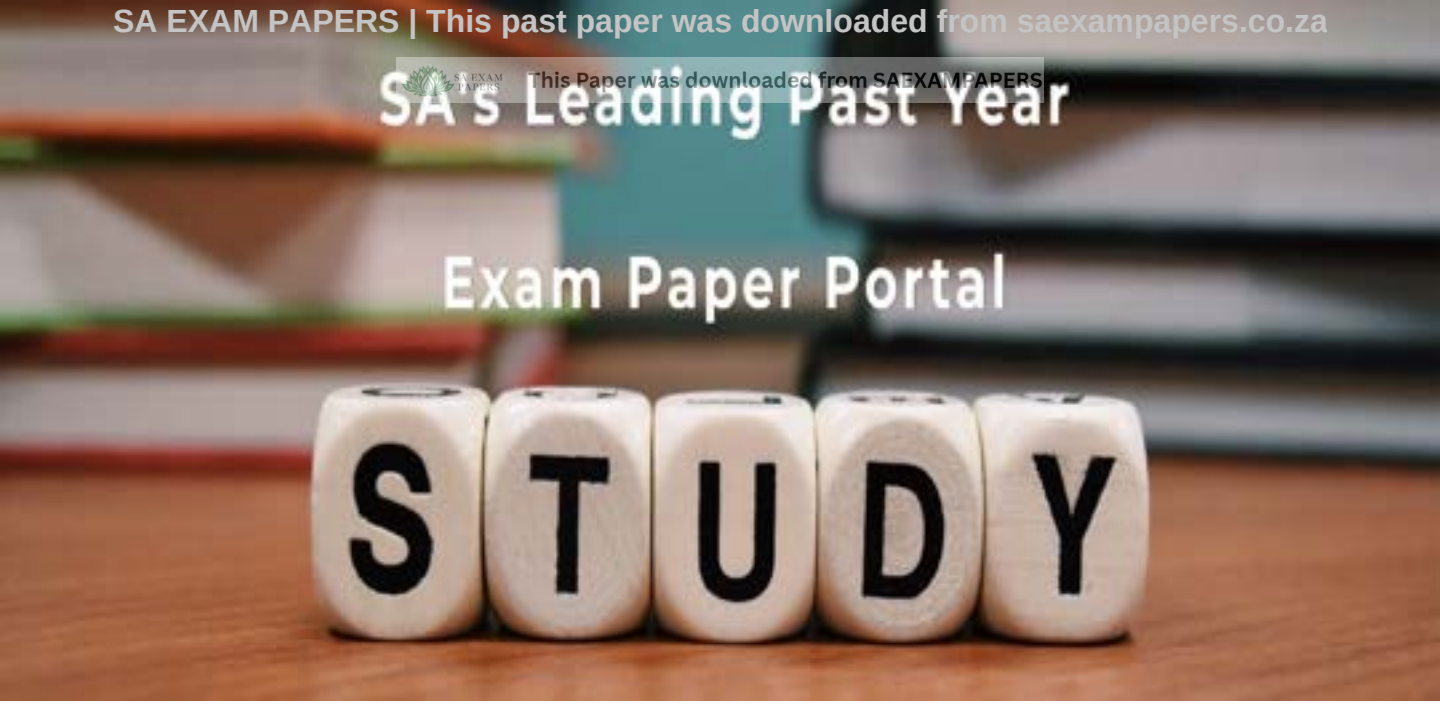


LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P2

SEPTEMBER 2025

MARKS: 150

TIME: 3 hours

This question paper consists of 13 pages and a 21- page SPECIAL ANSWER BOOK.

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

1. This question paper consists of FIVE questions.
2. Answer ALL the questions in the SPECIAL ANSWER BOOK provided.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show ALL calculations clearly.
5. Maps and diagrams are NOT necessarily drawn to scale, unless otherwise stated.
6. Indicate units of measurement, where applicable.
7. Round off ALL final answers appropriately accordingly to the given context, unless stated otherwise.
8. Write neatly and legibly.

QUESTION 1

1.1 Tzaneen is a town found in the northern part of Limpopo. Annexure A in the ANSWER BOOK shows the map of part of Tzaneen.

Use ANNEXURE A to answer the questions that follow:

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

1.1.2 Martin Dale Seedlings is found at the corner of which two streets? (2)

1.1.3 Name the hospital shown on the map. (2)

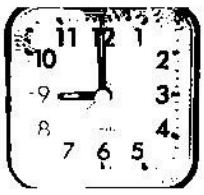
1.1.4 Mention two roads that passes through this part of map. (2)

1.1.5 Identify the type of roads in 1.1.4 (2)

1.1.6 Measure and write the distance (as the crow flies) in mm from Tzaneen swimming pool to Tzaneen animal clinic. (2)

1.2 Different watches displaying times are shown below:

A



B

C

D

Source: www.pinterest.com

Use the watches above to answer the questions that follow:

1.2.1 Name the time formats used to show time on the watches above. (2)

1.2.2 Write the time on watch A in the format which shows is in the evening, without writing PM. (2)

1.2.3 Clock C has a "03" what does it represent? (2)

1.2.4 Write the time on Clock D in words. (2)

1.3 Joanita bought a cabinet which needed to be assembled as in the picture below.

ANNEXURE B in the ANSWER BOOK shows steps for assembling the cabinet.

Picture of assembled cabinet

www.siyavula.com

Use the information above and match the pictures on Annexure B with the explanations on 1.3.1 to 1.3.5 Write only the letter A to E next to the explanation numbers e.g. 1.1.7 B.

1.3.1 Attach the top of the cabinet, screw it in. (2)

1.3.2 Screw the top support piece into the right side of the cabinet. (2)

1.3.3 Slide the bottom piece into the cabinet, screw it in place. (2)

1.3.4 Attach the wheels to the base of the cabinet. (2)

1.3.5 Screw the cabinet top support piece into the left side panel of the cabinet. (2)

[30]

QUESTION 2

2.1 ANNEXURE C in the ANSWER BOOK shows the map of Limpopo Province.

Use Annexure C to answer the questions that follow:

2.1.1 Identify the type of scale on the map. (2)

2.1.2 Write the scale of this map in the form of 1: --------- (4)

2.1.3 Give the general direction of Alldays from Magoebaskloof. (2)

2.1.4 Measure the distance from Belabela to Alldays in a straight line and calculate the actual distance in kilometres. (4)

2.1.5 Which national road can you use to travel from Mokopane to Musina. (2)

2.1.6 Name three provinces which share a boarder with Limpopo (3)

2.1.7 Calculate the probability of finding a National Park to a game reserve in Limpopo according to Annexure C as a decimal. (3)

2.1.8 Thapelo travelled with his family for 283km from Mokopane to Mapungubwe for Mapungubwe art festival, He left his place at 8:30, rested for 20 minutes along the way. He drove at a speed of 110km/h, he indicated that it will only take him 2h25 minutes including resting time to arrive. Prove with calculations if he is correct.

You may use the formula:

Distance = speed × time (7)

2.2 A gala dinner was held a week before the Mapungubwe Arts festival for Fund raising towards the event. The hall has a dimension of 20 m by 30m. Annexure D is a layout plan for the hall where the event was held.

Use the information above to answer the questions that follow:

2.2.1 Define the word layout plan according to context. (2)

2.2.2 Write down the total number of people who attended the gala dinner. If all tables were occupied. (2)

2.2.3 Identify a feature inside the men's bathroom which is not the same as the features in the women's bathroom. (2)

2.2.4 Which room share a common door with the dressing room and give a reason why the rooms have a common door. (3)

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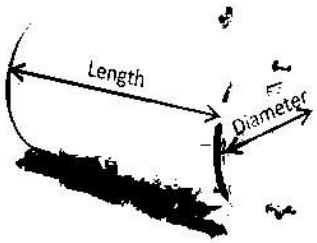
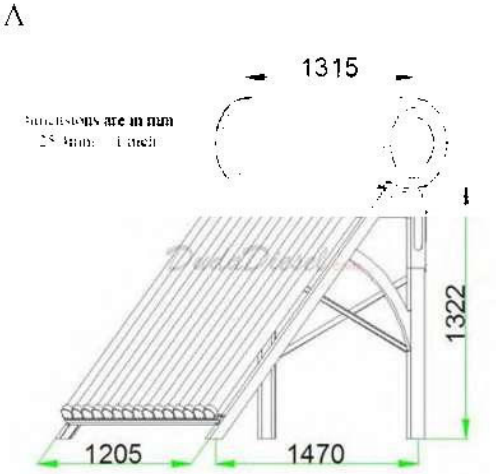
QUESTION 3

3.1 Mr. Mohale who stays in Groblersdal is a contractor who installs solar geysers. Below is a picture of a geyser with its dimensions.

PICTURE OF A GEYSER	DIMENSIONS OF THE SOLAR GEYSER
	

www.bing.com

Use the information and the picture above to answer the questions that follow:

3.1.1 The volume of the geyser is 0,31246 m^3. Calculate, in m, the diameter of the geyser (round your answer to three decimal places).

You may use the following formula:

Volume $= \pi \times radius^2 \times height$
Use $\pi = 3{,}142$ (7)

3.1.2 Calculate the circumference of the geyser in cm. (3)

You may use the following formula:

Circumference = $\pi \times$ **diameter**
Use $\pi = 3.142$

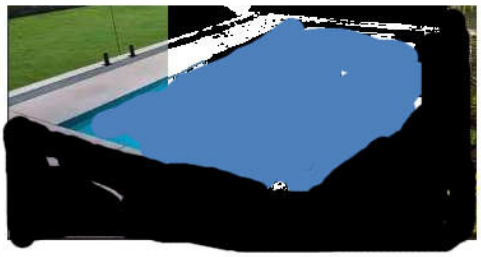
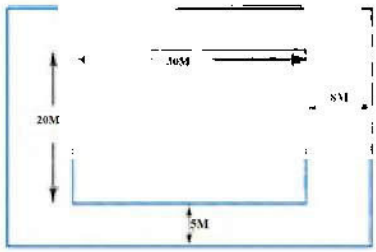
3.1.3 The posts which hold the geyser form a triangle on opposite sides. Calculate the area of the 2 triangles in mm^2 (4)

You may use the following formula:

Area of a triangle $= \frac{1}{2}$ **base × perpendicular height**

3.2

Mr. Mohale's wants to build a rectangular shaped swimming pool with dimensions 30 m by 20 m with 5 m paving along its length and 8 m along its width. Below is the picture of the swimming pool and its dimensions.

Picture of the swimming pool	Diagram of the pool
	

Adapted from:www.pinterest.com

Use the information above together with the picture of the pool to answer the questions that follow:

3.2.1 Determine the outside length and outside width which includes the paving area. (4)

3.2.2 Calculate the total area which needs to be paved. (5)

You may use the formula:

Area = L × B

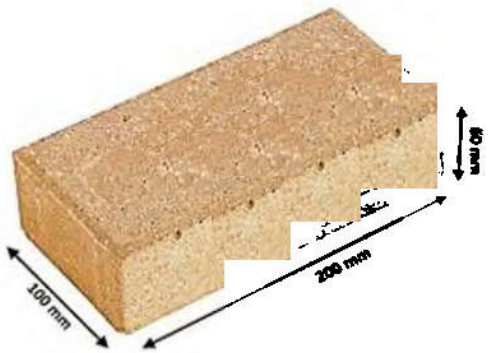
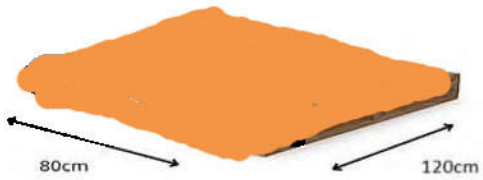
3.2.3 Mr. Mohale budgeted R145 000 for paving, if the rate for paving is R200 per square metre. Determine if the money will be enough. (3)

3.2.4 The depth of the pool is 1,8 m all round calculate how much soil will be dug out to build the swimming pool. (2)

You may use the formula:

Volume = Area × H

3.3. Paving bricks are packed on pallets for easy loading and deliver. The dimensions of a paving brick that Mr. Mohale will use is 200 mm by 100 mm by 60 mm, and the dimensions of a pallet is 120cm by 80cm as shown on the pictures below.

PICTURE OF A PAVING BRICK	PICTURE OF A PALLET
	

Source: Google pictures

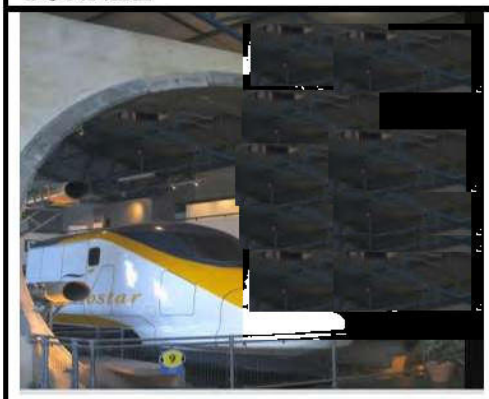
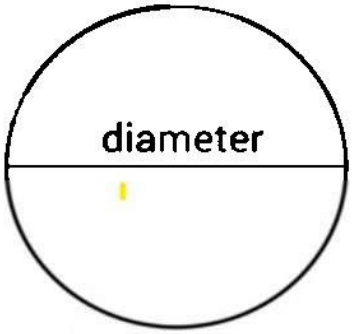
3.3.1 Mr. Mohale claims that one pallet can carry a maximum number of 500 bricks if 10 rows are packed. Verify with calculations whether his statement is correct. (7)

3.3.2 Determine the height of one packed pallet (in mm) if the thickness of a pallet is 144 mm (2)

[37]

QUESTION 4

4.1 The Channel Tunnel, also known as the Chunnel, is a 31,35 mile under see railway tunnel with diameter of 24,93 feet. It connects England with France beneath the English Channel.

PICTURE OF THE CHANNEL TUNNEL	DRAWING OF A CIRCLE
	

Source: en.wikipedia.org

NOTE: 1 mile = 1,609 km
1 cm = 0,0328 ft

4.1.1 Convert the length of the Channel tunnel to kilometres. (3)

4.1.2 Calculate the radius in metres. (5)

4.1.3 Calculate the surface area of the tunnel in metre squared. (4)

You may use the following formula:

Surface Area = $\mathbf{2 \times \pi \times radius \times height}$

Use $\pi = 3.142$

4.2.

The Eurostar is an international high-speed rail service in Western Europe connecting Belgium, France, Germany, the Netherlands and the United Kingdom. It can reach a maximum speed of 300 km/h.

Use the information above to answer the questions that follow:

4.2.1	Eurostar is a rail service in which continent.	(2)
4.2.2 (a)	If the journey from London to Paris is 490 km, how long can a Eurostar take if it is moving at a maximum speed? (Write you answer in hours and minutes). You may use the formula: $D = S \times T$	(4)
(b)	Do you think it is practically possible for the train to take the duration on 4.2.1 (a). Give a reason for your answer.	(3)
4.2.3(a)	If you board the train in London at 10:30 AM and arrive at Paris 1:47 PM (local time), how long is the journey? **Note: The time difference between London and Paris is 1 hour.**	(4)
4.2.3(b)	What does PM stand for?	(2)
4.2.4	If 80 % of the seats on the Eurostar are sold, what is the probability (in simplified form) that a randomly chosen seat will be occupied.	(3)

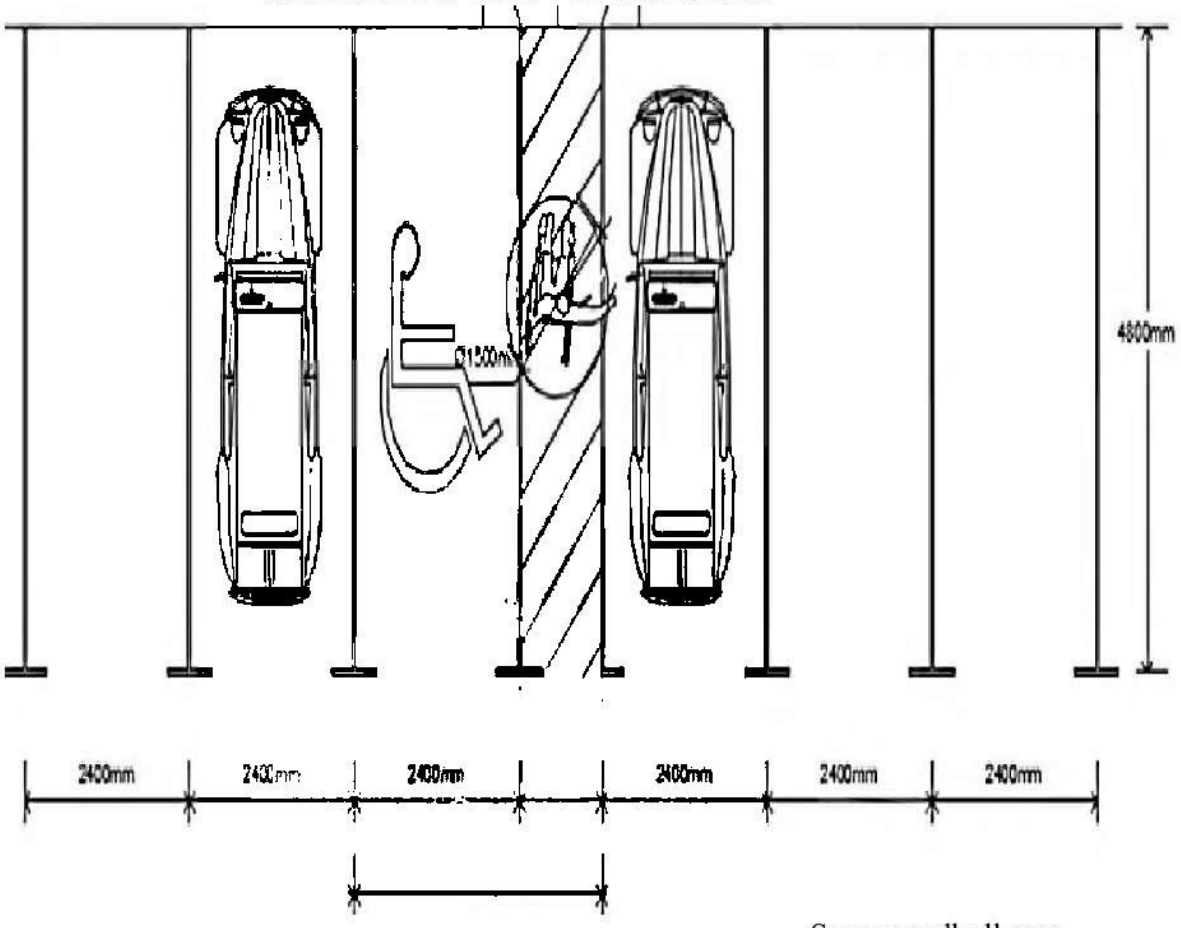
[30]

QUESTION 5

5.1. Muhluri an Engineer was hired to design the structure of parking bays in a mall. The diagram below shows the design of the parking bays. In south Africa, the National Building Regulations suggests that 4% of parking bays should be allocated for disabled parking.

The dimensions of a standard parking are 4800 mm by 2400 mm, the width of the disabled parking is 50% more than the width of a standard parking.

PICTURE OF CAR PARKING BAY



Source:cadbull.com

5.1.1 How much bigger is width of the disabled parking than the width of the standard parking? (3)

5.1.2 One of Muhluri 's employees said that the area of the disabled parking is 50% more than that of standard parking. Prove with calculation if he is correct. (6)

You may use the formula:
Area = L × B

5.2 Muhluri and his family has planned to go on a trip to Venezuela to see the Angela water fall during the holidays, when his company is closed.

Table 1 List of water falls

picture of the Angela water fall	**List of some of the waterfalls**		
	waterfall	Location	Height
	1. Angela	Venezuela	979 m
	2. Victoria falls	Zambia/Zimbabwe	961 m
	3. Niagara - falls	Canada	51 m
	4.Tugela waterfall	South Africa	947m
	5.Johannesburg falls	Washington	751 m

Source: www.audleytravel.com

Use the information above and the table below to answer the questions that follow:

5.2.1 Identify the waterfall which is shared by two countries. (2)

5.2.2 Niagara - falls has an average flow rate of 2 400 cubic metres per second. How much water flows over it in an hour? (3)

You may use the formula:

Volume of flow = flow rate per second × time

5.2.3 Determine the ratio of the height of Niagara - falls to the height of Angela falls as a unit ratio (correct to one decimal). (3)

[17]

TOTAL: 150