LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
EDUCATION

SEKHUKHUNE EAST DISTRICT – DISTRICT ON THE RISE

GRADE 11

MATHEMATICAL LITERACY

MID-TERM TEST

15 MAY 2023

TOTAL MARKS: 50

DURATION: 1 HOUR

INSTRUCTIONS AND INFORMATION

Read the following instructions carefully before answering the questions.

1. This question paper consists of 3 questions.
2. Answer ALL the questions.
3. Number the answers correctly according to the numbering system used in this question paper.
4. Clearly show ALL calculations, diagrams, graphs, et cetera that you have used in determining your answers.
5. Answers only will not necessarily be awarded full marks.
6. You may use an approved scientific calculator (non-programmable and non-graphical), unless stated otherwise.
7. If necessary, round off answers to TWO decimal places, unless stated otherwise.
8. Diagrams are NOT necessarily drawn to scale.
9. Write neatly and legibly.

QUESTION 1

1.1 The table below shows the relationship between hours and the rate of charged per hour or part thereof. Tariffs include value added tax (VAT). Refer to the table and answer the questions that follow.

HOURS	RATE CHARGED PER HOUR OR PART THEREOF:
0–2	R5,00
2–3	R7,00
3–4	R10,00
4–5	R12,00
5–6	R15,00
6–8	R20,00
More than 8 hours	R40,00

NOTE: Lost ticket penalty is R50,00 plus additional charges. (2)

1.1.1 What is the rate charged if Mr Sokutu parked his car for 8 hours 15 minutes? (2)

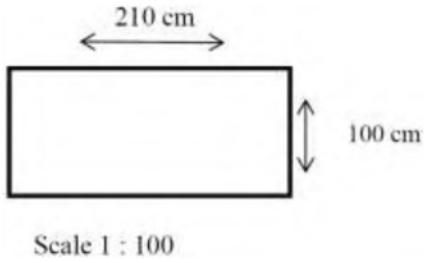
1.1.2 Write 8 hours and 15 minutes in hours. (2)

1.2 Mr Titi lost his ticket. When looking at the security cameras, they could see that he arrived at the mall at 11:30 am and that it was now 14:20 pm. (3)

1.2.1 Determine how much time lapsed. (2)

1.2.2 Calculate how much Mr Titi was charged. (2)

1.3 Refer to the rectangular diagram below and answer the questions that follow.



1.3.1 Define the term *perimeter*. (2)

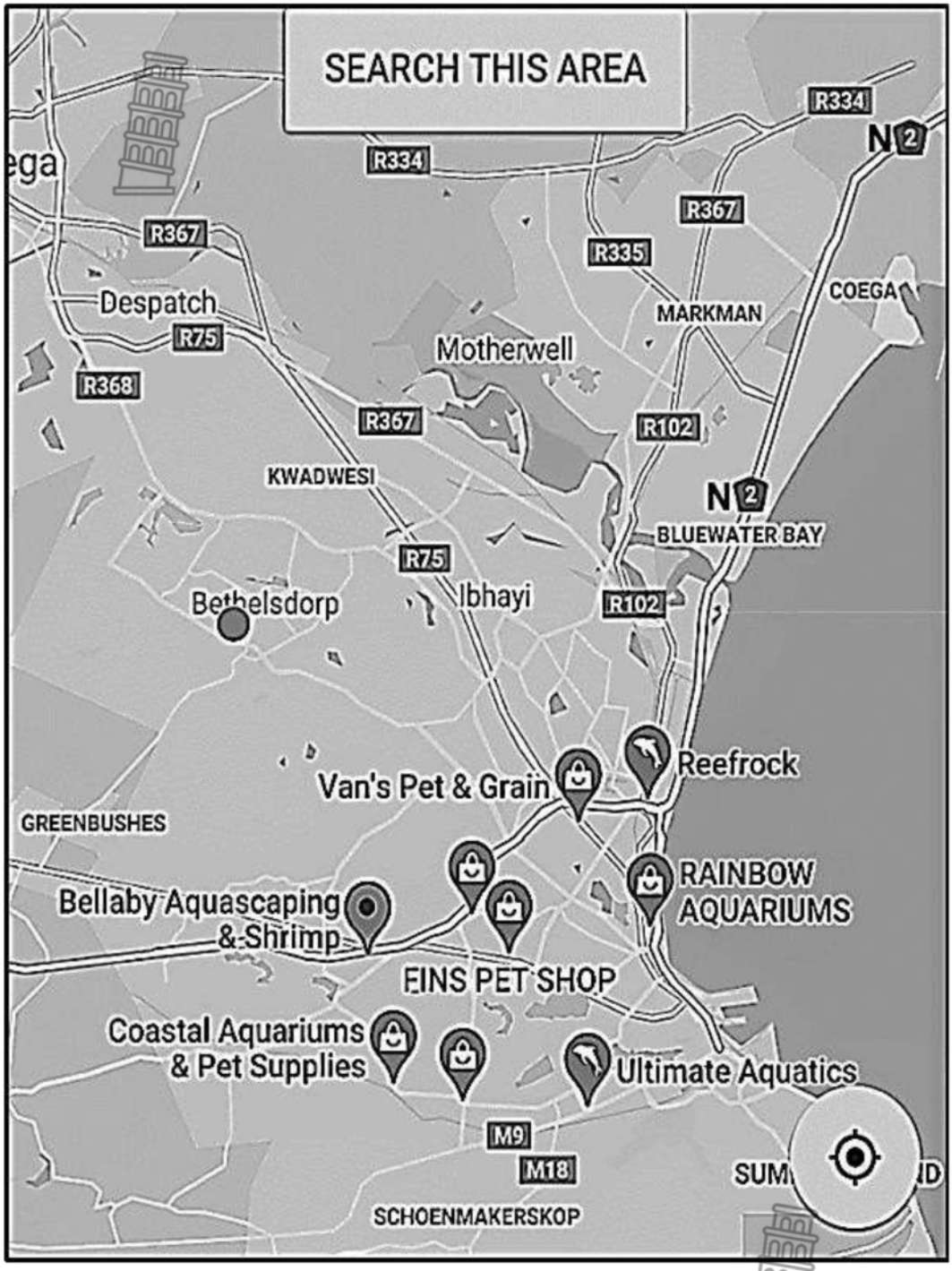
1.3.2 Determine the perimeter of the rectangular diagram in centimetres. (2)

1.3.3 Give the name of the scale found on the diagram. (2)

1.3.4 Explain what scale 1 : 100 means. (2)

QUESTION 3

Refer to the map below and answer the questions that follow.



3.1 Name the metropolitan roads found on the map. (2)

3.2 List the major national road that links Bluewater Bay to Coega. (2)

3.3 Identify the provincial road between Ibhayi and Despatch. (2)

3.4 How many provincial roads are indicated on the map? (2)

3.5 Mr Thulani stated that the measured distance on the map from Motherwell to Bluewater Bay is 5 cm, and the actual distance is 13 km. He further said that the scale of the map is $1 : 260\,000$.

Verify, with the necessary calculations, if his statements are valid. (6)

3.6 Determine the time (in minutes and seconds) taken by the Thulani family to travel from Motherwell to Bluewater Bay, if they travelled by car at an average speed of 80 km/h for a total distance of 13 km.

Use the formula:

$$\textbf{Time} = \frac{\textbf{Distance}}{\textbf{Average Speed}}$$ (4)

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MARKING GUIDELINE

15 MAY 2023

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QUESTION 1		
1.1.1	R40,00 ✓✓	(2)
1.1.2	Hours: 8 ✓ Convert 15 min = 15 ÷ 60 = 0,25 ÷ 8 = 8,25 hrs. ✓	(2)
1.2.1	Departure 14h20 Arrive − 11h30 ✓ Lapse time = 2h50 min✓	(2)
1.2.2	Cost = R50,00 + (R7,00 x R3,00) ✓ = R50,00 + R21,00 =R71,00 ✓	(2)
1.3.1	It is the total length of the sides in a shape. ✓✓ **OR** It is the distance around the outside of the shape. ✓✓ Accept any other relevant reason.	(2)
1.3.2	Perimeter rectangular diagram = 210 + 210 + 100 + 100 ✓= 620 cm✓	(2)
1.3.3	Numerical scale or Ratio scale ✓✓	(2)
1.3.4	Every 1 unit on the map represents 100 units in reality. ✓✓	(2)
1.4.1	R44 ✓✓	(2)
1.4.2	Provincial roads serve as feeders to the national roads. ✓✓ OR Provincial roads also serve as trunk roads in areas where there is no national roads. ✓✓ Accept any relevant explanation.	(2)
		[20]

QUESTION 2		
2.1.1	Bar scale ✓✓	(2)
2.1.2	Width of bar (measured) = 2,1 cm ✓ Length of animal = 15,1 cm ✓ 2,1 cm = 1,9 m ✓ $\frac{15.1}{2.1} \times 1.9$ m = 13,6619 m ✓ = 13,7 m ✓	(5)

2.1.3	1 ton = 1 000 kilogram 20 ton = 20 × 1 000 ✓ = 20 000 kilogram ✓	(2)
2.2	48 000 − 30 000 = 18 000 ✓ Percentage illegal fishing $= \frac{18000}{30000} \times 100$ ✓ $= 60\%$ ✓	(3)
		[12]

QUESTION 3		
3.1	M9 ✓ M18 ✓	(2)
3.2	N2 ✓✓	(2)
3.3	R75 ✓✓	(2)
3.4	6 provincial roads ✓✓ **OR** R75; R102; R334; R335; R367; R368 ✓✓	(2)
3.5	Measured distance : 5 cm ✓ 5 cm : 13 km ✓ 5 cm : 1300 000 cm ✓ $\frac{5cm}{5cm} : \frac{1300000cm}{5cm}$ ✓ 1 : 260 000 Yes, his statement is valid. ✓✓	(6)
3.6	Time $= \frac{13km}{80km/h}$ ✓ = 0,1625 hrs × 60 = 9,75 min ✓ = 0,75 × 60 = 45 seconds ✓ Total time = 9 min 45 seconds ✓	(4)
		[18]

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