



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA



**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY

SEPTEMBER TEST

2025

Stanmorephysics.com

Stanmorephysics.com

MARKS: 100

TIME: 2 hours

This question paper consists of 10 pages and an addendum with 4 annexures.

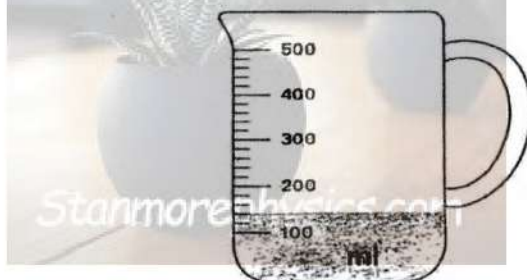
INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Use the ANNEXURES in the addendum to answer the following questions
 - ANNEXURE A for QUESTION 2.1
 - ANNEXURE B for QUESTION 3.2
 - ANNEXURE C for QUESTION 4.2
3. Number the answers correctly according to the numbering system used in this question paper.
4. Start EACH question on a NEW page.
5. You may use an approved calculator (non-programmable and non-graphical). Unless stated otherwise.
6. Show ALL the calculations clearly.
7. Round off, ALL the final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Diagrams are NOT necessarily drawn to scale unless stated otherwise.
10. Write neatly and legibly.



QUESTION 1

- 1.1 The picture below shows the 500 ml capacity jug containing concentrated juice. The amount of water will be added to make a mixed drink.



[source: www.google.com/images]

Use the picture and the information above to answer the questions that follow.

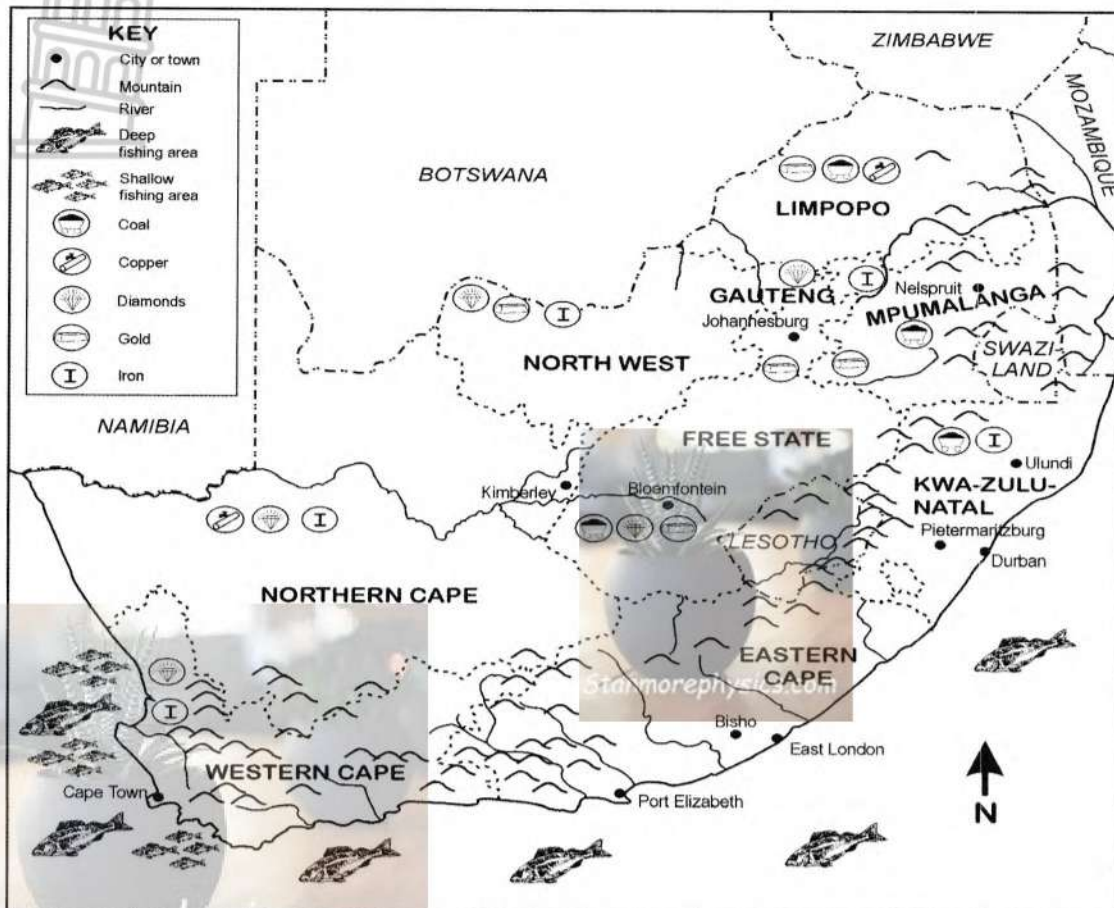
- 1.1.1 Convert the capacity of the jug to litres. (2)
- 1.1.2 Determine the amount of water in millilitres needed to make 500 ml of mixed juice. (2)
- 1.1.3 The 500ml mixed juice is poured into glasses. How many glasses can be filled with juice, if one glass can hold 50ml. (2)

- 1.2 The TWO pie charts in ANNEXURE A show the comparison of different kinds of energy production in 1995 and 2005.

Use ANNEXURE A in the addendum and the information above to answer the questions that follow.

- 1.2.1 Identify the source of energy production that showed a decrease between the two years. (2)
- 1.2.2 Write down the unit ratio of the percentage of nuclear energy to the total percentage of all other energy sources in 2005. (3)
- 1.2.3 Name ONE other type of graph that can represent the data in Annexure A. (2)
- 1.2.4 Calculate the difference between coal and gas percentages in 1995. (2)

- 1.3 The map below shows the South African mineral resources produced per province and major cities.



[source: <https://www.jobilize.com/online/>]

Study the map above and answer the questions that follow.

- 1.3.1 Choose the correct scale that can be used to produce the map above. Write ONLY the letter that represent the correct scale next to a question, e.g. 1.3.1 D
- A 1: 50
 B 1: 50 000 000
 C 1 cm: 50 m (2)
- 1.3.2 Name THREE types of mineral resources that are mined in the Northern Cape province. (3)
- 1.3.3 Determine the number of provinces that produce more than two mineral resources on the map of South Africa. (2)
- 1.3.4 Identify the province that does not produce any mineral resources on the map. (2)

[24]

QUESTION 2

- 2.1 In South Africa, the price of a basic food basket at the beginning of 2023 costs R1 417, which was 5.8% higher than in 2022. The basket is worth 35,6% of the minimum net wage in 2023.

ANNEXURE B in the addendum shows the basic food prices in January 2023.

Use ANNEXURE B in the addendum and the information above to answer the following questions.

- 2.1.1 Define the term *inflation* in the given context. (2)
- 2.1.2 Calculate the annual minimum wage in South Africa during 2023. (2)
- 2.1.3 Determine the price of ONE litre of milk in 2023. (2)
- 2.1.4 The analyst states that the difference in cost per kilogram between rice and meat was R73,33 in 2023. (4)
- Verify, showing ALL calculations whether the analyst's statement is correct.
- 2.1.5 Determine to the nearest R10 the price of the shopping basket value during 2022 (4)

- 2.2 The average minimum wage in South Africa was R3 979 in 2023, equivalent to approximately \$226.

Table 1 below shows the top ten ranked business sectors minimum wages in 2023.

TABLE 1: TOP 10 RANKED BUSINESS SECTORS MINIMUM WAGE IN DOLLARS.

SECTOR	INCREASE COMPARED TO JANUARY 2022	MINIMUM WAGE AS OF JANUARY 2023- CONVERTED TO US\$
Farming	104,5%	\$336
Mining	100%	\$457
Fishery	32,4%	\$180
Intelligence	27,1%	\$555
Transport	25,8%	\$289
Human Settlement	24,6%	\$111
Defence	24,5%	\$393
Policing	21,9%	\$1 594
Health	21,2%	\$189
Education	18,8%	\$646

[adapted from: <https://www.picodi.com/za/bargain-hunting/minimum-wage-2023>]

Use TABLE 1 and the information above to answer the questions that follow.

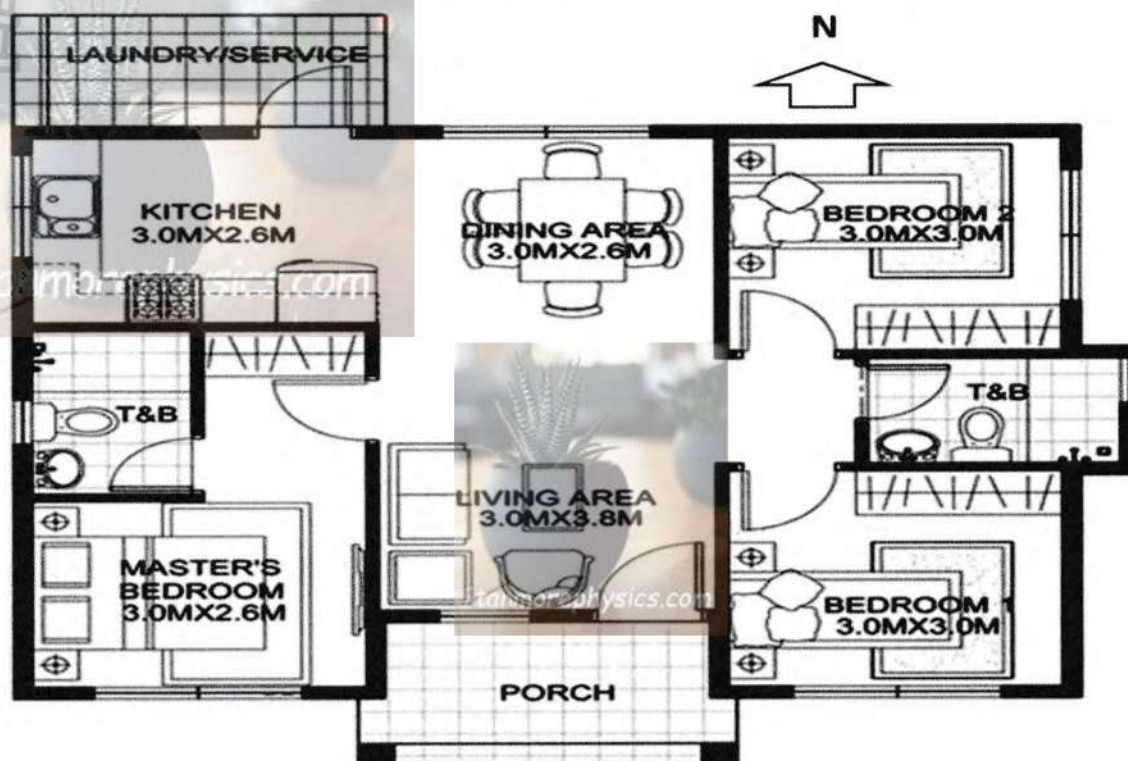
- 2.2.1 Calculate the minimum wage in dollars for mining during January 2022. (2)
- 2.2.2 Determine the exchange rate in rand per dollar during January 2023. (3)
- 2.2.3 Identify the sector that has the third lowest percentage increase and the highest minimum wage during January 2023 from the top ten ranked sectors. (2)
- 2.2.4 The probability that a sector has a minimum wage of less than \$200 is $\frac{3}{10}$ when chosen randomly.

Explain the meaning of the probability *outcome* above in the given context. (2)

[23]

QUESTION 3

- 3.1 Linda has recently purchased a house. She will be moving with her family from her old house. Below is the floor plan of her new house.

LINDA'S HOUSE FLOOR PLAN.

[source: <https://engineeringdiscoveries.com>]

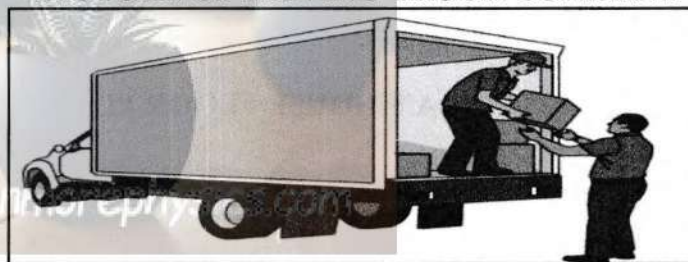
Study the floor plan above and answer the questions that follow.

- 3.1.1 Determine the number of windows shown on the floor plan. (2)
- 3.1.2 Linda states that her new house is an open floor plan. Critically comment on her statement. (3)
- 3.1.3 Calculate the total area of bedroom 1 and bedroom 2 in square metres. (3)
- 3.1.4 Give ONE valid reason for Linda to occupy the master bedroom of her new house. (2)
- 3.1.5 Identify which elevation is shown alongside on Linda's new house. (2)



- 3.2 Linda's family will hire Moving Truck Company to transport their belongings, packed in rectangular boxes to a new house.

PICTURE OF MOVING TRUCK COMPANY



[source: <http://google.com/images>]

Table 2 below shows the different dimensions of the interior compartment of the company trucks. Table 3 shows the type of boxes the family will use to pack their belongings.

TABLE 2: INTERIOR DIMENSIONS OF THE COMPARTMENT OF THE TRUCK.

TRUCK TYPE	LENGTH OF FLOOR	WIDTH OF FLOOR	HEIGHT
Regular cabin	4 m	2 m	2 m
Extended cabin	6,6 m	2,4 m	2,3 m

TABLE 3: DIFFERENT SIZES OF BOXES

BOX SIZE	LENGTH	WIDTH	HEIGHT
Small	0,4 m	0,3 m	0,3 m
Medium	0,5 m	0,5 m	0,5 m
Large	0,5 m	0,8 m	0,6 m

Use TABLE 2 and TABLE 3 above to answer the questions that follow.

- 3.2.1 Identify the size of the box that is a cube. (2)

- 3.2.2 Calculate the volume of the regular cabin truck.

You may use the formula:

$$\text{Volume of a rectangular prism} = \text{length} \times \text{width} \times \text{height} \quad (3)$$

- 3.2.3 Determine the number of large boxes that can fit into an extended cabin truck if the length of the box is packed along the length of the truck. (7)

- 3.3 The Moving Truck Company charges R12 per kilometre for each delivery. The moving truck company truck pays a fixed insurance cost of R6 000 and R4 per kilometre for fuel and maintenance.

- 3.3.1 Define the term *break-even* in the given context. (2)

- 3.3.2 Linda's family hires a truck for a total distance of 700 kilometres.

The manager states that the company will NOT make a profit for this trip. Verify, showing ALL calculations whether the statement is correct. (5)

[31]

QUESTION 4

- 4.1 The treasurer of the Leading Ladies Club compared the actual income and expenses amount against the projected budget amount at the end of the 2024 financial year.

ANNEXURE C shows the income and expenditure statement for the Leading Ladies Club during 2024. Some information has been omitted.

Use ANNEXURE C and the information above to answer the questions that follow.

- 4.1.1 Determine the number of members in the club if each member contributed an actual amount of R3 500. (2)
- 4.1.2 Give ONE possible reason why some other amounts are in brackets. (2)
- 4.1.3 Calculate the value of **A** and **B** (4)
- 4.1.4 Which of the following statements is true regarding the club financial performance in 2024? Write ONLY the letter of the correct answer.
- (A) Leading ladies made a profit of R5 500 during the year 2024.
- (B) The Leading Ladies Club performed worse than expected with an additional R3 000 loss over what was budgeted.
- (C) The leading ladies club received R6 000 more donation than what was budgeted. (2)
- 4.1.5 Suggest ONE possible way in which the Leading Ladies Club can decrease the club's deficit. (2)

- 4.2 The Leading Ladies Club intends to increase the income of the club by investing in a 12-month Tax-free fixed deposit account.

ANNEXURE D in the addendum shows the different investment capital from 2023 to 2038 with an interest rate of 9,05% per annum.

Use ANNEXURE D in the addendum to answer the questions that follow.

- 4.2.1 Write down the capital amount with an interest of R30 027,54 (2)
- 4.2.2 Round off to the nearest R10 000, the capital amount of R118 078,58, for the start date of 1 March 2025. (2)
- 4.2.3 Show by calculations how the daily interest of R8,93 was calculated. (3)
- 4.2.4 Calculate the final amount at the end of one year if the capital invested amount is R1 061 703,15. (3)

[22]

TOTAL MARKS: 100





KWAZULU-NATAL PROVINCE

EDUCATION

REPUBLIC OF SOUTH AFRICA



**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY

ADDENDUM

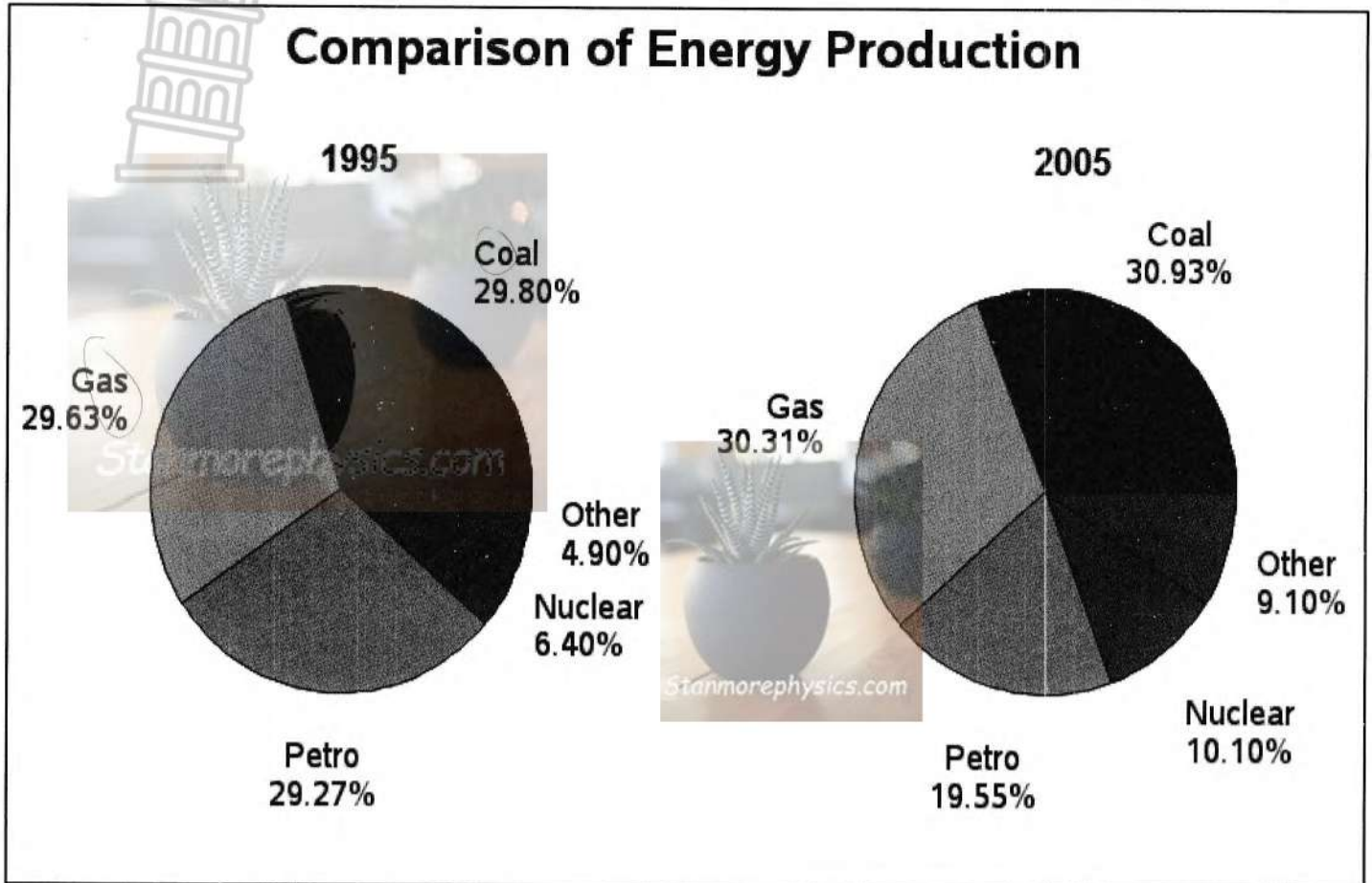
SEPTEMBER TEST

2025

This addendum consists of 5 pages with 4 annexures.

ANNEXURE A

QUESTION 1.2



[source: <https://www.ieltsnetwork.com/viewtopic.>]

ANNEXURE B

QUESTION 2.1



[source: <https://www.picodi.com/za/bargain-hunting/minimum-wage-2023>]

ANNEXURE C

QUESTION 4.1

LEADING LADIES CLUB INCOME AND EXPENDITURE FOR YEAR END 2024

ITEM	BUDGETED (ZAR)	ACTUAL (ZAR)	VARIANCE (ZAR)
INCOME			
Membership fees	35 000	42 000	7 000
Income from sales	5 000	5 500	(500)
Donations	12 000	6 000	(6000)
Total	52 000	52 500	500
EXPENSES	BUDGETED (ZAR)	ACTUAL (ZAR)	DIFFERENCE (ZAR)
Club rental	15 000	15 000	0
Wages	B 5000	7 000	2 000
Social events	32 000	38 000	6 000
Utilities	1 500	1 000	(500)
Total	57 500	61 000	3 500
Surplus/deficit	(5 500)	(8 500)	

[source: <http://ncvm3.books.nba.co.za>]

ANNEXURE D

QUESTION 4.2

TAX-FREE FIXED DEPOSIT INVESTMENT ACCOUNT WITH DIFFERENT CAPITAL

Capital	Interest rate	Daily interest	Start date	End date	Investment term	Interest amount
R36 000,00	9,05%	R8,93	1 March 2023	1 March 2024	12 months	R3 266,93
R75 266,93	9,05%	R18,66	1 March 2024	1 March 2025	12 months	R6 811,66
R118 078,58	9,05%	R29,28	1 March 2025	1 March 2026	12 months	R10 686,11
R164 764,69	9,05%	R40,85	1 March 2026	1 March 2027	12 months	R14 911,20
R215 675,90	9,05%	R53,48	1 March 2027	1 March 2028	12 months	R19 572,14
R271 248,04	9,05%	R67,25	1 March 2028	1 March 2029	12 months	R24 547,95
R331 795,99	9,05%	R82,27	1 March 2029	1 March 2030	12 months	R30 027,54
R397 823,53	9,05%	R98,64	1 March 2030	1 March 2031	12 months	R36 003,03
R469 826,56	9,05%	R116,49	1 March 2031	1 March 2032	12 months	R42 635,79
R548 462,35	9,05%	R135,99	1 March 2032	1 March 2033	12 months	R49 635,84
R634 098,20	9,05%	R157,22	1 March 2033	1 March 2034	12 months	R57 385,89
R727 484,08	9,05%	R180,38	1 March 2034	1 March 2035	12 months	R65 837,31
R829 321,39	9,05%	R205,63	1 March 2035	1 March 2036	12 months	R75 259,21
R940 580,61	9,05%	R233,21	1 March 2036	1 March 2037	12 months	R85 122,54
R1 061 703,15	9,05%	R263,24	1 March 2037	1 March 2038	12 months	R96 084,14

Disclaimer: The amounts above are calculated at a static rate of 9,05% over 12 months.

[source: <https://www.news24.com/brandstory/partner-content/business/>]

3.098,6



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA



**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

**MATHEMATICAL LITERACY
COMMON ASSESSMENT TASK
SEPTEMBER 2025
MARKING GUIDELINE**

Stanmorephysics.com

MARKS: 100

Stanmorephysics.com

SYMBOL	EXPLANATION
MA	Method with accuracy
MCA	Method with consistent accuracy
CA	Consistent accuracy
A	Accuracy (Answer)
C	Conversion
S	Simplification
RT/RG/RD	Reading from a table/ graph/ diagram
NPR	No penalty for units/rounding
SF	Correct substitution in a formula
O	Opinion/ reason/deduction/example
J	Justification
R	Rounding off/
F	Deriving a formula
E	Explanation
U	Units
AO	Answer only full marks

This marking guideline consists of 6 pages.

QUESTION 1 [24] ANSWER ONLY FULL MARKS			
QUE	SOLUTION	EXPLANATION	T&L
1.1.1	Capacity = $\frac{500\text{ml}}{1\,000}$ ✓MA = 0,5 litres ✓A	1MA dividing by 1000 1A correct answer (2)	M L1 E
1.1.2	Amount of water = $500\text{ ml} - 140\text{ ml}$ = 360 ml ✓A	1MA subtracting 140 ml 1A correct answer (2)	M L1 M
1.1.3	Number of glasses = $\frac{500\text{ ml}}{50\text{ ml}}$ ✓MA = 10 ✓A	1MA dividing by 50ml 1A correct answer (2)	M L1 E
1.2.1	Petro ✓✓RT	2RT correct answer (2)	DH L1 E
1.2.2	✓A 10,10% : 89,89% ✓MA 1 : 8,9 ✓A	1A for 89,89% 1MA correct ratio order 1A correct answer (3)	DH L1 D
1.2.3	Double bar graph ✓✓A	2A correct answer Accept: stacked bar graph (2)	DH L1 E
1.2.4	Difference = $29,80\% - 29,63\%$ ✓MA = 0,17% ✓A	1MA subtracting correct values 1A difference (2)	DH L1 E
1.3.1	B ✓✓A	2A correct scale Accept 1: 50 000 000 (2)	MP L1 E
1.3.2	✓RT ✓RT ✓RT Copper, diamond, and iron	1RT correct answer 1RT correct answer 1RT correct answer (3)	MP L1 E
1.3.3	5 provinces ✓✓RT	2RT correct number Accept: 4 provinces (2)	MP L1 E
1.3.4	Eastern Cape ✓✓RT	2RT correct province Accept: EC (2)	MP L1 E
			[24]

QUESTION 2 [23]			
QUE	SOLUTION	EXPLANATION	T&L
2.1.1	Inflation is the general increase in the prices of goods and services in South Africa. ✓✓O OR Inflation is the rate in which prices of goods or/and services increase over a period of time. ✓✓O	2O explanation (2)	F L1 E
2.1.2	Annual minimum wage = $R3\ 979 \times 12$ months = R47 748 ✓A	1MA multiplied by 12 months 1A annual wage (2)	F L2 M
2.1.3	Unit price of one litre = $\frac{R172}{10 \text{ litres}}$ ✓MA = R17,20 ✓A	1MA dividing by 10 litres 1A correct answer (2)	F L2 E
2.1.4	Cost of Rice/kg = $\frac{R36}{1,5 \text{ kg}}$ = R24 ✓A Cost of Meat/kg = $\frac{R584}{6 \text{ kg}}$ = R97,33 ✓A Difference = R97,33 – R24 ✓MA = R73,33 Valid statement ✓O	1A correct price/kg 1A correct price/kg 1MA difference 1O justification (4)	F L4 M
2.1.5	Price of the bucket in 2022 ✓RT = $R1\ 417 \times \frac{100}{105,8}$ ✓MA = R1 339,319 ✓A = R1 340 ✓R OR Price of the bucket in 2022 = $\frac{R1\ 417}{1,058}$ ✓MA = R1 339,319 ✓A = R1 340 ✓R	1RT reading the correct value 1MA dividing by 105,8% 1A answer (R1 339,32) 1R rounding OR 1RT reading the correct value 1MA correct denominator 1A answer (R1 339,32) 1R rounding (4)	F L3 M
2.2.1	Minimum wage in mining = $\frac{\$457}{2}$ ✓MA = \$228,50 ✓A OR Minimum wage in mining = $\$457 \times \frac{100}{200}$ ✓MA = \$228,50 ✓A	1MA dividing by 2 1A answer OR 1MA multiplying by $100 \div 200$ 1A answer (2)	F L2 D

QUE	SOLUTION	EXPLANATION	T&L
2.2.2	Exchange rate in rands per dollar ✓RT $\$226 = R3\ 979$ $226 \quad 226 \checkmark MA$ $1\$ = R17,60629 \checkmark A$	1RT both correct values 1MA dividing by 226 1A answer NPR (3)	F L2 E
2.2.3	Policing ✓✓RT	2RT correct sector (2)	F L2 E
2.2.4	It means that there are three out of ten sectors that are less than \$200 in minimum wage ✓✓O	2O explanation (2)	P L1 E
			[23]



QUESTION 3 [31]			
QUE	SOLUTION	EXPLANATION	T&L
3.1.1	8 windows ✓✓RT	2RT number of windows Accept: 13 windows (2)	MP L2 E
3.1.2	✓A True, No wall divides the kitchen, the dining area, and the living area. ✓✓O	1A correct answer 2O explanation (3)	MP L4 D
3.1.3	✓MA Total area = $2 \times (3 \text{ m} \times 3 \text{ m})$ ✓MA = 18 m^2 ✓CA	1MA multiplying by 2 1MA correct area dimensions 1CA answer (3)	M L3 M
3.1.4	The master's bedroom has an ensuite/The master's bedroom has a bathroom and a toilet. ✓✓O OR Master bedroom is bigger. ✓✓O OR She is the house owner. ✓✓O	2O Opinion (2)	MP L4 E
3.1.5	South elevation ✓✓RT	2RT correct elevation (2)	MP L2 E
3.2.1	Medium box ✓✓RT	2RT correct box (2)	M L1 E
3.2.2	Volume = $4 \text{ m} \times 2 \text{ m} \times 2 \text{ m}$ ✓SF = 16 m^3 ✓A ✓U	1SF correct substitution 1A answer 1U correct unit (3)	M L2 E
3.2.3	Total Number of boxes: Length wise = $\frac{6,6 \text{ m}}{0,5 \text{ m}}$ ✓MA = $13,2$ ✓A = 13 boxes ✓R Width wise = $\frac{2,4 \text{ m}}{0,8 \text{ m}}$ = 3 boxes ✓A Height wise = $\frac{2,3 \text{ m}}{0,6 \text{ m}}$ = $3,8333$ = 3 ✓R Total no. of boxes = $13 \times 3 \times 3$ ✓MCA = 117 ✓CA	1MA dividing correct dimensions 1A answer 1R rounding down 1A number of boxes 1R number of boxes 1MCA multiplying 1CA answer (7)	MP L3 M
3.3.1	It is when the Moving Truck Company has the same total income and total expenses for the same number of kilometres travelled. ✓✓O	2O explanation (2)	F L1 E
3.3.2	Total income = $\text{R}12 \times 700 \text{ km}$ ✓MA = $\text{R}8\,400$ ✓CA Total expenses = $\text{R}6\,000 + \text{R}4 \times 700 \text{ km}$ ✓MA = $\text{R}8\,800$ ✓CA Correct statement, the income is less than the expenses/ expenses are greater than the income. ✓J	1MA multiplying by R12 1 CA correct income 1 MA multiplying and adding 1CA answer 1J justification (5)	F L4 M
			[31]

QUESTION 4 [22]			
QUE	SOLUTION	EXPLANATION	T&L
4.1.1	Number of members = R42 000 ✓MA R3 500 = 12 members ✓CA	1MA dividing correct values 1CA (2)	F L2 E
4.1.2	The amounts represent negative values. ✓✓O OR The amounts represent the shortfall/deficit. ✓✓O	2O explanation (2)	F L4 E
4.1.3	A = R5 000 – R500 ✓MA = R 4 500 ✓A OR A = R52 500 – R6 000 – R42 000 ✓MA = R4 500 ✓A B = R7 000 – R2 000 ✓MA = R 5 000 ✓A	1MA subtracting correct values 1A answer OR 1MA subtracting correct values 1A answer 1MA subtracting correct values 1A answer (4)	F L3 E
4.1.4	B ✓✓A	2A correct answer Accept: the correct statement written in full. (2)	F L2 M
4.1.5	The club can reduce/decrease social event spending/increase membership fee/seek more donations/host more fundraising events. ✓✓O	2O Explanation (2)	F L4 E
4.2.1	R331 795,99 ✓✓RT	2RT correct amount (2)	F L2 E
4.2.2	R120 000 ✓✓R	2R correct rounding (2)	F L1 E
4.2.3	Daily interest ✓RT = $\frac{9,05\%}{365} \times R36\,000$ ✓MA = R8,92602 = R8,93	1RT correct interest rate 1MA multiplying by correct capital 1MA dividing by 365 (3)	F L4 D
4.2.4	Final amount ✓RT = R1 061 703,15 + R96 084,14 ✓MA = R1 157 787,29 ✓CA	1RT reading R96 084,14 1MA adding correct values 1CA answer (3)	F L2 E
			[22]
TOTAL MARKS: 100			