



Province of the  
**EASTERN CAPE**  
EDUCATION



**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2023**

**MATHEMATICAL LITERACY P2  
(DEAF)**

**MARKS: 100**

**TIME: 2 hours**

---

This question paper has 11 pages, with an addendum with 2 annexures.

---

**INSTRUCTIONS AND INFORMATION**

1. This question paper has **FOUR** questions.
2. Use the **ANNEXURES** in the **ADDENDUM** for:
  - ANNEXURE A for QUESTION 2.1
  - ANNEXURE B for QUESTION 4.1
3. **Answer ALL** the questions.
4. **Number** the answers the **same** as the numbers on the **question paper**.
5. **Diagrams** are **NOT** drawn to **scale**.  
**Some questions** will **tell** you to **use the scale**.
6. **Round off** ALL **final answers** to **fit** with the **content** of the question.
7. **Write units** where needed.
8. Start **EACH** question on a **NEW** page.
9. **Show ALL** calculations.
10. Write **neatly**.  
Your **work** should be **easy** to **read**.

## QUESTION 1

- 1.1 A young entrepreneur stocks sheet rolls for securing products on pallets. These rolls are suitable for wrapping goods. They are sold in 200 m and 300 m rolls.

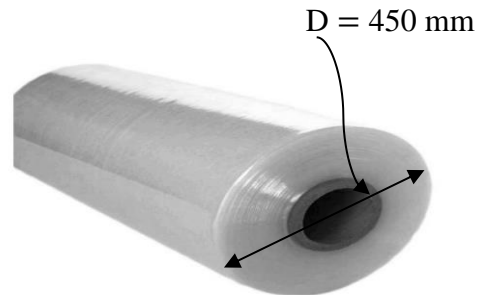
**Option A:**

300 m sheet roll cost R390,00

**Option B:**

200 m sheet roll cost R290,00

Diameter of roll (D) = 450 mm

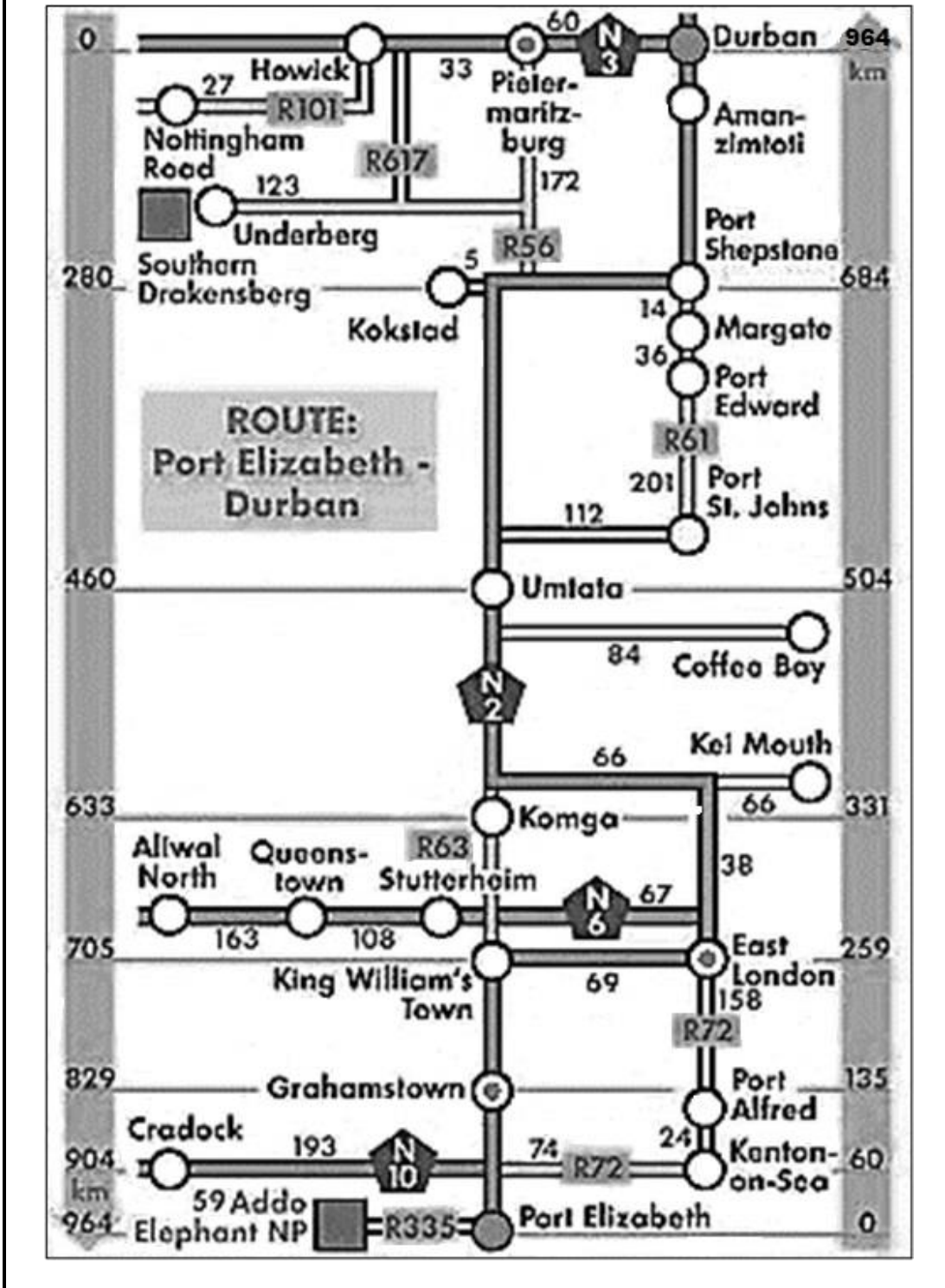
[Source: [www.supplywise.co.za](http://www.supplywise.co.za)]

Use the information. Answer the questions.

- 1.1.1 The circumference is **3,142 times more** than the diameter. Calculate the circumference of the roll in millimetre (mm). (2)
- 1.1.2 Calculate the cost of the pallet sheet roll per meter for Option B. (2)
- 1.1.3 Write the cost for Option B to Option A in simplified ratio format. (2)
- 1.1.4 Determine the radius in centimetre (cm). (3)

1.2

**David** and his family travelled from **Port-Elizabeth** (now Gqeberha) to **Durban** for the school holidays.  
The **map** below shows the **journey** the family undertook.



Use the information. Answer the questions.

- 1.2.1 Name TWO national roads indicated (shown) on the map. (2)
- 1.2.2 Identify the type of map shown. (2)
- 1.2.3 Determine the actual (real) distance between Port-Elizabeth and Durban in metres (m). (3)

- 1.2.4 **David** quickly **visited** his **cousin** in **Margate**.  
Just **after Umtata**<sub>(Mthatha)</sub> he **entered**<sub>(took)</sub> the **R61** to **Margate**.
- (a) **Write** the **name** of **ONE** **town** he **passed** between **Umtata**<sub>(Mthatha)</sub> and **Margate**. (2)
- (b) **Calculate** the **total distance**, in **kilometres (km)** that he **travelled** from **Port St. Johns** to **Margate**. (3)
- 1.2.5 Name **TWO** **provincial roads** on the **map**. (2)
- [23]

## QUESTION 2

- 2.1 A group of four university friends plan to watch the rugby game between the Springboks and All Blacks in Durban. They plan to travel by car and share the cost of the trip.
- On ANNEXURE A is a map of South Africa.

Use ANNEXURE A of the addendum. Answer the questions.

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

2.1.2 What is the general direction from Umtata(Mthatha) to Cape Town? (2)

2.1.3 Durban and Upington are 9,6 cm apart on the map. Mr Antonie claims that the distance between Durban and Upington is 972 km.

Say if Mr Antonie is correct. Use the bar scale method. (4)

- 2.2 Amos and his friends took exactly 17,25 hours to drive 1 635 km from Cape Town to Durban for the rugby game between the Springboks and the All Blacks.

2.2.1 Determine Amos's average speed for the trip in km/h.

Use the formula:  $\text{Speed} = \text{Distance} \div \text{Time}$  (3)

2.2.2 The petrol consumption<sub>(use)</sub> of the car is 1 litre per 12,5 km.

- (a) Amos claimed that if the petrol consumption<sub>(use)</sub> was 0,80 litre per 10 km, the car would use less petrol.

Say if Amos is correct. Show ALL calculations. (5)

- (b) The petrol price is R24,75 per litre. Calculate the cost of petrol to drive from Cape Town to Durban. (2)

[18]

**QUESTION 3**

3.1

Uyathanda Home Industry specialises in **baking** and **selling** cakes of **all** types. The **recipe** of a **cake** is **shown** below. **Study** the **recipe**. **Answer** the **questions**.

INGREDIENTS	SOUR CREAM CHOCOLATE CAKE
<ul style="list-style-type: none"><li>• <math>\frac{3}{4}</math> cups (250 g) flour</li><li>• <math>1\frac{3}{4}</math> cups (360 g) sugar</li><li>• <math>\frac{3}{4}</math> cup (90 g) unsweetened cocoa powder</li><li>• 2 teaspoons baking powder</li><li>• 1 teaspoon kosher salt</li><li>• 2 large eggs</li><li>• 1 cup sour cream</li><li>• <math>\frac{3}{4}</math> cup canola oil</li><li>• 2 teaspoons vanilla extract</li><li>• 1 cup strong piping<sub>(very)</sub> hot coffee</li><li>• 1 mixture (<math>1\frac{1}{2}</math> cups) chocolate or cream cheese frosting</li></ul>	<ul style="list-style-type: none"><li>• Preparation time: 20 minutes</li><li>• Baking time: 55 minutes</li><li>• Total time: 75 minutes</li></ul>

**Other information:**

- Preheat the oven to 320 °F

**NOTE:**

- An **order** was received for **90 people** who will be **attending** an event.
- **Each person** must get **one slice** of cake.
- **12 slices** can be **cut** from **one cake**.
- **One cake weighs 900 g**.
- The **amount of energy** in **100 g** of cake is **400 calories**.

3.1.1 Write down the **mass** of one **cake** in **kilograms**. (2)

3.1.2 Determine the **mass** of one **slice** of cake in **grams**. (2)

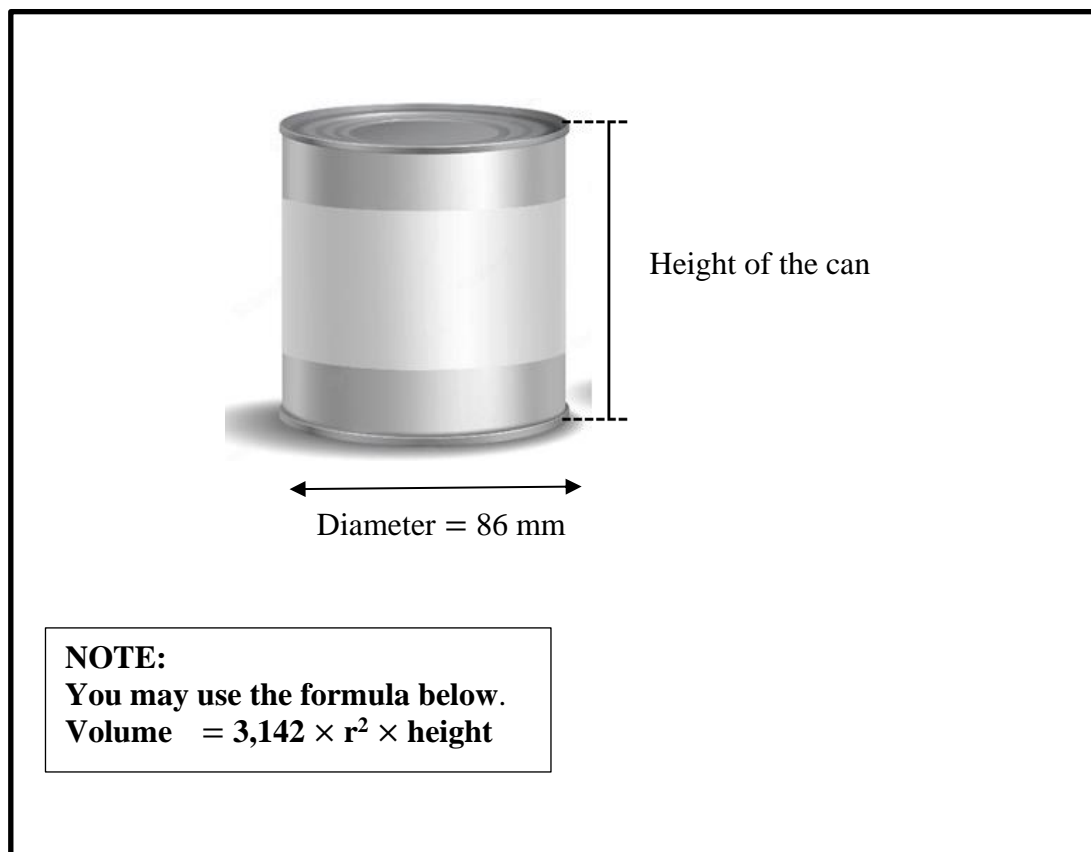
3.1.3 Calculate the **number** of **calories** in one **slice** of cake. (3)

3.1.4 **Convert**<sub>(Change)</sub> **total time** in **minutes** to **hours**. (2)

3.1.5 Determine the **number** of **cakes** that **should** be **baked** for the **number** of **guests** at the event. (4)

- 3.2 3.2.1 How many cups of flour is required<sub>(needed)</sub> if eight (8) cakes must be baked? (2)
- 3.2.2 The cost of 240 g of unsweetened cocoa powder is R62,75. Determine how much money will be needed for unsweetened cocoa powder for eight (8) cakes. (4)
- 3.2.3 Calculate the temperature of 320 °F in degrees Celsius. (3)
- Use the formula:  $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \div 1,8$
- 3.2.4 If a sour cream chocolate cake is placed in the oven at 09h03, at what time will the cake be ready? (2)
- 3.3 Mr Sihle owns a company which focus primarily<sub>(mainly)</sub> on producing cylindrical metal cans for the unsweetened cocoa powder. The volume of the can is 546,10 cm<sup>3</sup>. The height of the can's label is 80% of the height of the can.

Use the diagram. Answer the questions.



- 3.3.1 Determine the height of the can in centimetre (cm). (4)
- 3.3.2 Mr Sihle stated that the height of the can is 1,5 cm more than the height of the label. Say if Mr Sihle is correct. Show ALL calculations. (4)

[32]



**QUESTION 4**

4.1 Mrs Aretha Smith has a **floor plan** for the **new house** she **wants to build**.  
Use ANNEXURE B. It **shows an image** of the **floor plan** of this **house**.

Use ANNEXURE B. **Answer the questions.**

4.1.1 **Explain** the term *'floor plan'*. (2)

4.1.2 How **many windows** are there on the **east wall** of the **house**? (2)

4.1.3 **Use the number scale given.**  
**Determine the actual total length** of all the **outside walls** of the **house** on the **Northern** and **Eastern sides**.  
**Give your final answer in metres.** (7)

4.1.4 The **area** of the **porch** is **19,38 m<sup>2</sup>**, and the **length** is **10,2 m**.  
**Mrs Smith says** that the **width** is **six times less** than the **length**.  
**Say if Mrs Smith is correct. Show ALL calculations.** (4)

**Use the formula: Area = length × breadth**

4.2 Mr Smith **surprises** his **wife** and **gives** her a **rare**(not easy to find) **lucky coin** on her **birthday**.  
The **coin** has a **square cut out** of the **middle** as **shown**.

**NOTE:**  
Length of one side of the square = 0,9 cm  
Diameter of circle = 3,3 cm  
Volume of the coin = 1,47 cm<sup>3</sup>

**FORMULAE:**  
Area of circle =  $\pi \times r^2$ ; where  $\pi = 3,142$   
Area of square = side × side

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$



**Use the information. Answer the questions.**

4.2.1 **Calculate** the **area** of the **coin** in **cm<sup>2</sup>**.  
**Round your answer off to ONE decimal place.** (5)

4.2.2 The **density** of **gold** is **19,30 g / cm<sup>3</sup>**.  
**Calculate** the **mass** of the **coin** in **grams**. (2)  
**Round your answer off to ONE decimal place.**

4.3 **A box contains (holds) 12 gold coins, 2 silver coins and 2 bronze coins.**

4.3.1 **Determine the probability of selecting a gold coin in decimal format.** (3)

4.3.2 **Use your answer in QUESTION 4.3.1.  
Explain the probability of the event in words.** (2)

**[27]**

**TOTAL: 100**

ANNEXURE A

QUESTION 2.1

Below is a map of South Africa.

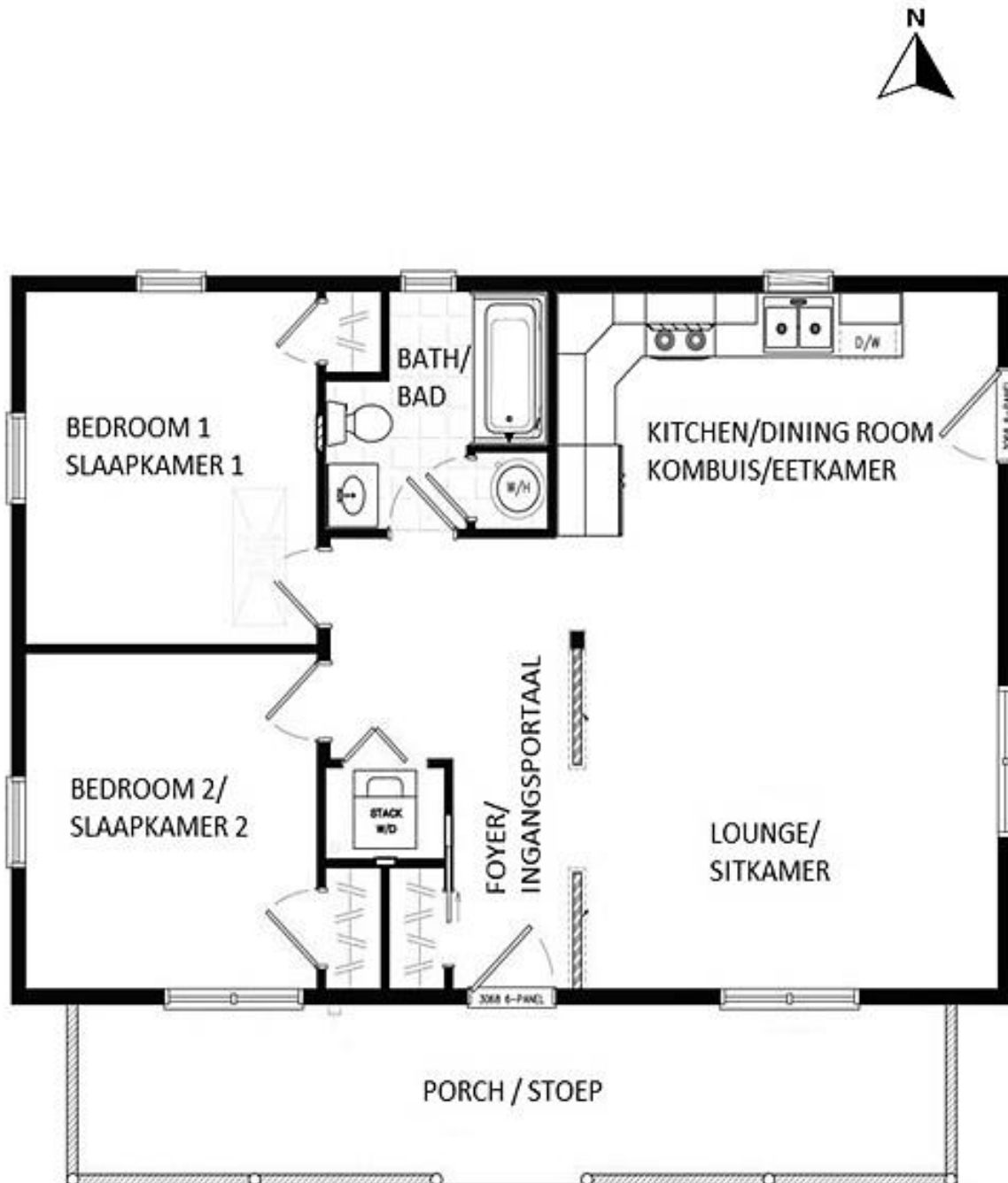


[Source: <http://www.lonelyplanet.com/maps/Africa/south-africa/map-of-south-africa.jpg>]

## ANNEXURE B

## QUESTION 4.1

Floor plan of Mrs Smith's house:



Scale 1 : 100