



NAME OF SCHOOL

GRADE 12

MATHEMATICAL LITERACY P1

TASK 4: MID-YEAR EXAMINATION

6 JUNE 2025

Stanmorephysics.com

Marks: 100

Time: 2 hours

This paper consists of 11 pages and a 16-page SPECIAL ANSWER BOOK

INSTRUCTIONS AND INFORMATION:

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Answer ALL questions in the SPECIAL ANSWER BOOK provided.
3. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
4. Show ALL the 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. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
8. Write neatly and legibly.



QUESTION 1

1.1 TABLE 1 below gives definitions of terminology used in Mathematical Literacy.

TABLE 1: TERMINOLOGY USED IN MATHEMATICAL LITERACY

LETTER	DEFINITION
A	Likelihood of a particular outcome occurring, expressed as a number from zero to one
B	Interest charged on an amount due, but including interest charges to date
C	The discount on tax payable
D	The values that divide an ordered dataset into four equal parts
E	Money that is owned by someone and used for the purpose of investing or lending
F	An amount of money that is spent on something
G	Value that cuts an ordered data set in half
H	An agreed sum of money that is lent by a bank or moneylender
I	The rate charged for a service rendered, e.g. import duties, water consumption cost, etc

Use TABLE 1 above and match the definitions with the terminology below. Write only the letter (A-I) next to the question numbers (1.1.1 to 1.1.4), e.g. 1.1.5 K

- 1.1.1 Tariff (2)
- 1.1.2 Quartiles (2)
- 1.1.3 Rebate (2)
- 1.1.4 Probability (2)

1.2

Sammy wants to buy a new car and decides to research car sales for the year of 2024.

Before considering which car to buy she made a quick study of the most popular cars in South-Africa.

TABLE 2 shows the sales figures of the 10 best selling cars with their country of origin.

**TABLE 2: SALES OF SOUTH AFRICA'S 10 BEST SELLING CAR BRANDS
(2023 VS 2024)**

BRAND	COUNTRY OF ORIGIN	2023	2024
TOYOTA	Japan	142 612	128 663
VOLKSWAGEN	Germany	67 456	66 486
SUZUKI	Japan	49 438	59 574
FORD	United States	30 710	32 766
HYUNDAI	South Korea	31 952	30 759
ISUZU	Japan	23 273	23 290
NISSAN	Japan	29 158	22 284
CHERY	China	16 319	19 971
GWM	China	19 904	18 927
RENAULT	France	21 703	15 822

[Adapted from cars.co.za]

Use the information above to answer the questions that follow.

1.2.1 Identify the brand of car that had the third lowest sales in 2023. (2)

1.2.2 Arrange in descending order, the units sold in 2023. (2)

1.2.3 Write in words, the number of Toyota cars sold in 2024. (2)

1.2.4 32 766 Ford Vehicles were sold in 2024 of which 5,89% were Ranger Raptor bakkies.

Determine how many Ranger Raptor units were sold. (2)

- 1.3 The table below shows the water tariffs for the financial year 2024-2025 for the Swartland Municipality.

TABLE 3: WATER TARIFFS FOR THE FINANCIAL YEAR 2024-2025

Step	Total In Rand VAT (Excl)	VAT In Rands 15%	Total Tariff In Rand VAT (Incl)	
1	0 – 6 kℓ	6,44	0,97	7,41
2	>6 – 10 kℓ	10,58	1,59	12,17
3	>10 – 15 kℓ	20,07	3,01	23,08
4	>15 – 20 kℓ	25,78	3,87	29,65
5	>20 – 25 kℓ	37,86	5,68	43,54
6	>25 – 35 kℓ	56,94	8,54	65,48
7	>35 kℓ	106,18	15,93	122,11
Fixed monthly charge		79,50	A	91,43

[Adapted from: swartland.org.za]

Use the information above to answer the questions that follow.

- 1.3.1 Determine the missing value **A**, the 15% VAT amount for the fixed monthly charge. (2)
- 1.3.2 Write down the maximum number of kilolitres of water that can be charged at a rate of R43,54 (VAT inclusive). (2)
- 1.3.3 Show how R122,11, the Total tariff (VAT inclusive) for Step 7 was calculated. (2)

[22]

QUESTION 2

- 2.1 Ms Banks enjoys shopping online and received an extract of her statement for the month of March from Mobicred, where you can buy on credit.

mobicred			
Ms S Banks	CREDIT AVAILABLE		R17 896,42
3 Joubert Street	CREDIT LIMIT		R40 000
Table View	STATEMENT DATE		2025/03/31
7441	STATEMENT PERIOD	2025/03/01 – 2025/03/31	
	CURRENT BALANCE		R22 103,58
	OVERDUE AMOUNT		R0,00
PHYSICAL ADDRESS	TOTAL INSTALMENT		R1 789,45
Jan Smuts Drive	DEBIT ORDER DATE		2025/03/31
Pinelands	ACCOUNT NUMBER		100380440
Cape Town			
7405			
MY TRANSACTION DETAILS			
DATE	DESCRIPTION	AMOUNT	BALANCE
2025/03/10	Purchase – Takealot	R1 207,00	R11 543,62
2025/03/17	Purchase – Amazon	R11 999,00	R23 542,62
2025/03/20	Monthly Fee (Debit)	R65,00	R23 607,62
2025/03/20	Interest	R285,41	R23 893,03
2025/03/25	Payment – Thank you	-R1 789,45	R22 103,58
Closing Balance			R22 103,58

[Adapted from mobicred]

Use the information above to answer the questions that follow.

- 2.1.1 Calculate the total cost of the purchases made by Ms Banks during March. (2)
- 2.1.2 To maintain a good credit score you should not use more than 60% of the available credit limit.
- Calculate the percentage that Ms. Banks has already used. (3)
- 2.1.3 The purchase at Amazon was a Play Station 5 at a discounted price.
- Calculate the original price of the Play Station 5 if 12% discount was given on the price paid. (3)
- 2.1.4 Give one possible reason why Ms Banks will purchase through Mobicred rather than pay cash for the items purchased. (2)

2.2

Mr Itonga is a 33-year-old man who earns an annual taxable salary of R227 600. He also receives a taxable performance bonus that is equal to one-and-a-half times his monthly taxable salary.

He contributes towards a medical aid for himself and has no non-taxable deductions.

He finds the table below to calculate his annual income tax.

TABLE 4: TAX TABLE FOR THE 2025/26 FINANCIAL YEAR

TAX BRACKET	TAXABLE INCOME	TAX RATE (IN RANDS)
1	1 – 237 100	18% of taxable income
2	237 101 – 370 500	42 678 + 26% of taxable income above 237 100
3	370 501 – 512 800	77 362 + 31% of taxable income above 370 500
4	512 801 – 673 000	121 475 + 36% of taxable income above 512 800
5	673 001 – 857 900	179 147 + 39% of taxable income above 673 000
6	857 901 – 1 817 000	251 258 + 41% of taxable income above 857 900
7	1 817 001 and above	644 489 + 45% of taxable income above 1 817 000

TAX REBATES

Primary	R17 235
Secondary (65 years and older)	R9 444
Tertiary (75 years and older)	R3 145

MEDICAL TAX CREDITS

PER MONTH	2025/2026
Main member with no additional dependants	R364
First dependant	R364
For each additional dependant	R246

[Source:sars.co.za]



Use the information above to answer the questions that follow.

- 2.2.1 Calculate Mr Itonga's performance bonus. (3)
- 2.2.2 Calculate Mr Itonga's income tax payable for the 2025/2026 financial year. (8)
- [21]**

QUESTION 3

3.1 Due to the many activities, restaurants and entertainment on a cruise ship, cruise holidays are very popular across the world.

ANNEXURE A shows a table with an extract of the number of people from different countries who go on cruises as well as a graph of the percentage of people from these countries who go on cruises.

Picture of a typical cruise ship:	Picture of a typical restaurant on a cruise ship:
	

Use ANNEXURE A to answer the questions that follow.

- 3.1.1 State whether the data in TABLE 4 is discrete or continuous. (2)
- 3.1.2 Identify the modal percentage of people who cruise from the identified countries. (2)
- 3.1.3 The cruise director stated that more people from Brazil go on cruises compared to people from Argentina. (2)
Verify this statement by showing all the relevant calculations. (5)
- 3.1.4 Write down the name of the country that represents the outlier when considering the population. (2)
- 3.1.5 Calculate the Inter quartile range (IQR) of the percentage of people cruising per year. (5)
- 3.1.6 An analyst states that the percentage shown for India cannot be zero as shown on the graph. (5)
Critically comment on this statement by showing the necessary calculations. (5)

3.2

One of the restaurants on the ship have a set menu where passengers can choose a three-course meal. The meal includes one of each of a variety of starters, main courses and desserts.

A tree diagram illustrating the possible combinations to be eaten is shown on ANNEXURE B

The three-course menu is shown below:

MENU	
STARTERS	MAIN
Butternut Soup (BS) OR Vegetable Samosas (VS) OR Biltong Pate (BP)	Rump Steak (RS) OR Baked Kingklip (BK) OR Vegetarian Pie (VP)
DESSERT	
Chocolate Mousse (C) OR Ice Cream (I)	

Use ANNEXURE B to answer the questions that follow:

- 3.2.1 Write down the missing meal options at 3.2.1(a) and 3.2.1(b). (2)
- 3.2.2 Determine the probability, written as a percentage, of eating a three-course meal that does not include Baked Kingklip. (3)
- [26]**

QUESTION 4

4.1 Riverside Secondary wanted to sell coffee and tea at their parent meetings.

ANNEXURE C shows the ingredients needed as well as a preliminary breakdown of the cost of making a cup of tea or coffee.

Use the information in ANNEXURE C to answer the following questions

4.1.1 Calculate the VAT inclusive selling price of Jacobs coffee. (3)

4.1.2 Calculate the cost of the milk needed for 1 cup of coffee. (5)

4.2 ANNEXURE D shows the graphs of the comparison between the income and expenses of tea and coffee sales.

- They pay a once-off fee of R100 for the use of the kitchen for each drink.
- Cost price of ONE cup of tea = R2,76
- Cost price of ONE cup of coffee = R3,70
- Selling price of ONE cup of tea = R6,50
- Selling price of ONE cup of coffee = R8,50

[Source:www.makro.co.za]

Use the information above along with ANNEXURE D to answer the questions that follow.

4.2.1 Estimate the cost as well as the number of cups of tea to sell at the breakeven point.
Example: 55 cups; R350 (2)

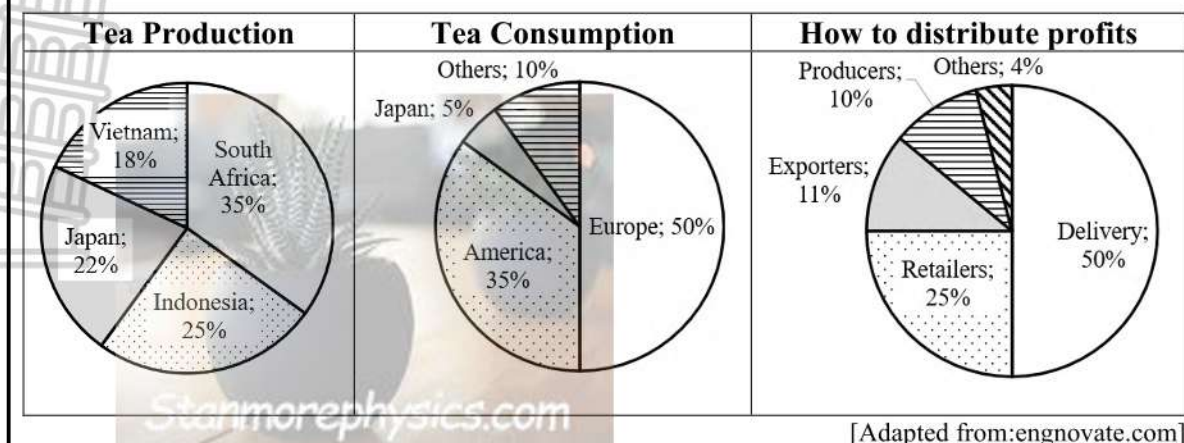
4.2.2 Show by means of calculations how the R285,00, the expenses for coffee for 50 cups, was determined. (3)

4.2.3 It is stated that the difference in profit between selling 30 cups of coffee compared to 30 cups of tea is R31,80.

Show by means of calculations whether it is correct. (7)

4.3

The three pie charts below show a possible breakdown of the production and consumption of tea and the distribution of profit around the world.



Use the information above to answer the questions that follow.

4.3.1 Write down as a unit ratio rounded to the 4th decimal, the production of tea in South Africa to Indonesia. (3)

4.3.2 Vietnam appears on the Tea Production graph, but their consumption is not shown on the second graph. An incorrect claim is made that the people of Vietnam therefore do not consume tea.

Critically comment on the claim above by analysing the consumption graph. (2)

4.3.3 In 2024, Vietnam's tea exports generated 235 000 000 USD in revenue for the first 11 months.

An analyst stated that the profit margin for tea production in Vietnam is 14,7% of the export value.

Calculate the amount that the producers will receive in one year if one assumes that the same trend remains for the rest of the year. (6)

[31]

TOTAL: 100



NAME OF SCHOOL

Name of district



MATHEMATICAL LITERACY

ADDENDUM

PAPER 1

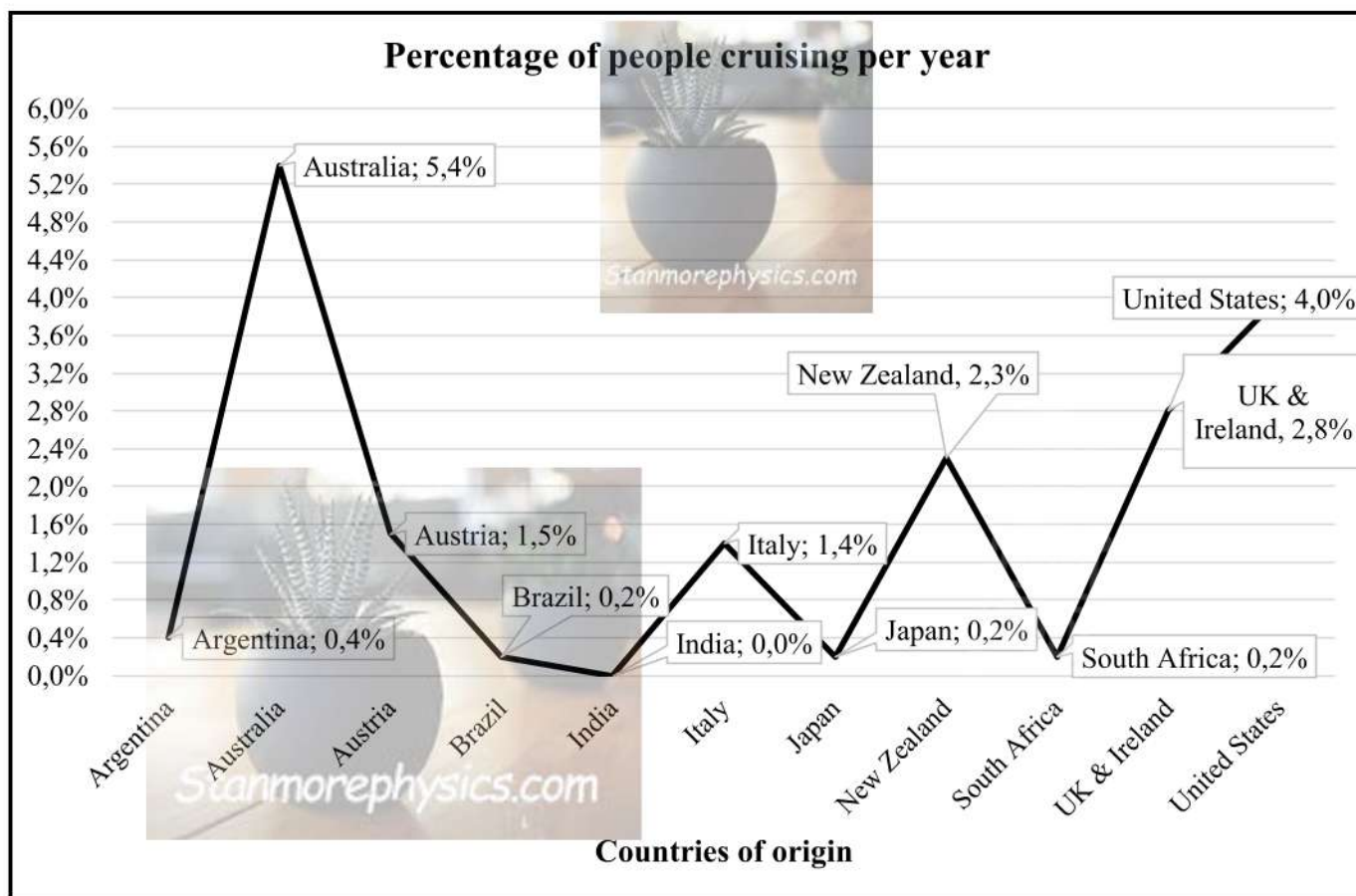
JUNE 2025

This addendum consists of 5 pages with 3 annexures and 1 Answer sheets.

**ANNEXURE A
QUESTION 3.1**

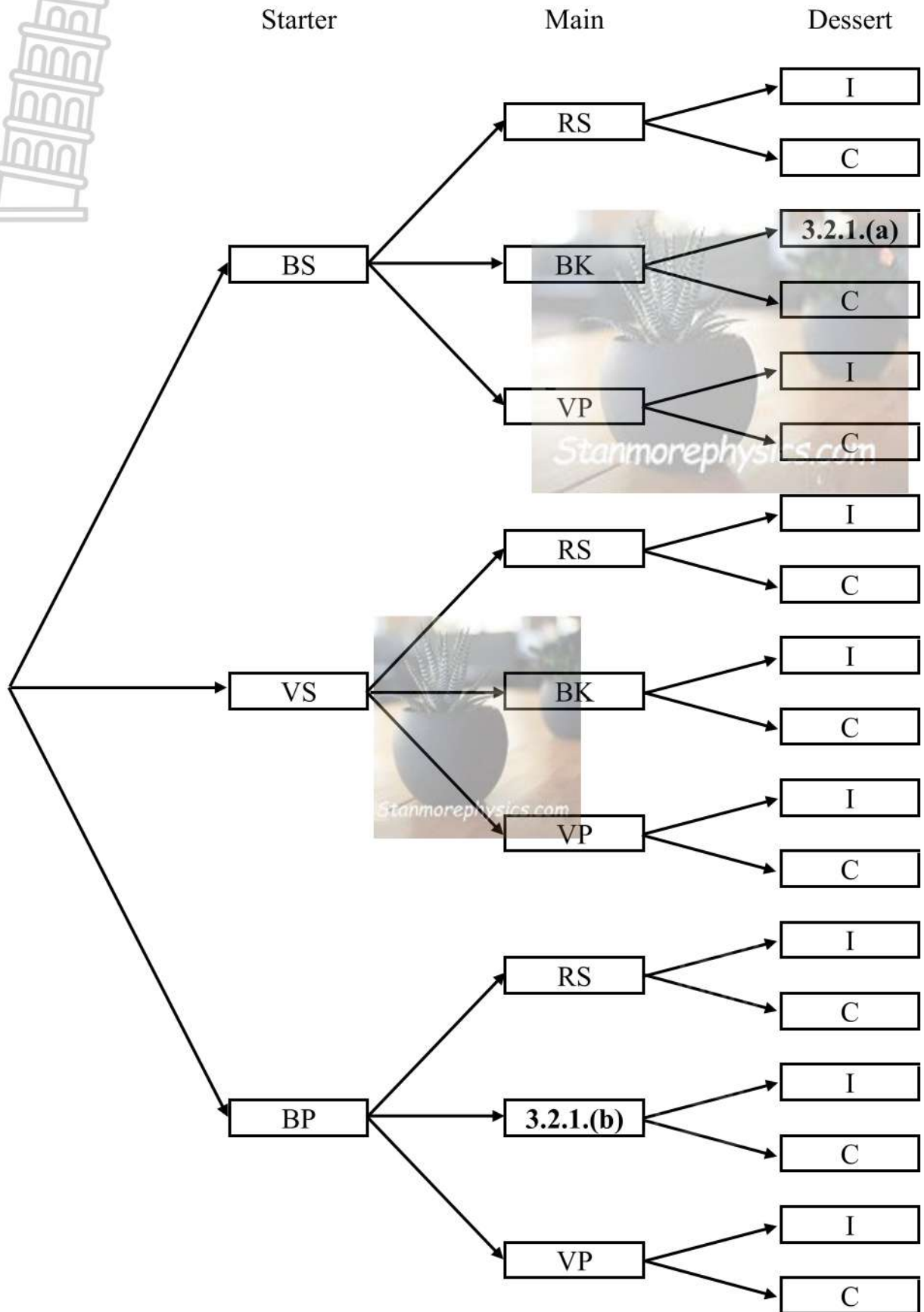
TABLE 4: Number of people from each country that took a cruise

COUNTRY	NUMBER OF CRUISE PASSENGERS (in thousands)	POPULATION OF THE COUNTRY
India	221	1 380 000 000
Japan	266	126 400 000
Brazil	510	212 500 000
Australia	1 345	25 000 000
United States	13 091	331 000 000
New Zealand	112	4 800 000
Argentina	...	45 200 000
South Africa	143	59 300 000
Italy	831	60 400 000
UK & Ireland	2 009	72 000 000
Austria	136	9 000 000



[Adapted from www.cruisemummy.co.uk]

ANNEXURE B
QUESTION 3.2



**ANNEXURE C:
QUESTION 4.1 – INGREDIENTS TO MAKE COFFEE AND TEA**

ROOIBOS TEA	COFFEE
	
R59,25 for 80 × teabags	VAT (15%) paid on 200 g of Jacobs = R24,38
LONG LIFE MILK	SUGAR
	
R97,95 for 6 × 1 litre	R45,95 for 1 × 2 kg

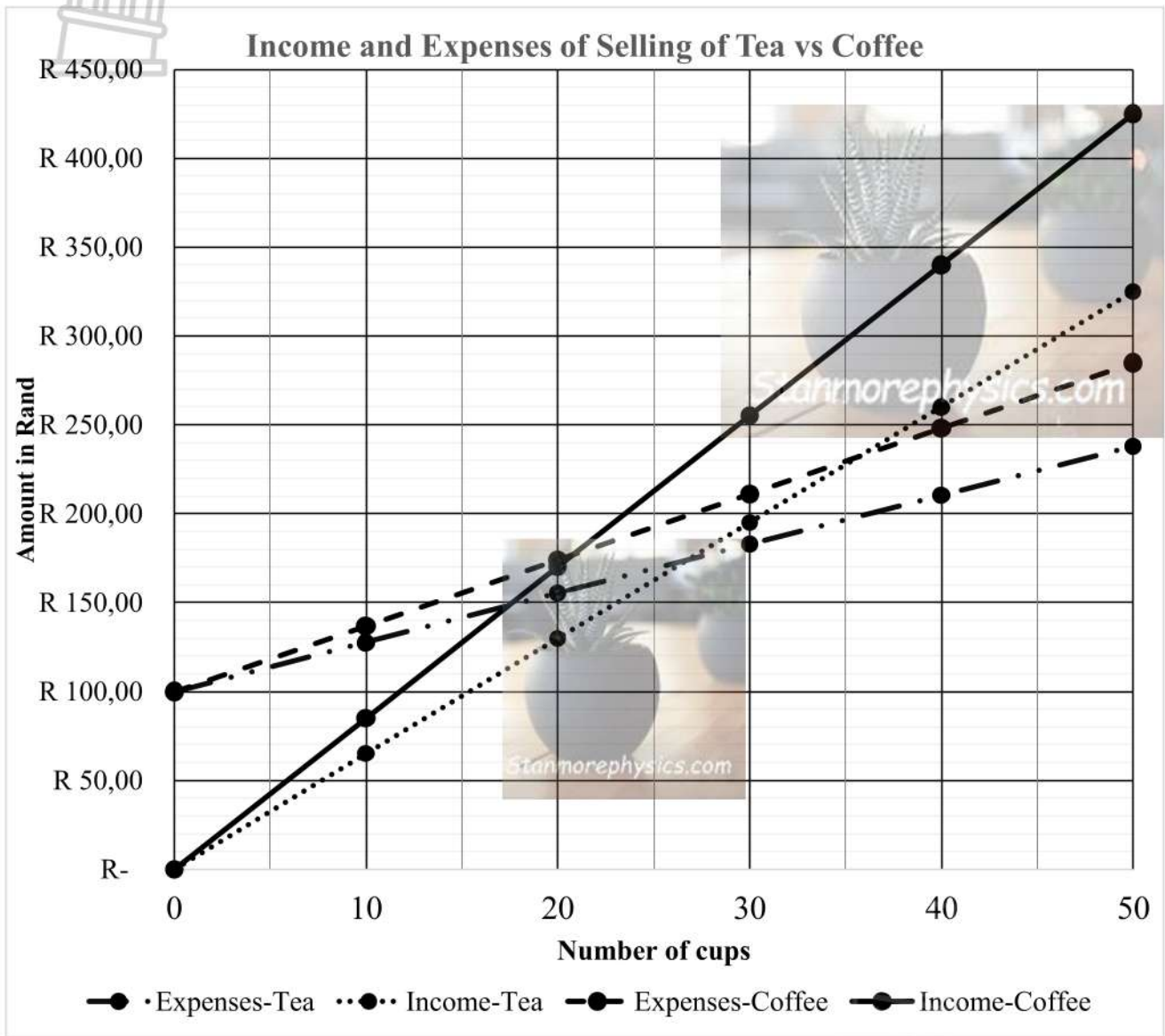
[Source:www.makro.co.za]

INGREDIENTS FOR 1 CUP OF TEA	
1 × tea bag	R0,74
Average of 2 teaspoons of sugar	R0,23
75 ml of milk	...
Additional costs	To be confirmed
TOTAL	

INGREDIENTS FOR 1 CUP OF COFFEE	
1,5 × teaspoon of coffee	R1,68
Average of 2 teaspoons of sugar	R0,23
75 ml of milk	...
Additional costs	To be confirmed
TOTAL	

ANNEXURE D

QUESTION 4.2: COMPARING TEA AND COFFEE AS A POSSIBLE FUNDRAISER.



Data Table	0 cups	10 cups	20 cups	30 cups	40 cups	50 cups
Expenses-Tea	R0,00	R65,00	R130,00	R195,00	R260,00	R325,00
Income-Tea	R0,00	R130,00	R260,00	R390,00	R520,00	R650,00
Expenses-Coffee	R100,00	R127,60	R155,20	R182,80	R210,40	R238,00
Income-Coffee	R100,00	R182,80	R265,60	R348,40	R431,20	R514,00



NAME OF YOUR SCHOOL

MATHEMATICAL LITERACY

EXAMINATION PAPER 1

JUNE 2025

MARKING GUIDELINES

Stanmorephysics.com

MARKS: 100

Cognitive Distribution for Assessment:

	Level 1	Level 2	Level 3	Level 4
Expected:	30%	30%	20%	20%
Actual:	28%	26%	23%	21%

Per Topic Distribution for Assessment:

Topic:	Finance	Data Handling	Measurement	Maps & Plans	Probability
% of task:	57%	36%			7%

Symbol/Kode	Explanation/Verduideliking
M	Method/Metode
MA	Method with accuracy/Metode met akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/document/diagram/Lees vanaf tabel/grafiek/dokument/diagram
SF	Correct substitution in a formula/Korrekte vervanging in 'n formule
O	Opinion/Explanation/Opinie/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 penalisasie vir afronding nie
AO	Answer only/Slegs antwoord
MCA	Method with consistent accuracy/Metode met volgehoue akkuraatheid
RCA	Rounding consistent with accuracy/ Afronding met volgehoue akkuraatheid

These marking guidelines consists of 8 pages.

QUESTION 1 [22 MARKS/PUNTE]			
QUES	SOLUTION	EXPLANATION/MARKS : FULL MARKS	Topic Level
1.1.1	I ✓✓A	2A Definition (2)	F L1
1.1.2	D ✓✓A	2A Definition (2)	D L1
1.1.3	C ✓✓A	2A Definition (2)	F L1
1.1.4	A ✓✓	2A Definition (2)	D L1
1.2.1	Renault ✓✓A	2RT correct Brand of car (2)	F L1
1.2.2	One hundred and twenty eight thousand six hundred and sixty three ✓✓RT	2RT correct value (2)	F L1
1.2.3	142 612 ; 67 456 ; 49 438 ; 31 952 ; 30 710 ; 29 158 ; 23 273 ; 21 703 ; 19 904 ; 16 319 ✓RT	1RT all correct values 1A correct order (2)	D L1
1.2.4	✓MA $\frac{5,89}{100} \times 32\,766$ $= 1\,929,9147$ $= 1\,930$ units ✓CA	1MA correct % calculated 1CA correct answer (2)	F L1
1.3.1	✓MA $A = R91,43 - R79,50 = R11,93$ ✓A OR $A = \frac{15}{100} \times 79,50 = R11,93$ ✓✓A	1MA subtract correct values 1A correct answer OR 1MA correct % 1A correct answer (2)	F L1
1.3.2	Step 5 = 5kl ✓✓A	2A correct answer (2)	F L1
1.3.3	✓MA Tariff (incl.VAT) = R106,18 + R15,93 ✓A = R122, 11 OR $R106,18 \times \frac{115}{100} = R122,107 = R122,11$	1MA subtracting 1A correct values (2)	F L1

		[22]	
--	--	------	--



QUESTION/VRAAG 2 [21 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/ Verduideliking	T&L
2.1.1	$R1\ 207 + R11\ 999 \checkmark RT$ $= R13\ 206 \checkmark A$	1RT identify correct values 1A total purchases (2)	F L1
2.1.2	$\checkmark RT \frac{22\ 103,58}{40\ 000} \checkmark MA \times 100\%$ $= 55,26\% \checkmark CA$	1RT identify money spent 1MA correct percentage calculation 1CA simplification (3)	F L2
2.1.3	$100\% - 12\% = 88\% \checkmark A$ $11\ 999 \times \frac{100}{88} \checkmark MA$ $= R13\ 635,23 \checkmark CA$	1A Finding discounted percentage 1MA calculate original price 1CA simplification (3)	F L2
2.1.4	She may not necessarily have the cash to purchase the product and it is easier for her to pay off monthly. $\checkmark \checkmark O$	2O explanation (2)	F L4
2.2.1	$\frac{227\ 600}{12} \checkmark MA \times 1,5 \checkmark MA$ $= R28\ 450 \checkmark CA$	1MA calculating monthly salary 1MA multiply by 1.5 1CA simplification (3)	F L2
2.2.2	Taxable income: $227\ 600 + 28450$ $= 256\ 050 \checkmark A$ Tax before rebate = $42\ 678 + 26\% \checkmark RT \times (256\ 050 - 237\ 100) \checkmark SF$ $= 42\ 678 + 26\% \times 18\ 950$ $= 42\ 678 + 4\ 927 \checkmark MCA$ $= 42\ 605 \checkmark CA$ $\checkmark MA$ Tax payable = $47\ 605 - 17\ 235 \checkmark RT - (364 \times 12)$ $= R26\ 002 \checkmark CA$	CA from 2.2.1 1A adding bonus to get TI 1RT identify correct bracket 1SF correct substitution 1MCA adding 1CA simplification 1RT correct rebate & credit 1MA monthly tax credit 1CA simplification (8)	F L3
		[21]	

QUESTION/VRAAG 3 [26 MARKS/PUNTE]			
Q/V	Solution/Oplissing	Explanation/Verduideliking	T&L
3.1.1	Discrete ✓✓ A	2A correct answer (2)	D L1 E
3.1.2	0,2% ✓✓ A	2A correct mode (2)	P L2 E
3.1.3	<p>✓MA ✓RT Argentina: $45\,200\,000 \times 0,40\% = 180\,800$ people ✓CA ✓C Brazil: $510 \times 1000 = 510\,000$ people ∴ His statement is valid ✓O</p> <p>OR</p> <p>✓MA ✓RT Argentina: $45\,200\,000 \times 0,40\% = 180\,800$ people ✓CA ∴ 180,8 thousand ✓C Brazil: 510 thousand ∴ His statement is valid ✓O</p>	<p>1RT correct percentage 1MA calculating percentage 1CA simplification 1C Converting to thousands 1O Verification</p> <p>1RT correct percentage 1MA calculating percentage 1CA simplification 1C Converting to thousands 1O Verification (5)</p>	D L4
3.1.4	India ✓✓ A	2A concept of outlier (2)	D L1 E
3.1.5	<p>0,0; 0,2; 0,2; 0,2; 0,4; 1,4; 1,5; 2,3; 2,8; 4,0; 5,4 ✓MA Median = 1,4 Q1 = 0,2 ✓A Q3 = 2,8 ✓A IQR = $2,8 - 0,2$ ✓SF = 2,6 % ✓CA</p>	<p>1MA arranging correct data set 1A Quartile 1 1A Quartile 3 1SF 1CA IQR (5)</p>	D L3 M
3.1.6	<p>The analyst is incorrect. ✓O To calculate the percentage: ✓SF $\frac{221\,000}{1\,380\,000\,000} \times 100$ ✓MA</p>	<p>1O Incorrect 1SF Correct values 1MA percentage calculation 1S simplification</p>	D L4 D

	<p>$= 0,01601449275... \checkmark S$</p> <p>Data is rounded to nearest 1 decimal, so it is shown as 0,0.</p> <p>$\checkmark O$</p>	<p>1 O Explanation /Refer to rounding</p> <p>(5)</p>	
3.2.1	<p>(i) C OR chocolate mousse</p> <p>(ii) BK OR Baked Kingklip</p>	<p>1A C</p> <p>1A BK</p> <p>(2)</p>	<p>D</p> <p>L2</p> <p>E</p>
3.2.2	<p>$\checkmark A$</p> <p>$\frac{12}{18} \times 100 = 66.66\% \checkmark CA$</p> <p>$\checkmark A$</p> <p>OR</p> <p>$\checkmark A$</p> <p>$\frac{2}{3} \times 100 = 66.66\% \checkmark CA$</p> <p>$\checkmark A$</p>	<p>1A Correct denominator</p> <p>1 A Correct denominator</p> <p>1CA percentage</p> <p>1A Correct denominator</p> <p>1 A Correct denominator</p> <p>1CA percentage</p> <p>NPR</p> <p>(3)</p>	<p>D</p> <p>L2</p> <p>M</p>



QUESTION 4 [31 MARKS]			
4.1.1	<p>VAT inclusive price:</p> $\frac{115}{15} \times \frac{R24,38}{1} = R186,91$ <p>✓MA ✓RT ✓CA</p> <p>OR</p> $\frac{100}{15} \times \frac{R24,38}{1} = R162,53 + R24,38 = R186,91$ <p>✓MA ✓RT ✓CA</p>	<p>1MA concept of VAT 1RT correct value</p> <p>1CA simplification</p> <p>OR</p> <p>1MA concept of VAT 1RT correct value</p> <p>1CA simplification</p> <p>(3)</p>	F L2 D
4.1.2	<p>Cost of milk per litre:</p> $R97,95 \div 6 = R16,33$ <p>✓RT ✓MA</p> $A = R16,33 \times 0,075 = R1,22$ <p>✓MA ✓C ✓CA</p>	<p>1RT correct value 1MA finding cost per litre</p> <p>1C converting 75 ml to ℓ 1MA multiply by R16,16 1CA simplification</p> <p>(5)</p>	F L3 M
4.2.1	<p>Estimated cost at breakeven point = R172,00 Estimated cups at breakeven point = 27</p> <p>✓A ✓A</p>	<p>1A correct estimation 1A correct estimation [Accept R170 – R180; 26 - 27]</p> <p>(2)</p>	F L2 M
4.2.2	<p>Expense of 50 cups of coffee:</p> $100 + 50(R3,70) = 100 + 185 = R285,00$ <p>✓RT ✓MA</p>	<p>1RT correct values 1MA setting up of formula 1CA simplification</p> <p>(3)</p>	F L2 M
4.2.3	<p>Profit of Tea = 195,00 – 182,80 = R12,20 Profit of Coffee = 255,00 – 211,00 = R44,00 Difference in profit = R44,00 – R12,20 = R31,80</p> <p>✓RT ✓M ✓CA ✓RT ✓MA ✓MCA</p> <p>Therefore, the statement is correct ✓O</p>	<p>1RT correct values 1M subtract expense from income 1CA simplification 1RT correct values 1MA finding profit</p> <p>1MCA subtracting profits</p> <p>1O Justification</p> <p>(7)</p>	F L4 M

