education

Department of Education
FREE STATE PROVINCE

ASSIGNMENT 1

GRADE 11

MATHEMATICAL LITERACY

MAY 2025

MARKS: 50

TIME: 1 HOUR

This question paper consists of 07 pages including 01 ANNEXURES.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of THREE questions. Answer ALL the questions.
2. Number the questions correctly according to the numbering system used in this question paper.
3. An approved calculator (non-programmable and non-graphical) may be used unless stated otherwise.
4. Show ALL calculations clearly.
5. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
6. Indicate units of measurement, where applicable.
7. Start EACH question on a NEW page.
8. Write neatly and legibly.

QUESTION 1

1.1 Joyce wanted to buy a scooter for her child's birthday. She searched the internet and found the advertisement below.

BIG JIM JUMBO	BABY SCOOTER BLACK
	
Selling Price: R299, 00 (excluding VAT)	Selling Price: R799,00(VAT included)

(Adapted from www.takealot.com)

VAT is charged at 15%

Study the two options above and answer the following questions.

1.1.1 What does the acronym VAT stand for? (2)

1.1.2 Determine the VAT amount that Joyce will pay if she buys the Big Jim Jumbo scooter. (2)

1.1.3 Write down the selling price of Baby scooter black in words. (2)

1.2 Joyce works at Thokoana-Makaota Secondary school as voluntarily food handler. She earns a gross salary of R6 000 per month. Joyce and her employer contribute 1% each towards UIF every month.

1.2.1 Provide two benefit of contributing towards UIF for employees. (4)

1.2.2 Calculate the monthly UIF contribution paid by Joyce. (2)

[12]

QUESTION 2

2.1 Joyce is a resident in the Maluti-a-phofung municipality and below is a tariff table (on a sliding scale) that the municipality uses to charge for water usage.

TABLE 1: MALUTI-A-PHOFUNG LOCAL MUNICIPALITY DOMESTIC WATER TARIFFS FOR 2023/2024

House hold(All tariff are 15% VAT inclusive)		
Block	**Tariff summary(in kl)**	**Charge per kl**
Block 1	0 – 6kl	free
Block 2	7 – 12kl	R11,79
Block 3	13 – 25kl	R12,17
Block 4	26 – 40kl	R12,55
Block 5	41 kl and above	R13,94

(Adapted from MAP tariffs 2023/2024)

Note: Fixed charge if > 6kl = R50,75 (once-off)

Use TABLE 1 above to answer the questions that follow:

2.1.1 Determine the maximum kilolitres charged in Block 2 (2)

2.1.2 Give a possible reason why the first 6kl would be free. (2)

2.1.3 Calculate the amount(to two decimal places) for a customer who used 7,5kl of water in Block 3. (Do the calculation only for Block 3). (3)

2.1.4 Joyce used 34kl of water in January 2024. She claims that she will pay R392,65 including VAT. Verify with calculations if her claim is correct. (7)

2.2 Joyce's mother, Ms Moloi, who lives in Japan decided to send Joyce money to help her pay for water bill.

TABLE 2: EXCHANGE RATES TABLE ON 16 JULY 2024

Currency	Unit per ZAR	ZAR per unit
USD($)	0,055126	18,140202
Euros (€)	0,050678	19,732455
British Pound (£)	0,042580	23,485191
Japanese Yen (¥)	8,751673	0,114264

(Source: www.x-rates.com)

Use TABLE 2 above to answer the questions that follow:

2.2.1 Explain what the term exchange rate mean. (2)

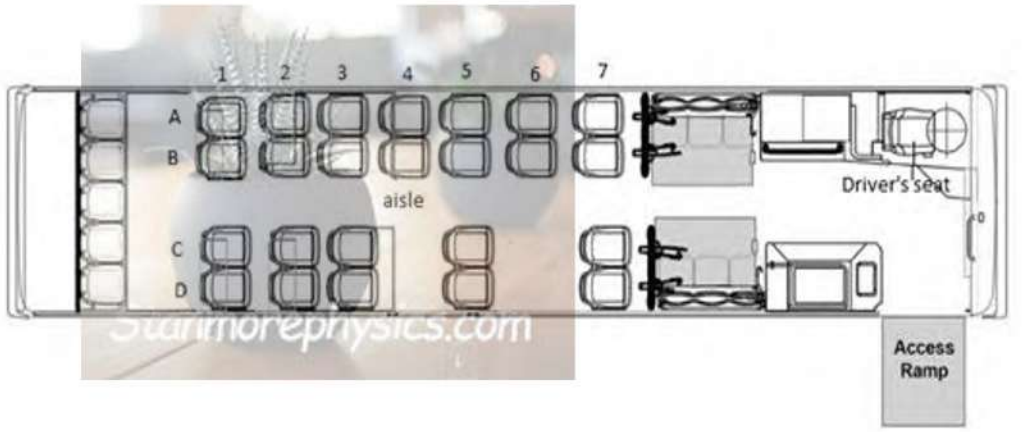
2.2.2 Identify the currency that is weaker than the rand. (2)

2.2.3 Ms Moloi sent Joyce 1550 Yen (¥). Determine (rounded to the nearest rand), the amount Joyce received from her mother (3)

[21]

QUESTION 3

3.1 Study the seating plan of a bus below and answer the questions that follow.



(Adapted from www.researchgate.net/figure)

3.1.1 Determine the number of seats inside the bus, excluding the driver's seat. (2)

3.1.2 Mr Dladla is seated in A5. He wants to move from his seat to talk to his colleague who is seating in D2.
Give detailed directions of how he will get to his colleague. (3)

3.2 Mr Dladla stays in Bloemfontein, he wants to visit his family in Pretoria. Study the MAP in ANNEXURE A to answer the questions that follow.

3.2.1 Identify the grid reference of Port Elizabeth (2)

3.2.2 Give the general direction of Pretoria from Bloemfontein. (2)

3.2.3 Use the given scale to calculate the actual distance(in kilometres) between Bloemfontein and Pretoria (direct distance – as the crow flies). (4)

3.2.4 Mr Dladla travelled from his place to Pretoria at average speed of 110km/h

Determine how long (in hours and minutes) it will take him to get to his family. Use the distance you calculated in 3.2.3.

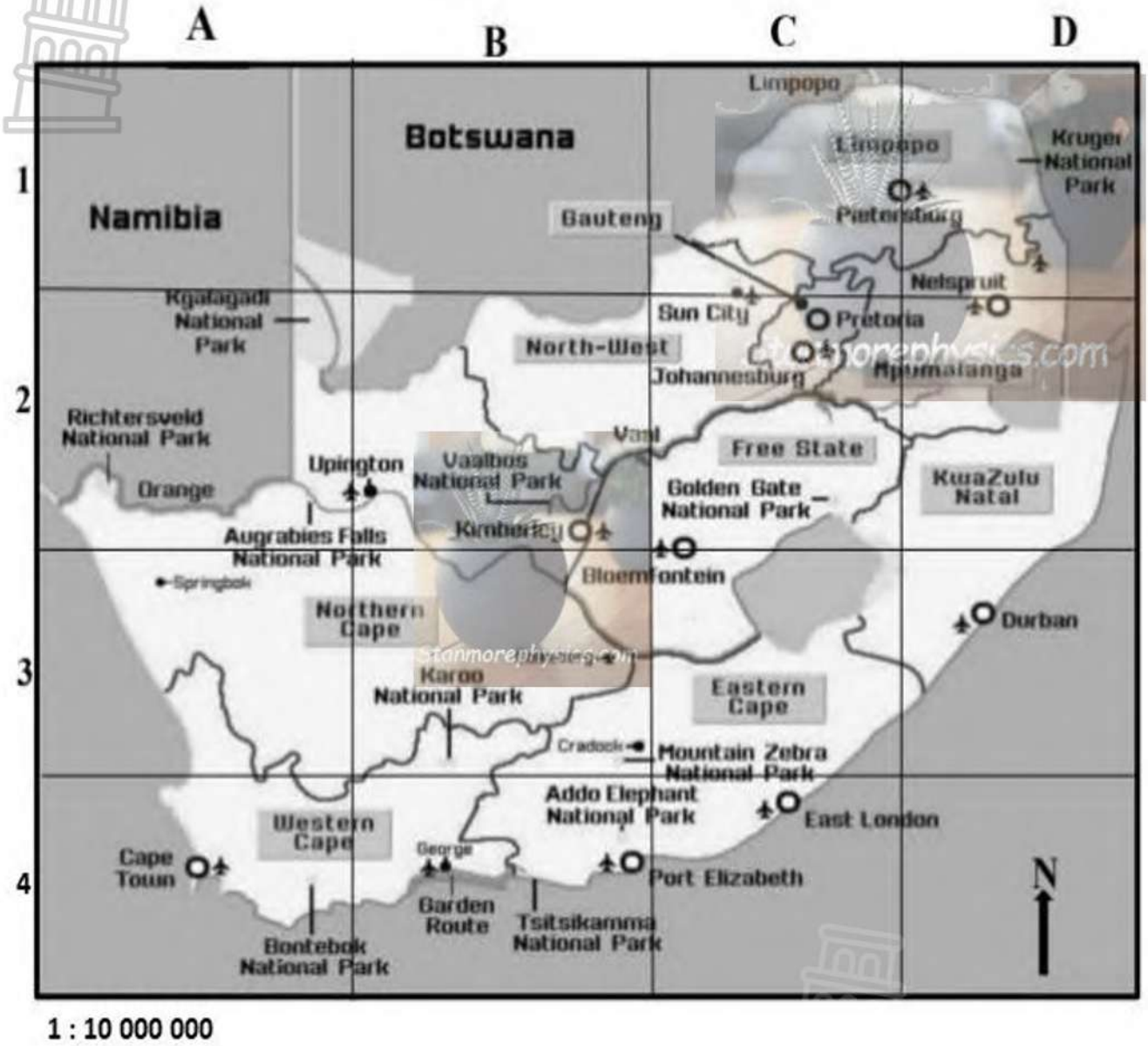
You may use the following formula:

Distance = Speed × Time

(4)
[17]

TOTAL: 50

ANNEXTURE A
QUESTION 3.2
SOUTH AFRICAN MAP



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MARKING GUIDELINE

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MARKS: 50

Symbol/*Simbool*	**Explanation/*Verduideliking***
M	Method/*Metode*
M/A	Method with accuracy/*Metode van akkuraatheid*
CA	Consistent accuracy/*Volgehoue akkuraatheid*
A	Accuracy/*Akkuraatheid*
C	Conversion/*Herleiding*
S	Simplification/*Vereenvoudiging*
RT	Reading from a table/graph/diagram/*Lees vanaf tabel/grafiek/diagram*
SF	Correct substitution in a formula/*Korrekte vervanging in formule*
O	Opinion/Example/Definition/Explanation/*Opinie/Voorbeeld/Definisie/Verduideliking*
P	Penalty, e.g., for no units, incorrect rounding off, etc./*Penalisasie, bv. vir geen eenhede/verkeerde afronding ens.*
R	Rounding off/*afronding*
NPR	No penalty for rounding/*Geen penalisering vir afronding nie*
NPU	No penalty for the units/*Geen penalisering vir eenhede nie*
AO	Answer only, if correct, full marks/*Slegs antwoord, indien korrek, volpunte*
MCA	Method with consistent accuracy/*Metode met volgehoue akkuraatheid*

This marking guideline consists of 05 pages

QUESTION1[12 MARKS]	ANSWER ONLY FULL MARKS AO		
Item	**Solution**	**Explanation**	**T/L**
1.1.1	Value Added Tax ✓✓A	2A Correct explanation (2)	F L1 E
1.1.2	VAT = $\frac{15}{100} \times$ R299,00✓ MA = R44, 85 ✓CA	1MA multiplying by 15% 1CA Correct VAT amount (2)	F L1 M
1.1.3	Seven hundred and ninety-nine rand.✓✓A	2A correct amount Penalise 1 mark if Rand is omitted. (2)	F L1 E
1.2.1	• Unemployment insurance fund ✓✓O • Illness benefit ✓✓O **OR** • Maternity benefit • Adoption benefit • Dependent benefit **OR** ANY RELEVANT BENEFIT	2O correct benefit 2O correct benefit (4)	F 1 M
1.2.2	UIF contribution = $R6000 \times \frac{1}{100}$ ✓MA = R600 ✓CA	1MA multiplying by 1% 1CA the answer (2)	F 1 M

QUESTION2 [21 MARKS]			
Item	**Solution**	**Explanation**	**T/L**
2.1.1	6kl ✓✓A	2A (2)	F L2 E
2.1.2	• To Accommodate households with low or no income ✓✓O **OR** • For Indigent families ✓✓O	1MA multiplying by 15% 1CA Correct VAT amount (2)	F L4 E
2.1.3	7,5kl x R12,17 ✓M = R91, 275 ✓CA = R91,28 ✓R	1M multiplying by R12,17 1CA answer 1R correct rounding (3)	F L3 M
2.1.4	✓MA Block 1: 6kl x R0,00 = R0,00 ✓CA Block 2: 6kl x R11,79 = R70,74 ✓CA Block 3:13kl x R12,17 =R158,21 Block 4: 9kl x R12,55 = R112,95 Total amount =R0,00 + R70,74 + R158,21 + R112,95 ✓CA ✓M = R341,90 + R50,75 = R392,65 ✓CA Valid ✓O	1MA multiplying correct values 1CA Simplification 1CA block 2 calculation 1CA simplification 1M adding Fixed charge 1CA simplification after adding Fixed charge 1O conclusion (7)	F L4 D
2.2.1	The value of one currency relative to the value of another currency ✓✓O	2O (2)	F L1 E
2.2.2	Yen(¥) ✓✓A	2A	F L2 E

2.2.3	1 ZAR = 8,751673 Japanese Yen (¥) Amount(R) = $\frac{1550¥}{8,751673}$ ✓MA = R177,11 ✓CA = R177 ✓R **OR** 1 Japanese Yen (¥) = R0,114264 Amount(R) = 1550 ¥ x R0,114264 ✓MA = R177,11 ✓CA = R177 ✓R	1MA dividing correct values 1CA simplification 1R correct rounding 1MA multiplication 1CA simplification 1R correct rounding (3)	F L3 M

QUESTION 3[17 MARKS]			
Item	**Solution**	**Explanation**	**T/L**
3.1.1	29 ✓✓A	2A correct answer (2)	MP L1 E
3.1.2	Turn right passing B5 ✓A Turn right walking on the aisle towards the back of the bus ✓A Then turn left passing between C2 and C3. His destination will be on the right.✓A	1A right 1A right and towards back 1A left between C2 and C3 (3)	MP L3 E
3.2.1	B4 ✓✓A	2A correct answer (2)	MP L2 E
3.2.2	North East / NE ✓✓A	2A correct direction (2)	MP L2 M
3.2.3	Distance between Bloemfontein and Pretoria = 4cm ✓A Actual distance = 4 cm × 10 000 000 ✓M = 40 000 000cm ÷ 100 000 ✓CA = 400 km ✓C	1A correct measurement Allow (± 0.1cm or 1 mm) 1M multiplying by scale factor 1CA Simplification 1C conversion **NOTE: MEASURE LEARNER'S COPY OF QUESTION PAPER AND USE THOSE MEASUREMENTS** (4)	MP L3 D
3.2.4	Distance = Speed × Time ✓SF 400km = 110km/h × Time Time = $\frac{400Km}{110Km/h}$ ✓S = 3,636 hours ✓CA = 3h and 0.636h ×60 = 3hours 38 minutes ✓ C	**CA from 3.2.3** 1SF substitution in the formula 1S changing the subject of the formula 1CA simplification 1C conversion (4)	MP L3 D