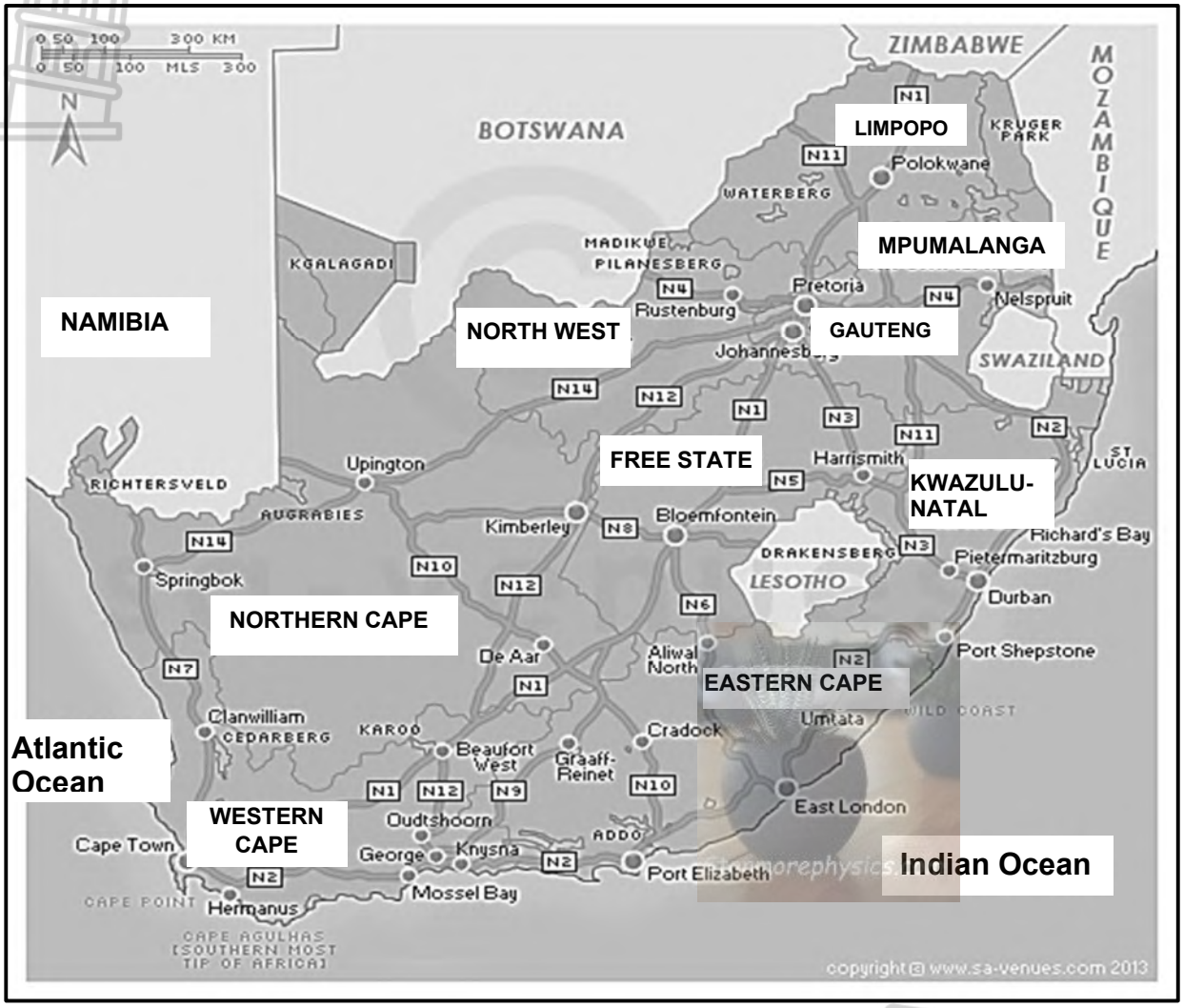
1.2.1	Convert the mass of the muffin mix to grams.	(2)

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1.2.2	Convert the 20-minute baking time to hours.	(2)

1.2.3	Determine the number of large eggs needed to make 36 muffins.	(2)

1.3 Study the map of South Africa given below and answer the questions that follow.



[Source: ***https://www.sa-venues.com/maps/south-africa-national-roads.htm*****]**

1.3.1	Identify the type of scale used in the map above.	
		(2)

1.3.2	Name the ocean that borders the coast of the KwaZulu-Natal province.	(2)

1.3.3	Identify the country that lies west of the North West province.	(2)

1.3.4	Name the first town one will pass when travelling from Johannesburg to Durban via the N3.	(2)

[20]

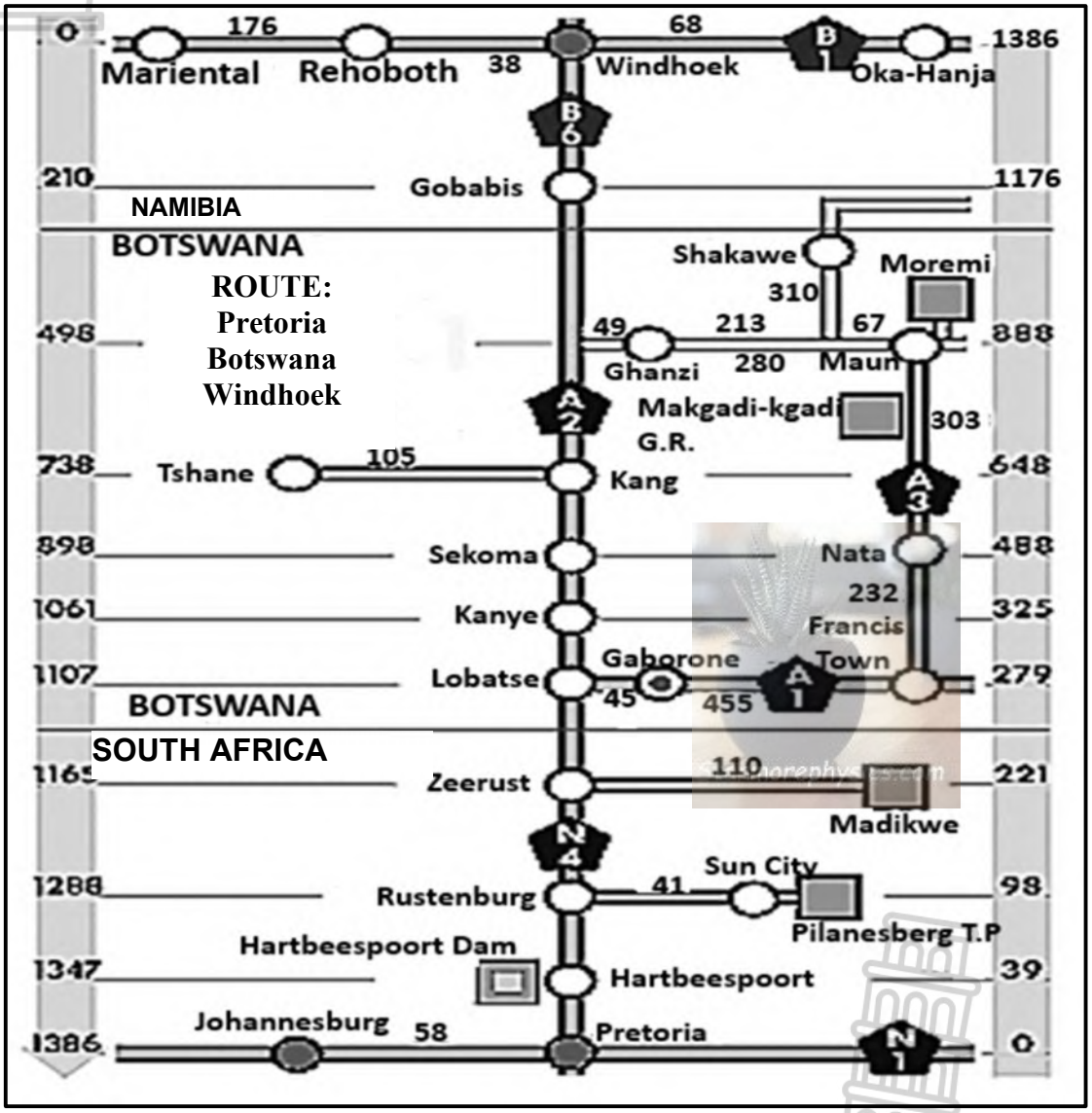


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QUESTION 2

2.1 Ileshree wants to drive from Pretoria to Gaborone to visit her grandparents so they can celebrate their 50th wedding anniversary together. She found a map, shown below, that will help her navigate her journey.



[Source: *http://www.roomsforafrica.com*]

NOTE: The distances shown on the map are in kilometres.

Use the information as well as the map above to answer the questions that follow.

2.1	Identify the type of map shown above.	
		(2)

2.2	List ALL the national roads displayed on the map for the Botswana region.	(3)

2.3	Determine the distance between Zeerust and Lobatse in kilometres.	(3)

2.4	On her way back from Gaborone to Pretoria, Ileshree left at 18:20. Calculate her arrival time if she was travelling at an average speed of 120 km/h. You may use the following formula: **Time** = $\frac{\textbf{Distance}}{\textbf{Speed}}$	(5)

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2.5	The estimated population of Namibia is currently 3 136 844. Write the population out in word format without using numbers.	(2)
2.6	Ileshree left Gaborone and wants to pass via Sun City to see a friend before driving back to Pretoria. Provide a set of instructions in bullet form that Ileshree can use from Gaborone to Sun City.	(4)

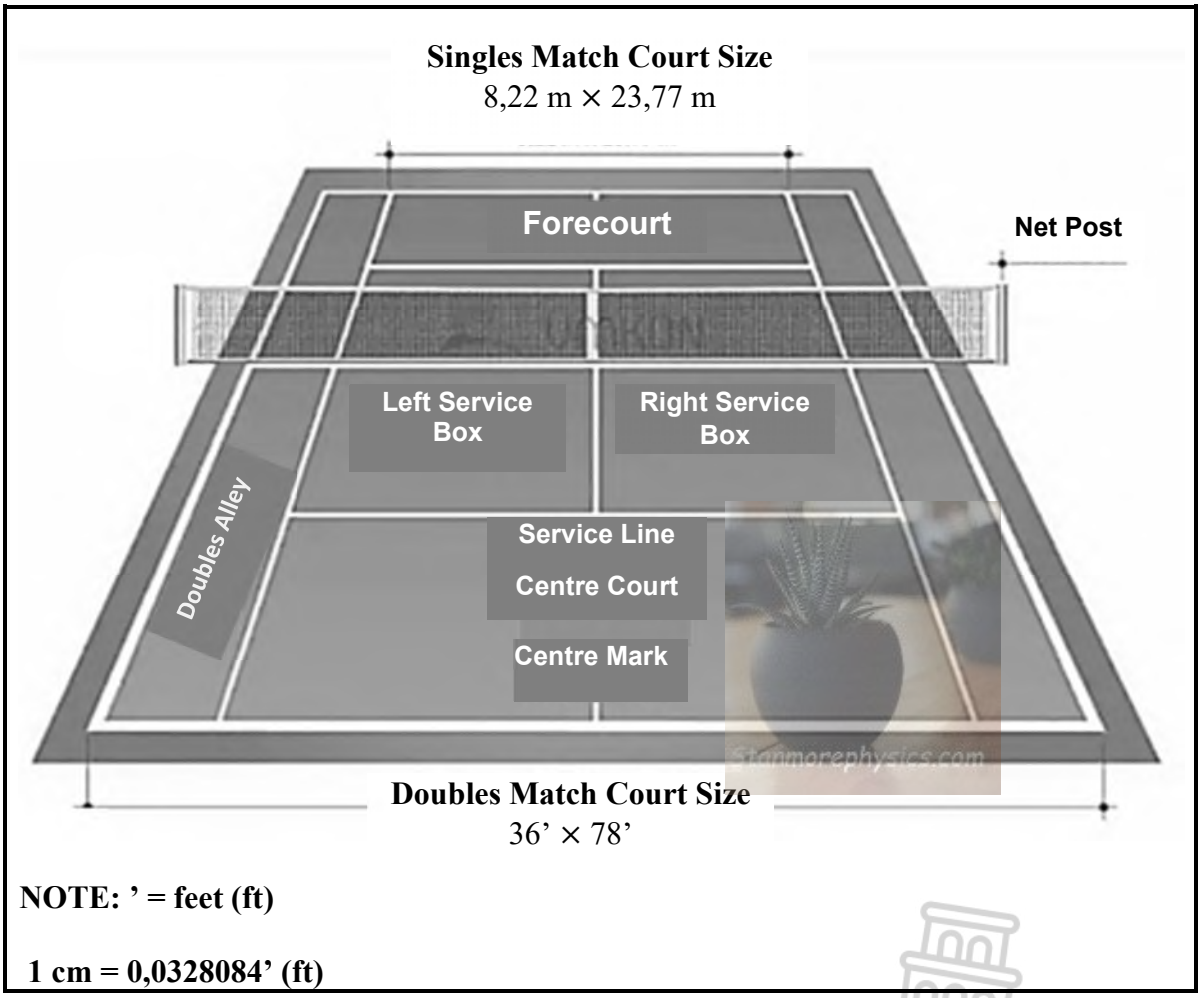
[19]

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QUESTION 3

3.1 Tennis is played by millions of people in clubs and on public courts. The four main types of courts are clay courts, grass courts, hard courts and artificial or "carpet" courts.

Below is a diagram of an artificial tennis court, with dimensions.



NOTE: ' = feet (ft)

1 cm = 0,0328084' (ft)

[Source: *https://vmkonsport.com/tennis-court-dimensions/*]

Study the information above and use it to answer the questions that follow.

3.1.1	Determine the probability, as a fraction, of picking an artificial tennis court from the types of tennis courts.	
		(2)

3.1.2	A standard doubles match tennis court is 78 feet long, with a width of 36 feet. A spectator claims that the area of a doubles match court is more than 260 m^2.	(6)

	Verify, with calculations, whether the claim is CORRECT or NOT. You may use the following formula: **Area = Length × Width**	

3.1.3	A tennis match started at 11:08 and lasted 2 hours and 53 minutes. Calculate the time that the match ended. Leave your answer in the 24-hour format.	
		(2)

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3.2 For a player to qualify to play a professional match, the person's BMI has to be considered healthy. Carlos is an 18-year-old boy whose weight is at the 90th percentile and whose height is at the 75th percentile.

TABLE 2 below shows the BMI Weight Status and a growth chart for boys is shown on ANNEXURE A on the next page.

Study the information and use it to answer the questions that follow.

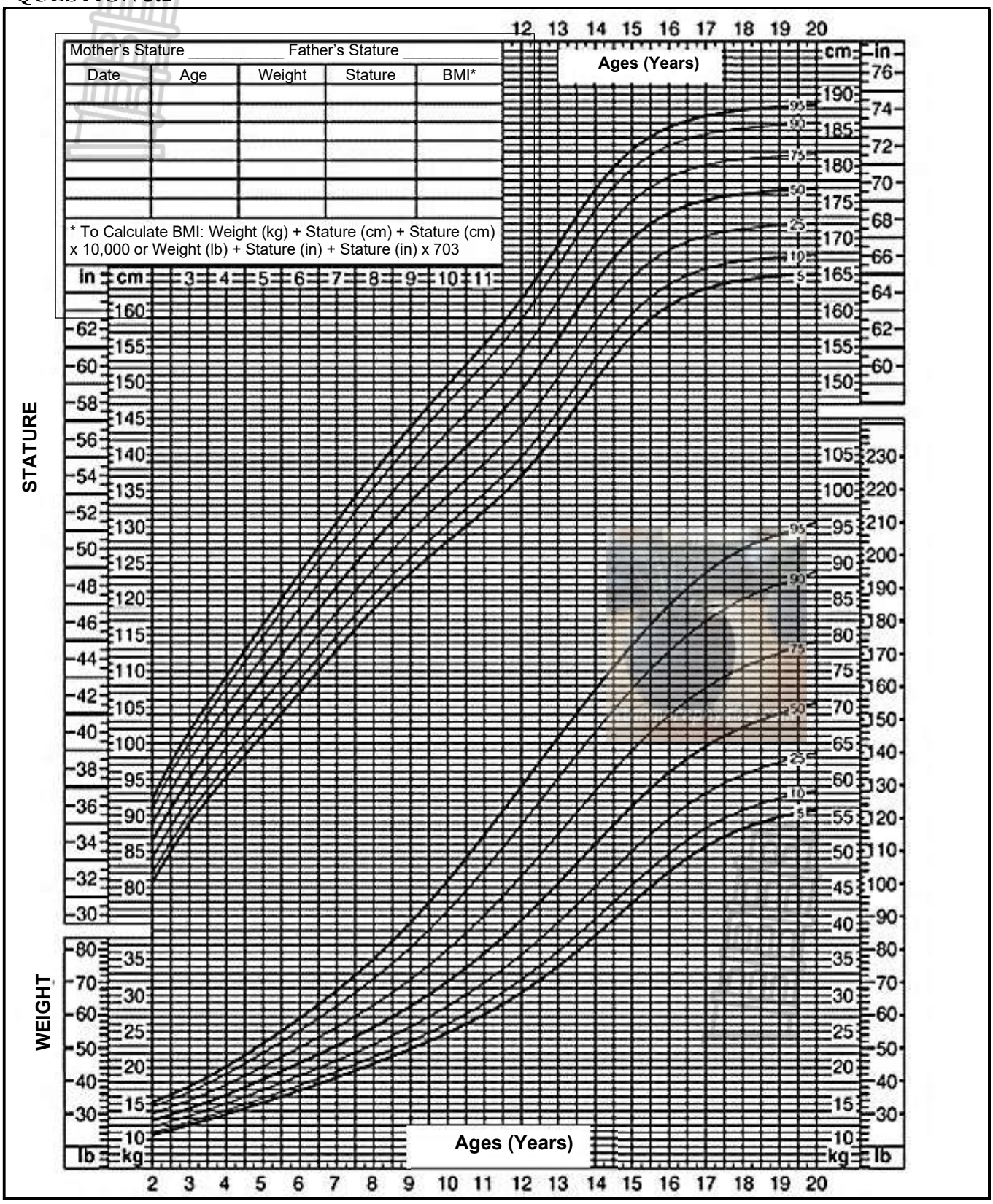
TABLE 2: BMI AND WEIGHT STATUS TABLE

BMI (kg/m^2)	WEIGHT STATUS
<18,5	Underweight
18,5 – 24,5	Normal or Healthy
25 – 30	Overweight
> 30	Obese

You may use the following formula: $\textbf{BMI} = \frac{\textbf{Weight in kg}}{(\textbf{Height in m})^2}$



ANNEXURE A
QUESTION 3.2

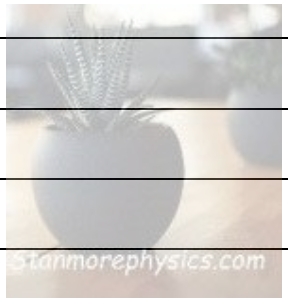


Published May 30, 2000 (modified 11/21/00)
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

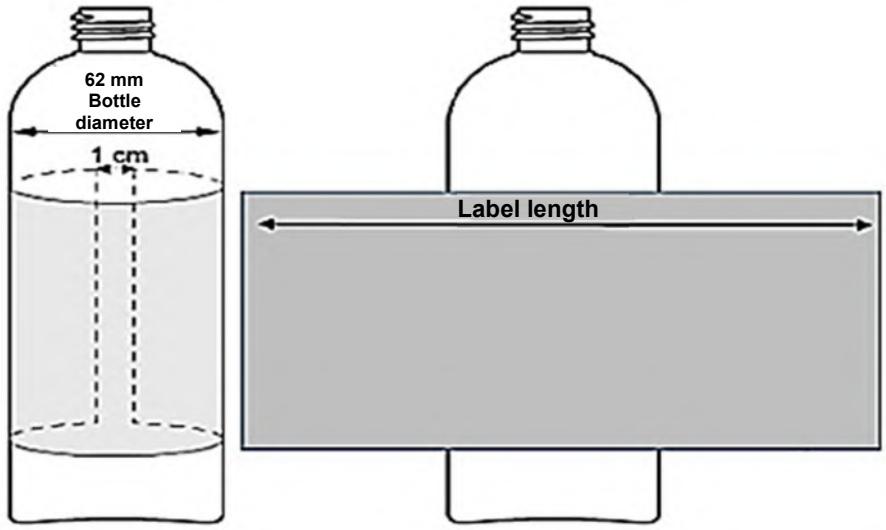
SAFER · HEALTHIER · PEOPLE

[Source: *http://www.cdc.gov/growthcharts*]

3.2.1	Write the abbreviation *BMI* in full.	(2)
3.2.2	Use the information in TABLE 2, as well as ANNEXURE A, to determine whether Carlos can play professional tennis.	(7)



3.3 It is vital to drink water while playing any sport. Study the dimensions of a water bottle below to answer the questions that follow.



NOTE:

- Bottle diameter = 62 mm
- Label opening = 1 cm

[Source: ***https://www.upyfinal.shop/?path=page/ggitem&ggpid=592136*****]**

Calculate the length of the label. You may use the following: $\boldsymbol{Circumference = \pi \times diameter}$; where $\boldsymbol{\pi = 3{,}142}$	
	(5)

[24]

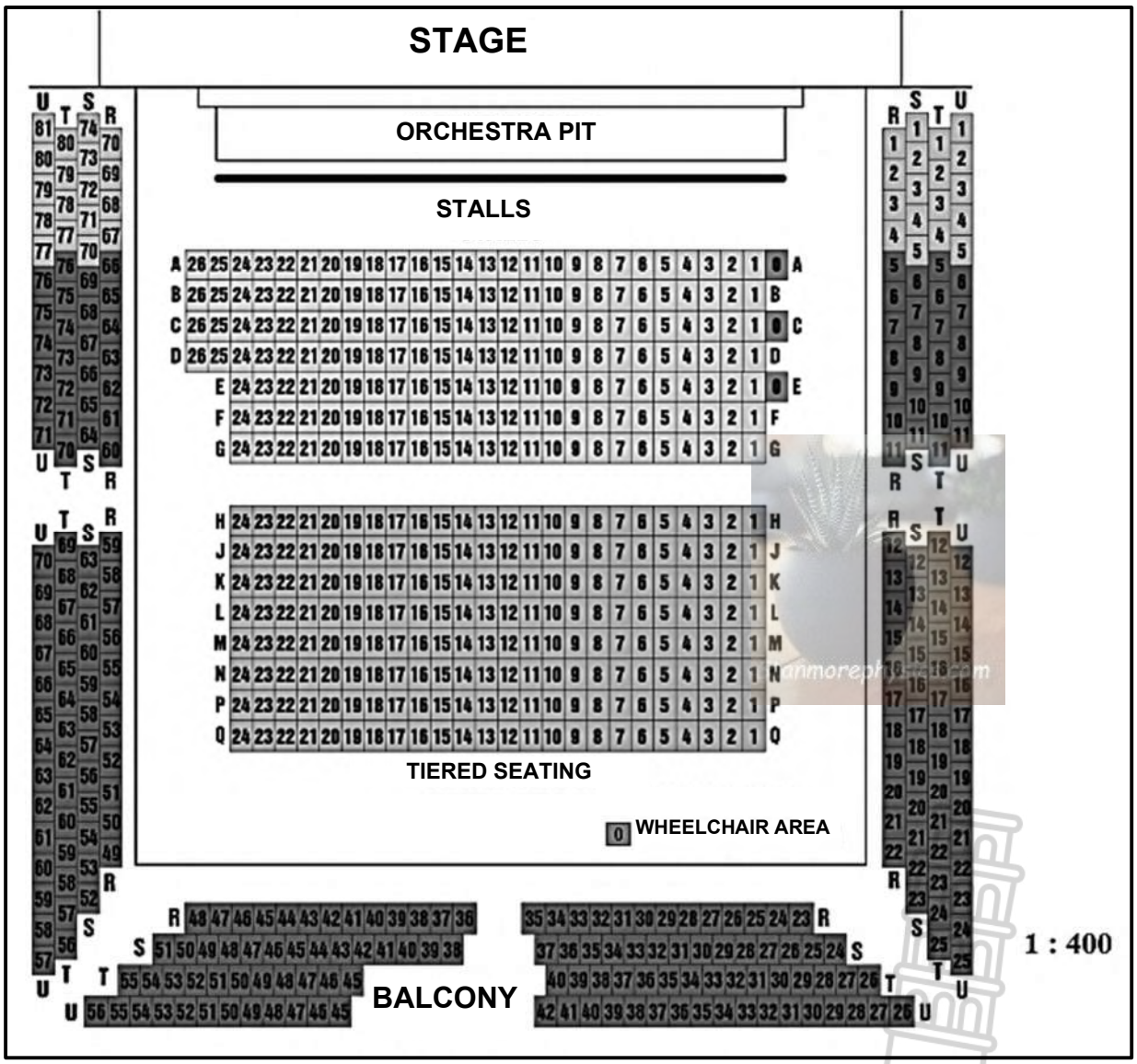
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QUESTION 4

Mr John Van Der Merwe and his family went to watch a live orchestra performance at the Royal Spa Centre auditorium that can accommodate 767 people. The seating plan of the live concert is shown in ANNEXURE B below.

Use ANNEXURE B below to answer the questions that follow.



[Source: ***https://www.warwickdc.gov.uk/royalspacentre/info/58/seating_plans*****]**

4.1	Define the term *seating plan* in this context.	(2)

4.2	Write down the ratio of the number of seats in the stalls to the number of seats in the tiered seating. (Focus on seats in rows **A** – **Q** only).	(3)

4.3	Give ONE reason why rows **A**, **C**, and **E** have seats numbered 0 (zero).	(2)

4.4	Write down the probability, as a percentage, of finding a seat in row **E** in the auditorium.	(3)

4.5	Use the given scale to calculate the actual length of the orchestra pit in metres.	(4)

4.6	Calculate the actual breadth of the orchestra pit in metres if its actual area is given as $144\ m^2$. You may use the following formula: $\mathbf{Area = breadth \times width}$	(3)

4.7	Which row do you think will be the cheapest? Give a reason for your answer.	(2)

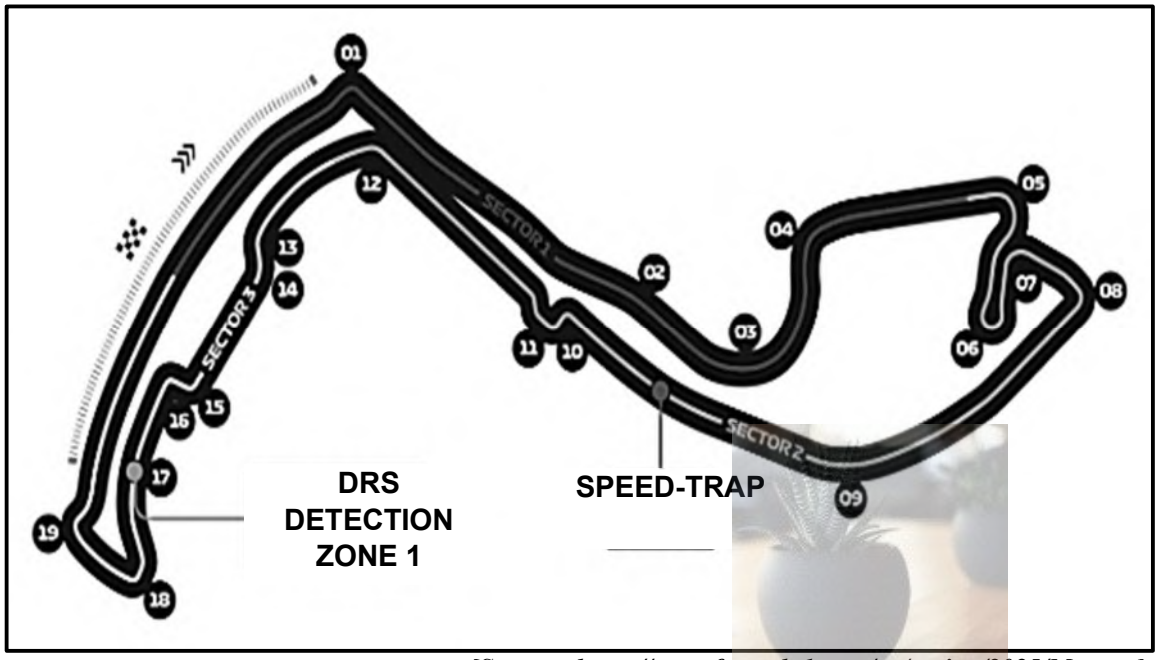
[19]



QUESTION 5

5.1 Formula One (F1) racing is the highest class of international racing for single-seater, open-wheel formula racing cars. It is a form of motor racing, where teams and drivers compete for both the Drivers' and Constructors' Championships. Races, called Grand Prix, take place at circuits around the world.

The Formula One (F1) Monaco Grand Prix is held in Monaco. Below is a sketch of the Monaco Grand Prix race circuit.



[Source: ***https://www.formula1.com/en/racing/2025/Monaco*****]**

- Circuit length: 3,337 km
- The record for the fastest lap on this track is held by Lewis Hamilton, who completed the 3,337 km lap in a time of 1 minute and 12,909 seconds.

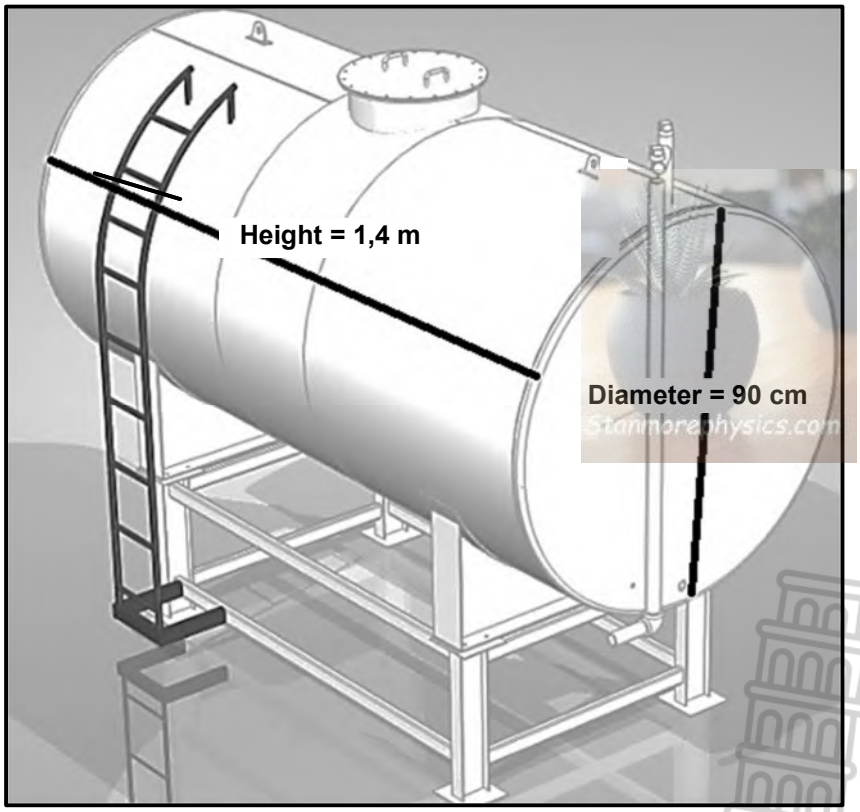
Use the information given above to answer the questions that follow.

5.1.1	The spectators at the race were advised to wear warm clothes as the average temperature on the day of the grand prix was -1℃. Calculate the average temperature in degrees Fahrenheit (°F). You may use the following formula: $℃ = (°F - \mathbf{32}) \div \mathbf{1,8}$	
		(3)

5.1.2	The distance of the entire race is 260,286 km. Calculate the number of laps of the Monaco Grand Prix.	(2)

5.2 During the Monaco Formula One Grand Prix, Lewis Hamilton's team used a portable cylindrical fuel-storage container placed in the pit area.

The container is used to safely store race-grade fuel before it is pumped into the car. A diagram of the fuel container is shown below.



The container has the following dimensions:

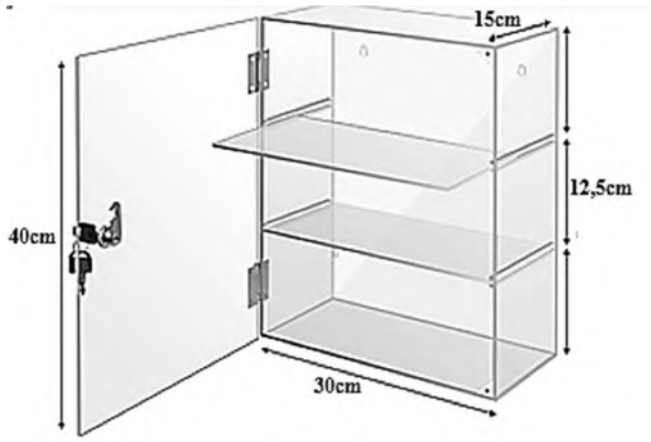
- Height = 1,4 m
- Diameter = 90 cm

[Source: Petro Industrial Solutions]

Calculate the volume of the cylindrical fuel-storage container in litres. **Given: 1 litre = 1 000 cm^3** You may use the following formula: **Volume = 3,142 × $radius^2$ × height**	
	(5)

5.3 After winning the Monaco Grand Prix, a custom trophy cabinet (Rectangular Prism) was designed for Lewis Hamilton's trophies.

A diagram with the dimensions and a picture of the trophy cabinet are shown below.

Diagram of the trophy cabinet	**Picture of the trophy cabinet**
 **The trophy cabinet has the following dimensions:** Length = 30 cm Breadth = 15 cm Height = 40 cm	

[Source: *Amazon.com/uk*]

5.3.1	Show, with calculations, that the total height for the three shelves (excluding the space used to divide the shelves) is 37,5 cm.	
		(2)

5.3.2	Calculate the total external surface area of the trophy cabinet. You may use the following formula: $\textbf{Surface Area} = \mathbf{2(l \times b) + 2(l \times h) + 2(b \times h)}$ **Where: l = length; b = breadth; h = height**	
		(4)

5.3.3	A South African company imports the same trophy cabinets that are shown in QUESTION 5.3. To protect the cabinet from scratches and damage during transportation, the outside of the trophy cabinet is wrapped in a transparent adhesive film. The adhesive film costs R12,25 per 100 cm^2. Calculate the cost of wrapping the trophy cabinet.	
		(2)

[18]

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ADDITIONAL SPACE		



ADDITIONAL SPACE		



TOTAL : 100