



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY P2

MID YEAR EXAMINATION 2026

MARKS:75

TIME: 2HOURS

This question paper consists of 07 pages and an Answer Book

INSTRUCTIONS AND INFORMATION:

1. This question paper consists of **FOUR** questions. Answer ALL the questions.
2. Answer ALL the questions in the SPECIAL ANSWER BOOK provided.
3. Answer only will NOT necessarily be awarded full marks.
4. Use annexure to answer the following questions:
 - 4.1 ANNEXURE A for Question 2
5. Number the questions correctly according to the numbering system used in this question paper.
6. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
7. Show ALL the calculations clearly.
8. Round ALL the final answers appropriately according to the context unless stated otherwise.
9. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.
11. Indicate the units of measurement, where applicable.



QUESTION 1

1.1 In TABLE 1 below is a list of explanations and definitions of concepts used in Mathematical Literacy.

TABLE 1 : EXPLANATIONS AND DEFINITIONS OF CONCEPTS

A	A symbolic representation of selected characteristics of a place drawn on a flat surface.
B	Show the design and dimension of the outside of a building from a side view using a specific scale.
C	An instrument that is used to measure the weight of an object.
D	Unit used to measure temperature in most countries.
E	The distance from the Centre of the circle to any point on the circumference of the circle
F	The amount of 3-D space occupied by an object. It is measured in cubic unit.
G	The area of all the faces/surfaces of an object added together.
H	The amount of space available to hold something. Usually measured in litres.

Use the information above to write down the letter of the explanation or definition (A- H) of EACH of the following concepts.

1.1.1 Radius (2)

1.1.2 Map (2)

1.1.3 Degrees Celsius (2)

1.1.4 Surface Area (2)

1.1.5 Capacity (2)

1.1.6 Scale (2)

1.2 Convert 5 °C to °F .

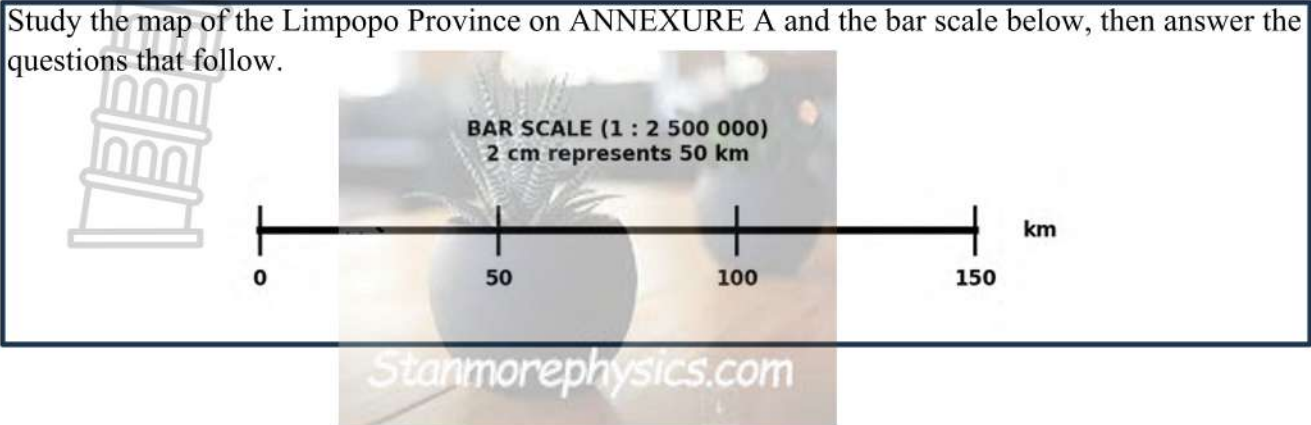


Use the formula: $^{\circ}\text{F} = (^{\circ}\text{C} \times \frac{9}{5}) + 32$ (3)

[15]

QUESTION 2

Study the map of the Limpopo Province on ANNEXURE A and the bar scale below, then answer the questions that follow.



2.1

2.1.1 Name the district in which Tzaneen is located. (2)

2.1.2 Determine the probability that a learner selects N12 on the given map. (2)

2.2

Mr. Mokoena plans a road trip from Polokwane to Thohoyandou using the N1.

2.2.1 The straight-line distance on the map between Polokwane and Thohoyandou measure 5cm. Use the bar scale (2cm = 50km) to calculate the actual straight-line distance, in km. (4)

2.2.2 The actual road distance via the N1 is 195 km. He drives at an average speed of 100 km/h. Calculate the time, in hours and minutes, that the trip will take.

Use the following formula: $\text{Time} = \text{Distance} \div \text{Speed}$ (4)

2.2.3 His vehicle uses fuel at 8ℓ per 100 km. Calculate the total fuel needed for the return trip. (3)

2.2.4 Petrol costs R26,52 per litre. Calculate the total cost of fuel for the return trip. (3)

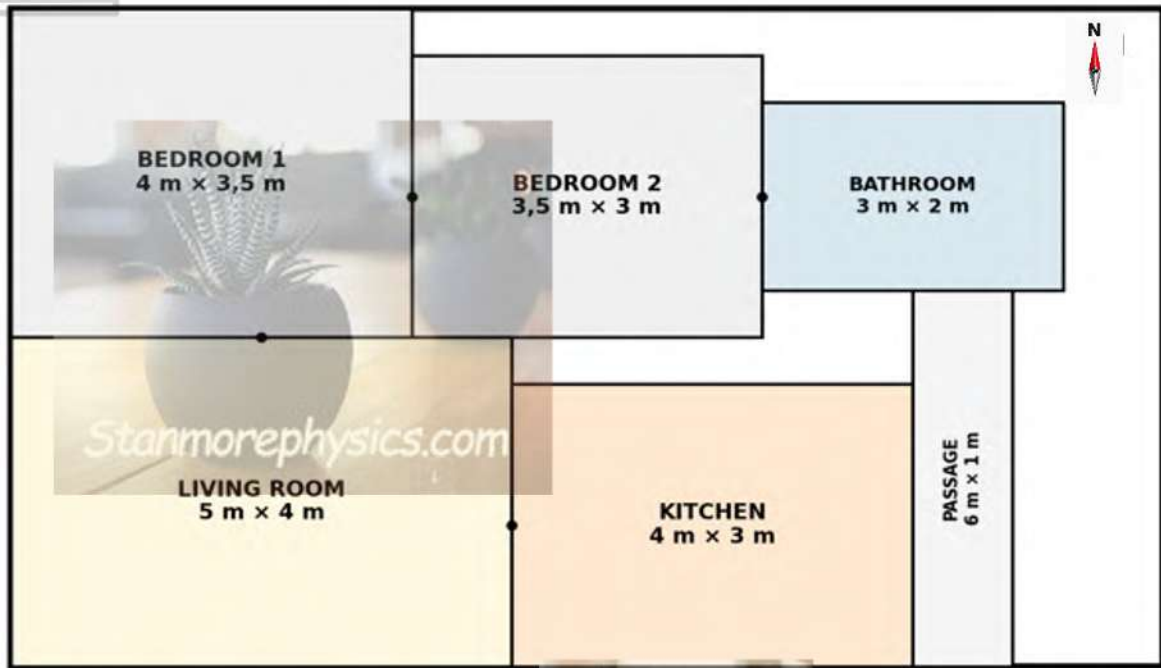
2.2.5 Give a possible reason why Polokwane was chosen as the provincial capital, based on its position on the map. (2)

[20]

QUESTION 3

The Mthembu family is building a new house in Seshego, Limpopo. The simplified floor plan (top view) of the proposed house is shown in DIAGRAM 1. The plan is drawn using a scale of 1:100

DIAGRAM 1: FLOOR PLAN – MTHEMBU FAMILY HOUSE (TOP VIEW)



Scale : 1:100 (2 m)

Use the floor plan and information above to answer the questions that follow:

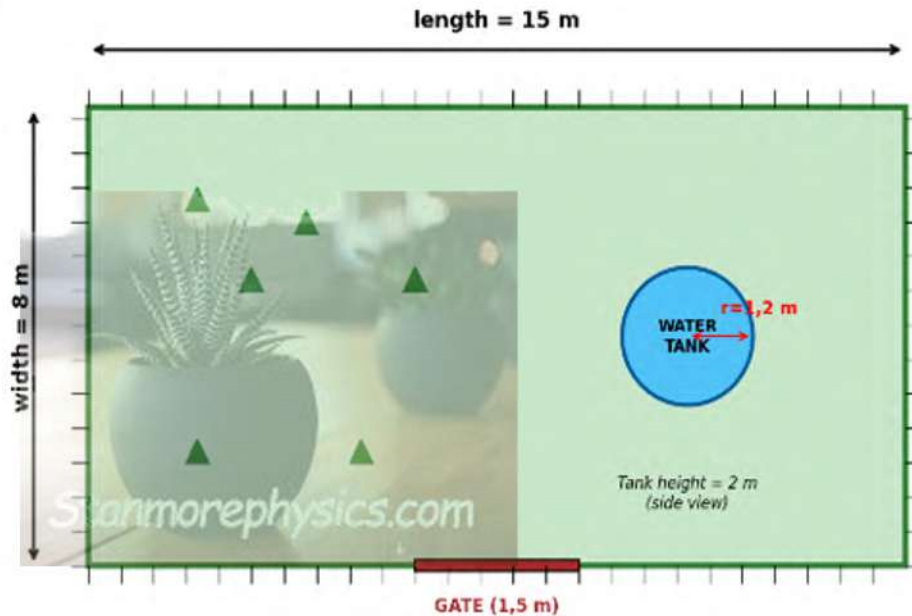
- 3.1 On the actual plan drawing, the length of Bedroom 1 measures 4 m. Use the scale to calculate the actual length of Bedroom 1, in centimetres. (3)
- 3.2 The family wants to tile the kitchen floor with 500 mm × 500 mm tiles. Calculate the number of tiles needed. (6)
- 3.3 Determine the probability of selecting a bedroom amongst the rooms. (2)

[11]

QUESTION 4

A community in Giyani is building a rectangular vegetable garden surrounded by a fencing wire. The layout is shown in DIAGRAM 2. The garden measures 15m by 8m. A circular water tank with a radius of 1,2m and a height of 2m is installed inside the garden.

DIAGRAM 2: VEGETABLE GARDEN WITH WATER TANK (Top View)



NOTE: Fencing wire is used to construct fences, especially on farms and rural properties. Its ideal for enclosing livestock or making boundaries.

Source: Google map

Use the floor plan and information above to answer the questions that follow:

4.1 Calculate the perimeter of the garden.

Use the Formula: **Perimeter = 2(l + w)**

(2)

4.2 Fencing wire costs R85,50 per metre. The community wants ONE gate of 1,5m (no fence at the gate). Calculate the total cost of the fencing wire required.

(4)

4.3 Calculate the area of the garden in m², excluding the water tank. (Use $\pi = 3,142$)

(6)

4.4 Calculate the volume of the cylindrical water tank in litres.
(Use $\pi = 3,142$, $1 \text{ m}^3 = 1\,000 \text{ l}$)

(4)

4.5 The community pays R12,40 per kilolitre for municipal water. Calculate the cost of filling the tank ONCE. (1 kℓ = 1 000 ℓ)

(3)

4.6 The garden uses 25ℓ of water per m² per week. Determine the number of full weeks that one full tank can supply the garden. Show ALL calculation.

(5)

4.7 Calculate the outside surface area of the tank in m².

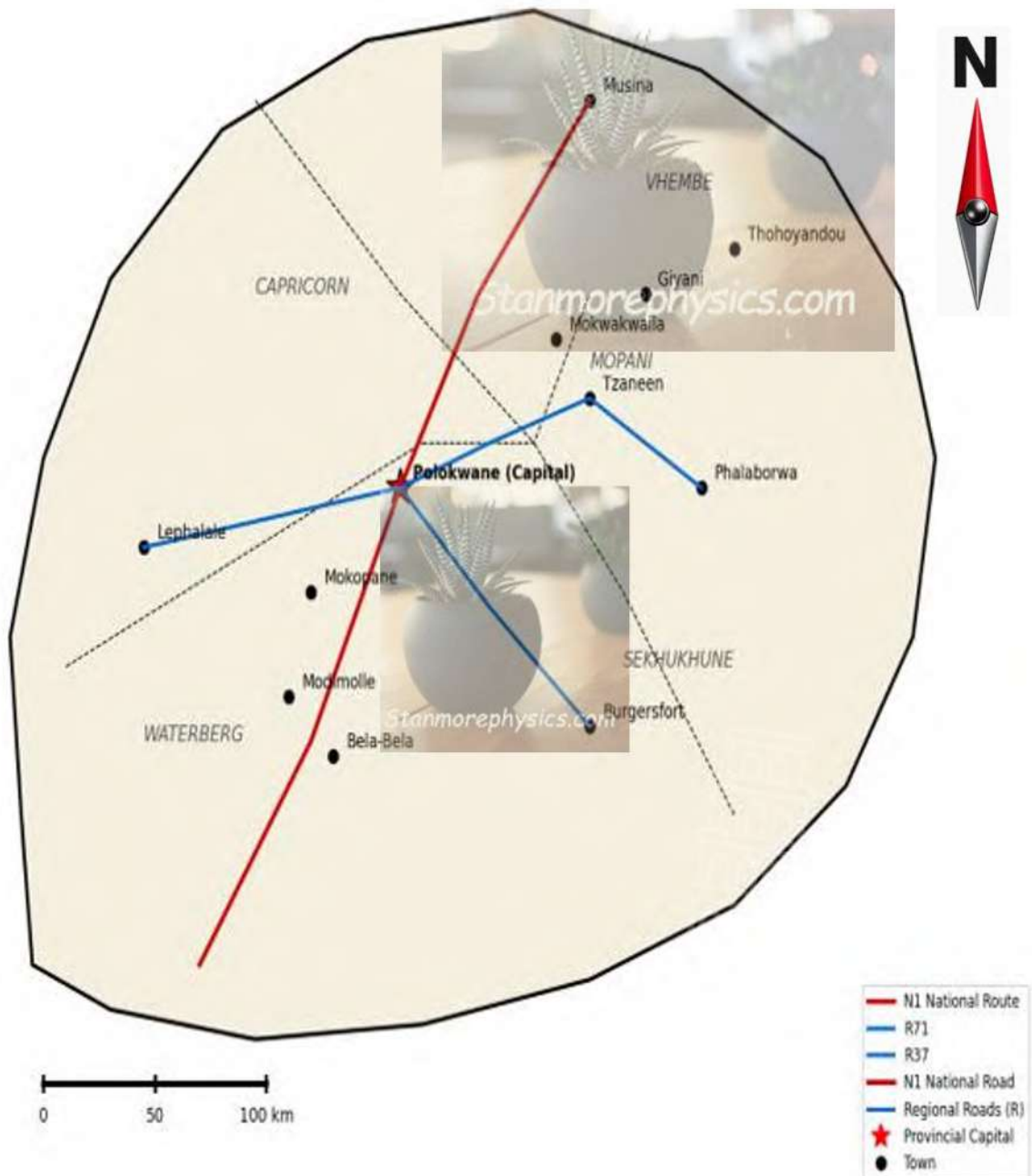
You may use the formula: **Surface area = $2\pi r^2 + 2\pi rh$**

(5)
[29]

ANNEXURE A

QUESTION 1: MAP OF LIMPOPO

Showing Major Towns, Roads & Districts





LIMPOPO

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GRADE 11

MATHEMATICAL LITERACY P2

MID-YEAR EXAMINATION 2026

ANSWER BOOK

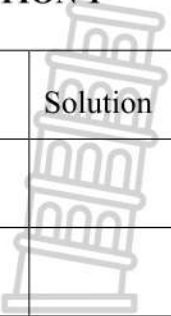
QUESTION NO.	MAX MARKS	MARKS OBTAINED	MODERATED MARK
1	15		
2	20		
3	11		
4	29		
TOTAL	75		

Learner's name	
Class	
Date	
School name	



This answer book guidelines consists of 08 pages.



QUESTION 1

No	Solution	Marks
1.1		
1.1.1		(2)
1.1.2		(2)
1.1.3		(2)
1.1.4		(2)
1.1.5		(2)
1.1.6		(2)
1.2		(3)
		[15]



QUESTION 2

No	Solution	Marks
2.1		
2.1.1		(2)
2.1.2		(2)
2.2		
2.2.1		(4)
2.2.2		(4)

2.2.3		(3)
2.2.4		(3)
2.2.5	 Stanmorephysics.com	(2)
		[20]

QUESTION 3

No	Solution	Marks
3.1		(3)
3.2		(6)
		
3.3		(2)
		[11]

QUESTION 4

No	Solution	Marks
4.1		(2)
4.2		(4)
4.3		(6)

4.4		(4)
4.5		(4)
4.6		(4)

4.7		 Stanmorephysics.com	(5)	
			[29]	



GRAND TOTAL: 75 MARKS



LIMPOPO

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EDUCATION

FINAL EXAMINATION

GRADE 11

MATHEMATICAL LITERACY P2

MEMORANDUM

MID YEAR EXAMINATION 2026

SYMBOL/SIMBOOL	EXPLANATION/VERDUIDELIKING
M	Method/METODE
MA	Method with Accuracy/metode met akkuraatheid
CA	Consistent accuracy/konstanteakkuraatheid
RCA	Rounding consistent Accuracy/afrondkonstanteakkuraatheid
A	Accuracy/akkuraatheid
O	Opinion/Explanation/verduideliking
C	Conversion/omskakeling
S	Simplification/vereenvoudiging
RT/RG/RD/RM	Reading from table/Reading from graph/Reading from diagram/Reading from map/lees van grafiekdiagram,kaart
F	Choosing the correct formula/korrekteformule
SF	Correct substitution in a formula/korrekte substitusie in formule
J	Justification/regverdiging
P	Penalty e.g. for no units, incorrect rounding off etc./pennaliseervireenhede, afrondens.
Re	Reason/rede
Ro	Rounding /afrond
NPU/NPR	No Penalty for units/ No Penalty for rounding.
AO	Answer only ,full marks/antwoordalleenvolpunte.

QUESTION 1 15 MARKS			
Ques	Solution	Explanation	T/L
1.1			
1.1.1	E✓✓	2A correct option	M L1 (2)
1.1.2	A✓✓	2A correct option	MP L1 (2)
1.1.3	D✓✓	2A correct option	M L1 (2)
1.1.4	G✓✓	2A correct option	M L1 (2)
1.1.5	H✓✓	2A correct option	M L1 (2)
1.1.6	C✓✓	2A correct option	M L1 (2)
1.2	$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$ $= (5 \times 1,8) + 32$ ✓ $= 9 + 32$ ✓ $= 41$ °F✓	1SF – Substitution 1MA – multiplication 1A – answer	M L1 (3)
			[15]



QUESTION 2 [20 MARKS]			
QUES	SOLUTION	EXPLANATION	T/L
2.1			
2.1.1	Mopane ✓✓	2 A correct answer	MP L1 (2)
2.1.2	0 or 0% ✓✓	2 A correct answer	P L1 (2)
2.2			
2.2.1	Scale 2 cm : 50 km ✓ Measured = 5 cm Distance = $(5 \div 2) \times 50$ ✓ $= 2,5 \times 50$ ✓ $= 125$ km ✓ OR Scale 1cm : 50km then 1cm : 25km ✓ Distance = $(5 \times 1) \times 25$ ✓ $= 5 \times 25$ ✓ $= 125$ km ✓	1 MA – set up ratio 1 SF – substitution 1 M – multiplication by 50 1 CA – answer with unit 1 MA ration 1 SF substitution 1 M multiply by 25 1 CA answer with unit	MP L2 (4)
2.2.2	Time = $195 \div 100$ ✓ $= 1,95$ h ✓ $= 1$ hours + $(0,95 \times 60)$ min ✓ $= 1$ h 57 min ✓	1 SF substitution 1 CA simplification 1 C conversion 1 Answer	MP L2 (4)
2.2.3	Return distance = $195 \text{ km} \times 2$ $= 390 \text{ km}$ ✓ Fuel = $(390 \text{ km} \div 100 \text{ km}) \times 8 \text{ l}$ ✓ $= 31,2 \text{ l}$ ✓	1 MA return distance 1 MA fuel per litre 1 answer	MP L2 (3)
2.2.4	Cost = $31,2 \times R26,52$ ✓✓ $= R827,24$ ✓	CA from 2.2.3 1 RT 1 M multiply values 1 CA answer	F L2 (3)
2.2.5	Polokwane is centrally located ✓✓ Accessible to all districts ✓✓ On the N1 ✓✓	2 A correct opinion	MP L4 (2)
			[20]

QUESTION 3 [11 MARKS]			
QUES	SOLUTION	EXPLANATION	T/L
3.1	$\text{Actual} = 4 \text{ m} \div 100 \checkmark$ $= 0,04 \text{ cm} \times 100 \checkmark$ $= 4 \text{ cm} \checkmark$	1 C conversion 1 MA scale 1 CA answer	MP L2 (3)
3.3	$\text{Kitchen area} = 4 \times 3 \checkmark$ $= 12 \text{ m}^2 \checkmark$ Tile: $500 \text{ mm} \div 1000$ $= 0,5 \text{ m} \checkmark$ Tile area = $0,5 \text{ m} \times 0,5 \text{ m}$ $= 0,25 \text{ m}^2 \checkmark$ Tiles = $12 \text{ m}^2 \div 0,25 \text{ m}^2 \checkmark$ $= 48 \text{ tiles} \checkmark$	1 RT correct values 1 SF substitution 1 C conversion 1 MA calculation 1 MA number of tile 1 CA answer	MP L3 (6)
3.4	$P_{\text{(bedroom)}} = \frac{2}{5} \checkmark \checkmark$	1 A numerator 1 A denominator	P L1 (2)
			[11]

QUESTION 4 [29 MARKS]			
QUES	SOLUTION	EXPLANATION	T/L
4.1	$P = 2(15 + 8) \checkmark$ $= 2 \times 23$ $= 46 \text{ m} \checkmark$	1 SF substitution 1 CA answer	M L2 (2)
4.2	Wire = $46 - 1,5 \checkmark$ $= 44,5 \text{ m} \checkmark$ Cost = $44,5 \times \text{R}85,50 \checkmark$ $= \text{R}3\ 804,75 \checkmark$	CA from 4.1 1 MCA subtract gate 1 A value 1 M multiply by cost 1 CA answer	F L2 (4)
4.3	Full A(garden) = $15 \times 8 \checkmark$ $= 120 \text{ m}^2 \checkmark$ A(tank) = πr^2 $= 3,142 \times 1,44 \text{ m}^2 \checkmark$ $= 4,52 \text{ m}^2 \checkmark$ $\therefore \text{Area of Garden} = 120 \text{ m}^2 - 4,52 \text{ m}^2 \checkmark$ $= 115,48 \text{ m}^2 \checkmark$	1 SF substitution 1 A value 1 SF substitution 1 A value 1 M subtracting the area 1 CA answer	M L3 (6)
4.4	$V = \pi r^2 h = 3,142 \times (1,2)^2 \times 2 \checkmark$ $= 3,142 \times 1,44 \times 2$ $= 9,049 \text{ m}^3 \checkmark$ $= 9,049 \times 1\ 000 \checkmark$ $\approx 9\ 048,96 \text{ l} \checkmark$	1 SF substitution 1 S simplification 1 C conversion 1 CA answer	M L3 (4)

4.5	$9\,048,96\ \ell \times 1000$ $= 9,049\ \text{k}\ell\ \checkmark$ Cost = $9,049 \times R12,40\ \checkmark$ $= R112,21\ \checkmark$	CA from 4.4 1 C conversion 1 M multiply by cost 1 CA answer	M L3 (3)
4.6	Weekly use = $25 \times 120\ \checkmark$ $= 3\,000\ \ell/\text{week}\ \checkmark$ Weeks = $9\,048,96 \div 3\,000\ \checkmark$ $\approx 3,016\ \checkmark$ $= 3\ \text{full weeks}\ \checkmark$	CA from 4.3 and 4.4 1 M multiply by litres 1 A value 1 MA dividing by 3000 1 M number 1 CA answer	M L4 (5)
4.7	$SA = 2\pi r^2 + 2\pi rh$ $= 2(3,142)(1,44)\ \checkmark + 2(3,142)(1,2)(2)\ \checkmark$ $= 9,04896\ \checkmark + 15,0816\ \checkmark$ $= 24,13056\ \text{m}^2\ \checkmark$	1 C conversion 1 SF substitution 1 S simplification 1 M adding 1 CA answer	M L3 (5)
			[29]
TOTAL = 75 MARKS			

