



LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

MOGALAKWENA DISTRICT

MATHEMATICAL LITERACY GRADE

11

TERM 1 INVESTIGATION

FEBRUARY 2025

Marks = 50

Time = 1 ½ hours

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions
2. Number the answers correctly according to the numbering system used in this question paper.
3. Start EACH question on a NEW page.
4. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
5. Show ALL calculations clearly.
6. Round ALL the final answers off to TWO decimal places, unless stated otherwise OR where the context requires rounding up or down.
7. Indicate units of measurement, where applicable.
8. Maps and diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

QUESTION 1

Tinyiko is selling scones to support her family. She is buying her ingredients from the local shopping mall. It costs her R2,00 to prepare and make one scone and R18 for transport. She sells the scones at R3,00 each.

TABLE 2: COST AND SELLING PRICES OF MAKING SCONES

Number of scones	0	5	15	30	60	90	120	200	250
Cost Price (in Rands)	18	28	48	78	A	198	258	418	518
Selling Price (in Rands)	0	15	45	90	180	B	360	600	750

Use the information above to answer the questions that follow.

- 1.1.1 Determine the values of A and B. (4)
- 1.1.2 Determine the point where the selling price is the same as cost price. (3)
- 1.1.3 Draw the two graphs on the same set of axes provided. (on answer sheet provided) (6)
- 1.1.4 If Tinyiko increases the selling price to R3,50, what will happen to the point in Question 1.1.2 (Show all your calculations). (2)
- 2.1.5 The selling price is given by the formula Selling Price = R3,00 × K, where K is number of scones. Determine the equation for the cost price. (2)

(17)



QUESTION 2

Musa plans to attend a funeral service in Durban. The funeral service starts at 04h00 on Saturday morning. She plans to travel by Shosholoza bus. Table 1 below

shows the bus stops and the schedule/time table for Shosholoza buses from Cape Town to Durban.

NOTE: The cost for a single ticket from Cape Town to Durban is R625.

SHOSHOLOZA BUSES

Table 1: CAPE TOWN- BLOEMFONTEIN - DURBAN

Bus stops	Arrival time	Departure time
Cape Town to.....		08:00
Beaufort West	12:35	12:55
Bloemfontein	17:45	18:05
Welkom	19:35	19:45
Ladysmith	23:30	23:45
Pietermaritzburg	01:32	01:42
Durban	02:36	

Study time table above and answer the question that follows.

- 2.1 Write the departure time in 24hr format. (2)
 - 2.2 In which day of the week should Musa leave Cape Town to be in Durban on time? (2)
 - 2.3 Name two bus stops where the Shosholoza bus stops for exactly 20 minutes. (4)
 - 2.4 Musa left Cape town at 08:00 and arrived in Durban at 02:36 the following day. Determine the time he spend on the road. (2)
 - 2.5 Calculate the cost for the return. (2)
- (12)**

QUESTION 3

3.1

Jake makes concrete pillars for houses and sells them to the community.

The pillars are both in cylindrical and rectangular shape.

Below are the two types of pillars and their dimensions.

Cylindrical concrete pillar



Rectangular concrete pillar



210cm

Cylindrical dimensions

Height = 210 cm

Radius = 22 cm

$1 \text{ m}^3 = 1\,000\,000 \text{ cm}^3$

$1 \text{ litre} = 1\,000 \text{ cm}^3$

Rectangular dimensions

Height = 210 cm

Length = 40 cm

Breadth = 40 cm

Study the information and the pictures of the respective concrete pillars above and answer the questions that follow:

3.1.1 Determine the diameter of the cylindrical concrete pillar. (2)

3.1.2 Calculate the area of the top circle of the cylindrical concrete pillar. You may use the formula:

Area of circle = $\pi (radius)^2$, where $\pi = 3.142$ (2)

3.1.3 Determine the perimeter of the base (bottom) of the rectangular concrete pillar.

You may use the formula:

Perimeter of square = $2(\text{length} + \text{breadth})$ or $P = 4 \times s$ (2)

3.1.4 Calculate the surface area of the concrete pillar. You may use the formula:

Surface area of a cylinder $= (2 \pi \times r \text{ a d i u s } \times h \text{ e i g h t }) + 2(\pi \times (r)^2)$

Where $\pi = 3,142$. (4)

3.1.5 Jake argues that the volume of the rectangular pillar is exactly 15 000 cm^3 more than the volume of the cylindrical pillar. Verify, showing all calculations, whether the argument is correct. Give reason for your answer.

You may use the following formula:

Volume of rectangular pillar = length $\times$ breadth $\times$ height.

Volume of the cylindrical pillar = $\pi (r \text{ a d i u s })^2 \times \text{height}$, where $\pi = 3,142$ (8)

3.1.6 Calculate the mass (weight) of the cylindrical pillar in grams.

Give your answer to the nearest gram.

You may use the following formula:

Mass/weight of the pillar (in g) = density of the pillar $\times$ volume of the pillar

Where density of the pillar = 2.162 g/cm^3 . (3)

(21)

TOTAL = 50



ANSWER SHEET 1

Question 1.1.3

NAME:

