



# education

Department:  
Education  
North West Provincial Government  
**REPUBLIC OF SOUTH AFRICA**

**PROVINCIAL ASSESSMENT**

**GRADE 11**

**MATHEMATICAL LITERACY P2**

**JUNE 2024**

**MARKS: 75**

**TIME: 1½ hours**

**This question paper consists of 10 pages.**









**INSTRUCTIONS AND INFORMATION**

1. This question paper consists of **FOUR** questions. Answer **ALL** the questions.
2. Start **EACH** question on a **NEW** page.
3. Number the answers correctly according to the numbering system used in this question paper.
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** drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

**QUESTION 1**

1.1

Neo is trying a recipe for making Greek stuffed eggplant. The recipe below shows the ingredients needed for making Greek stuffed eggplant.

PICTURE OF GREEK EGGPLANT	INGREDIENTS
	 <p>2 x large eggplants</p>  <p>12 ounces (350 g) ground beef</p>  <p>100 g feta cheese</p>  <p><math>\frac{1}{4}</math> cup (60 ml) light cream</p>  <p>1 tablespoon of dried oregano</p>  <p><math>\frac{1}{4}</math> cup (60 ml) olive oil</p>
<p>Serves</p> 	<p>Preparation time: 10 min</p> <p>Cooking time : 40 min</p>

Use the information above to answer the questions that follow.

1.1.1 Write down the maximum number of people that this recipe will cater for. (2)

1.1.2 State the recommended time it will take Neo to prepare and cook this dish. (2)

1.1.3 A  $\frac{1}{4}$  cup of oil is equivalent to 60 ml. Determine the number of millilitres in one cup of oil. (2)

1.1.4 Neo will start to serve this dish at 6:37 pm.

Write down this time using the 24-hour clock format. (2)

1.2

The scale used on the seating plan of an examination room is 1:50.
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1.2.1 Explain the meaning of the scale of the seating plan. (2)

1.2.2 Name ONE other type of scale that you have studied. (2)

1.3 Define the concept *outcome* as used in probability. (2)

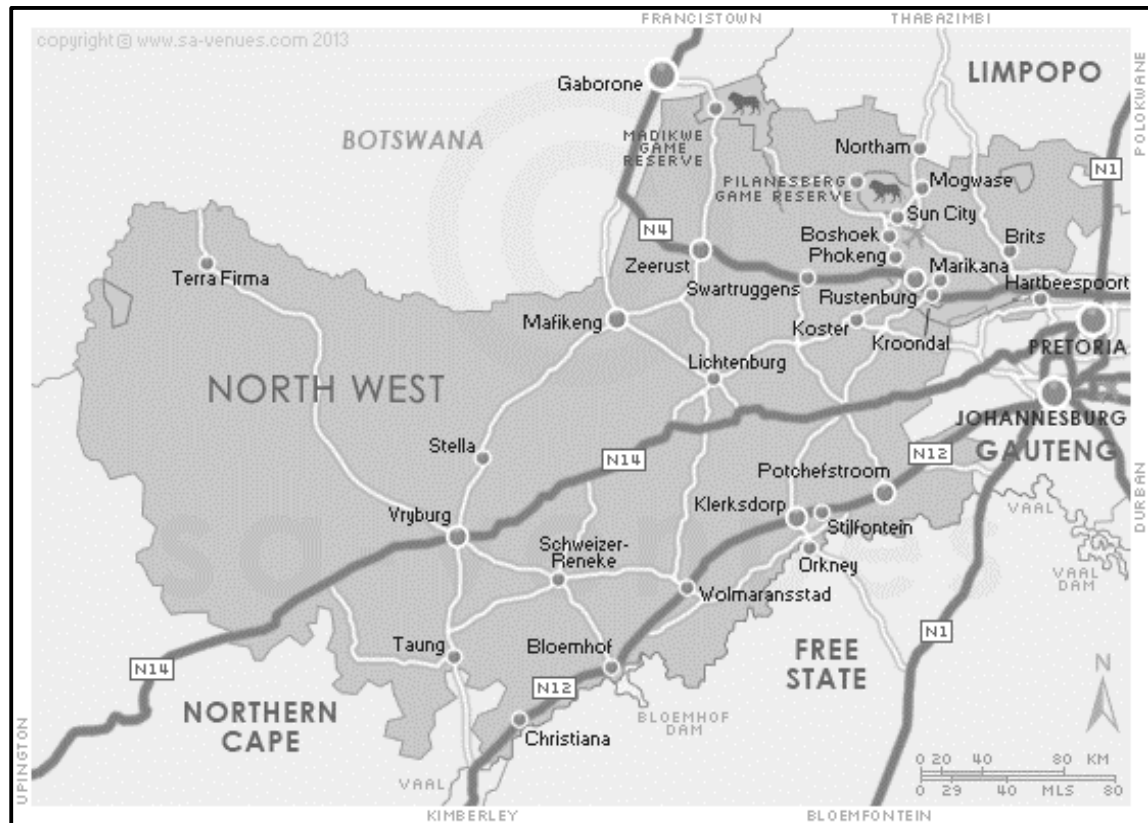
**[14]**

**QUESTION 2**

2.1

Below is a map of the North West province showing town/cities and roads.

**MAP OF NORTH WEST SHOWING NATIONAL ROADS LEADING TO TOWNS /CITIES**



Use the map above to answer the questions that follow.

2.1.1 Determine the total number of provinces other than North West shown on this map. (2)

2.1.2 The N4 measures 718 km, starts on the Botswana border and ends in Komatipoort on the Mozambique border.

Identify any TWO towns shown on the map where the N4 passes through. (2)

2.1.3 The area of the North West province is 104 882 km<sup>2</sup>. The area of the whole of South Africa is 1 220 813 km<sup>2</sup>.

(a) Determine the percentage that the North West province make out of the whole of South Africa. (3)

(b) Give a reason why a traveller from Botswana needs a passport to enter the North West province. (2)



Use the information above to answer the questions that follow.

3.1.1 Determine, in millimetres the total height of the cake. (3)

3.1.2 The cake was baked using 3 and a half pounds of butter.

Determine the mass of butter, in kilograms.

**NOTE:** 1 pound = 453,592 grams (3)

3.1.3 The bottom layer of the cake has a radius of 14 cm.

(a) Determine, in cm, the diameter of the bottom layer. (2)

(b) Verify, showing ALL the calculations, that the volume of the bottom layer of this cake is  $9\,237,48\text{ cm}^3$ .

You may use the formula:

**Volume of a cylinder =  $3,142 \times (\text{radius})^2 \times \text{height}$ .** (3)

3.1.4 The cake must be stored in the fridge at  $5\text{ }^\circ\text{C}$ .  
Convert this temperature to  $^\circ\text{F}$ .

You may use the formula:  $^\circ\text{F} - 32^\circ = \left(\frac{9}{5} \times ^\circ\text{C}\right)$  (3)

3.2

Mrs Nku has two children, Tom and Neo. They attend two different schools. The information below describes Mrs Nku's routine on a particular morning.

- She drives the children to their respective schools.
- First she drops off Tom at point A.
- Then she takes Neo to her school at point B.
- Thereafter she returns home.

Mrs Nku's journey is illustrated in the graph below

Use the graph and information above to answer the questions that follow.

3.2.1 It took Mrs Nku 15 minutes to drive the 10 km from home to Tom's school.

Express 15 minutes as a fraction of an hour in decimal form. (2)

3.2.2 Indicate whether the following statements are TRUE or FALSE. If FALSE, correct the statement.

(a) It took Mrs Nku, 25 minutes to drive from Neo's school to home. (2)

(b) The distance from Tom's school to Neo's school is 15 km. (2)

3.2.3 Mrs Nku left her home at 6:47 in the morning to drive her kids to school. On her way back home, she stopped for 20 minutes at the shop to buy bread.

Verify, showing ALL calculations, whether she will arrive at her house before 8:00 a.m. (4)

**[24]**



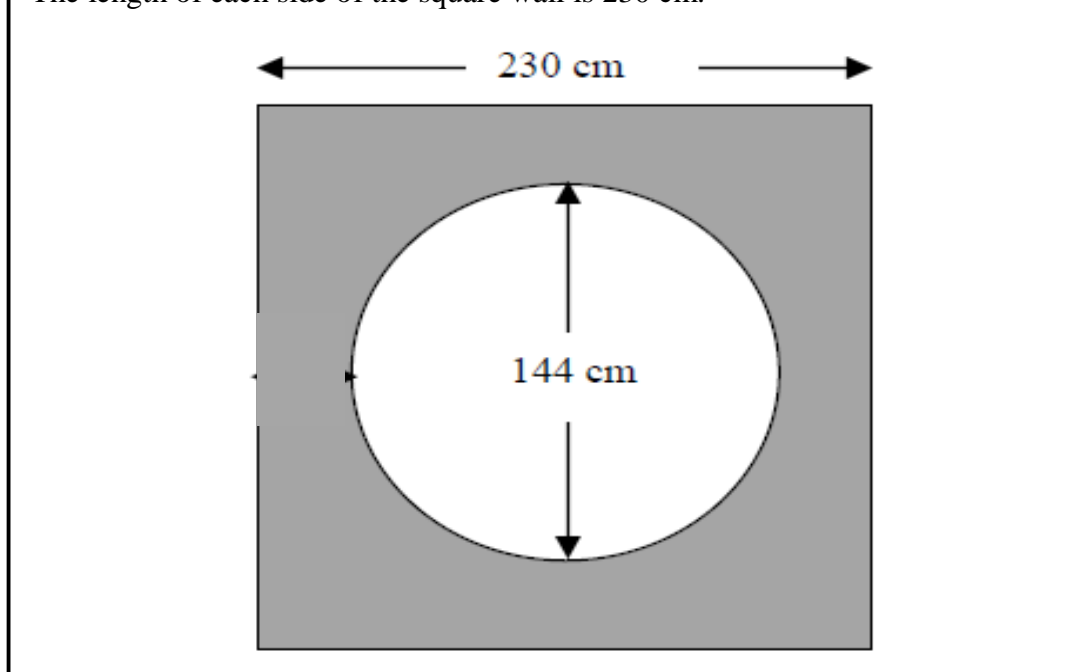
**QUESTION 4**

4.1

Sol installed a circular window in the centre of a square wall, as shown in the diagram below. He intends to paint the wall with 3 coats of paint.

The diameter of the circular window is 144 cm.

The length of each side of the square wall is 230 cm.



Use the information above to answer the questions that follow.

4.1.1 Calculate the circumference of the window.

You may use the formula: **Circumference of the circle =  $3,142 \times d$** . (2)

4.1.2 Calculate, in  $\text{cm}^2$ , the area of the wall that needs to be painted.

You may use the formulae:

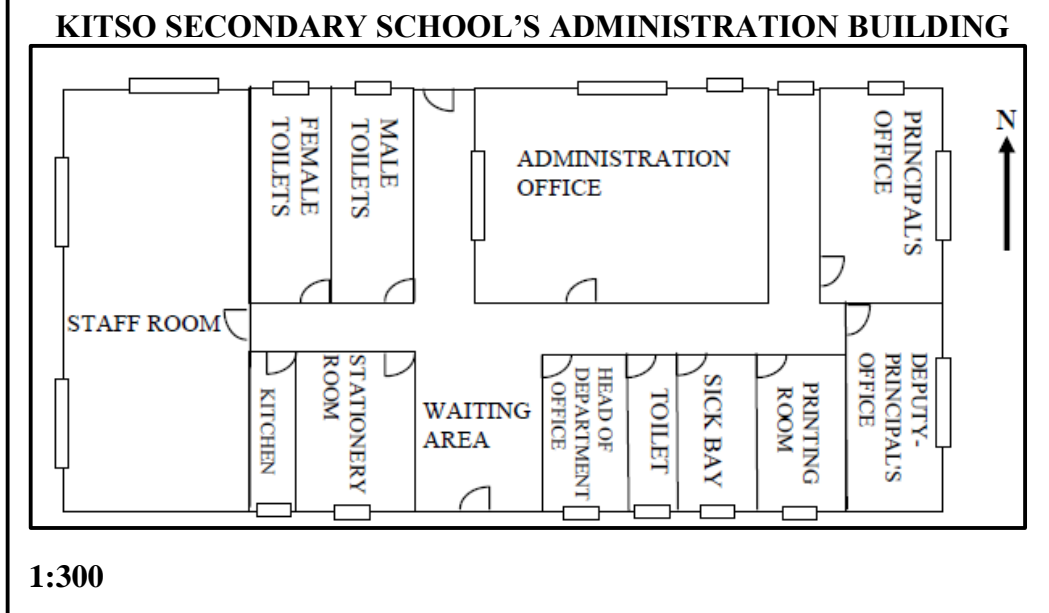
**Area of a circle =  $3,142 \times \left(\frac{d}{2}\right)^2$**  where d is the diameter

**Area of a square =  $s^2$** , where s is the length of each side (6)

4.1.3 Convert the answer in QUESTION 4.1.2 to  $\text{m}^2$ . (2)

4.2

The diagram below shows a scaled diagram of Kitso Secondary School’s administration building.



Use the diagram above to answer the questions that follow.

4.2.1 Determine the number of offices in this administration building. (2)

4.2.2 The length of the printing room on the scale diagram is 2,2 cm.

Use the given scale above to calculate in metres, the actual length of the printing room. (3)

4.2.3 Give a reason why the administration building has a waiting area. (2)

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**TOTAL: 75**