



education

MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

MATHEMATICAL LITERACY P1

SEPTEMBER 2026

MARKS: 150

TIME: 3 hours

Stanmorephysics.com

This question paper consists of 12 pages and a 19-page SPECIAL ANSWER BOOK.

INSTRUCTIONS AND INFORMATION

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

QUESTION 1

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

TABLE 1: DEFINITIONS OF TERMINOLOGY USED IN MATHEMATICAL LITERACY.

LETTER	DEFINITIONS
A	Events that have even chances of happening.
B	The value in the middle of an arranged set of data.
C	Arranging data from the smallest to the biggest.
D	Data organised from the biggest value to the smallest.
E	The difference between the highest and lowest value in a set of data.
F	The relationship between two currencies.
G	The sum of all values in a set of data, divided by the number of values.
H	Likelihood of an event happening.

Use TABLE 1 above and match the definitions with the terminology below.

Write only the letter (A - H) next to the question numbers (1.1.1 to 1.1.5), eg 1.1.5 G.

- 1.1.1 Exchange rate (2)
- 1.1.2 Mean (2)
- 1.1.3 Descending (2)
- 1.1.4 Range (2)
- 1.1.5 50/50 events (2)

- 1.2 The table below shows how the municipality of Tshwane puts water consumption restrictions on residents and businesses.

TABLE 2: TSHWANE WATER RESTRICTIONS FOR LEVEL 1 TO 3.

	CONSUMPTION PER 30 DAYS.	RESTRICTION LEVELS PER KL (VAT INCLUSIVE)		
		LEVEL 1	LEVEL 2	LEVEL 3
Block 1	0kl to 9 kl	R0.00	R0.00	R0.00
Block 2	10kl to 18kl	R28.97	R34.75	R41.68
Block 3	19kl to 30kl	R39.20	R58.45	R105.19
Block 4	31kl to 42kl	R45.13	R72.18	R158.75
Block 5	43kl to 60kl	R48.28	R86.89	R225.86
Block 6	More than 60kl	R51.70	R103.38	R310.08

[<https://Tshwane.gov.za>]

Use TABLE 2 above to answer the questions that follows.

- 1.2.1 Write the acronym VAT in full. (2)
- 1.2.2 Identify the block with the largest maximum amount of water excluding block 6. (2)
- 1.2.3 Determine the number of kl that can be charged in Block 3. (2)
- 1.2.4 Name the type of graph that can be used to represent the information on table 1. (2)
- 1.2.5 Determine the difference between the charges for level 3 and 1 in block 6. (2)

- 1.3. ANNEXURE A in the ANSWER BOOK shows the results of the foundation phase in the Gert Sibande District mid-year exam 2025.

Use ANNEXURE A to answer the questions that follow.

- 1.3.1 Identify the year in which the results have been the lowest in most subjects. (2)
- 1.3.2 Write down the name of the subject whose performance remained the same from 2023 to 2025. (2)

1.3.3 State whether the data represented by the graph above is discrete or continuous. (2)

1.3.4 Write down the performance in Mathematics in 2023 to the performance in Life Skills in 2025 as a ratio in its simplest form. (3)

[29]



QUESTION 2

- 2.1 Khanyi is a 66-year-old professional nurse at Tafalofefe hospital. She earns a monthly basic salary of R20 220,50. She contributes 7.5% of her salary to the pension fund scheme and receives an annual bonus equivalent to her monthly basic salary. She has a medical aid where she covered her three daughters.

Use the information above and ANNEXURE B in the ANSWER BOOK to answer the questions that follow.

2.1.1 Identify the minimum amount of tax levied on taxpayers in tax bracket B. (2)

2.1.2 Determine the number of tax brackets in the tax rate table in Annexure B. (2)

2.1.3 Show how the amount of R42 678 in tax bracket B was calculated. (2)

2.1.4 Calculate Khanyi's monthly tax. (9)

- 2.2 Khanyi is planning to relocate to Mpumalanga in a few years' time but does not have a house to stay. She saved R1 300,00 per month for 2 years. She has two investment options.

OPTION 1

ABC bank at an interest rate of 6,6% p.a simple interest.

OPTION 2

ABSA bank: 9,02% pa interest, compounded yearly.

Use the information above to answer the questions that follow.

2.2.1 Calculate, how much money will she have in her investment account after three years if she invests with ABC Bank (5)

2.2.2 She claims that investing with ABSA will be the best option because she will earn the same amount of interest as with ABC Bank in 2,5 years.

Verify, with calculations if her claim is valid.

(9)
[29]

QUESTION 3

- 3.1 ANNEXURE C in the ANSWER BOOK is showing South Africa's revenue for 2025/26 in billions of rands.

Use ANNEXURE C in the ANSWER BOOK to answer the questions that follow.

- 3.1.1 Identify South Africa's main source of income in the context. (2)

- 3.1.2 Determine the amount received from fuel levy as a percentage of the total income. (5)

- 3.1.3 Write down, without using numerals, the amount of revenue expected from VAT. (2)

- 3.2 ANNEXURE D in the ANSWER BOOK shows a log table of community soccer teams in Fernie in the Gert Sibande district in Mpumalanga.

Use ANNEXURE D in the ANSWER BOOK to answer the questions that follow.

- 3.2.1 Show how the 11 points for Fernie Masters were determined. (2)

- 3.2.2 Determine the probability of randomly selecting a team that has scored 10 goals. (2)

- 3.2.3 One of the commentators stated that the interquartile range for the GF is 5. Verify, through calculations whether his statement is valid.

You may use the following formula.

$$\text{Interquartile range (IQR)} = Q_3 - Q_1$$

(4)

- 3.3 The learners at Chief DT Dlamini Secondary school were asked to measure their weight in kg.

TABLE 5 below are their measurements rounded to the nearest whole numbers.

TABLE 5: MEASUREMENT OF LEARNERS' WEIGHT.

Weight (Kg)	49	53	60	P	67	69	104
Number of learners	1	1	2	3	4	3	1

Use TABLE 5 and the information above to answer the questions that follow.

- 3.3.1 Determine the sample size . (2)

- 3.3.2 Identify the population. (2)

- 3.3.3 The mean weight is 66 kg. Determine the missing value P. (4)

[25]



QUESTION 4

- 4.1 Mrs Nkosi makes 375 fat cakes using 70 cups of flour that cost R105. She sells each fat cake for R1, 00, she buys the ingredients below.

Ingredients:

10 kg flour @ R120

2kg sugar @ R50

2 litres cooking oil @ R62

7 grams' yeast @ R5

Note. 1cup = 125 grams

4 cups of flour use 7 grams of yeast.

Yeast is sold in packets of 7g.

Use the information above to answer the questions that follow.

- 4.1.1 Determine the price of a 1 litre cooking oil, as a percentage of the cost of flour. (4)

- 4.1.2 Show with calculations that the cost of yeast that will be needed to bake the 70 cups is R90. (5)

- 4.1.3 Determine the profit made from baking seventy cups of flour, assuming all ingredients were used as is except the flour and yeast (5)

- 4.1.4 Mrs Nkosi claims that the profit she makes is more than 22%.
Verify, showing ALL calculations, weather her claim is valid. (4)

- 4.2 TABLE 6 below shows the top best athletes who advanced to the final in the long jump competition in Africa.

TABLE 6: HEIGHTS AND DISTANCES JUMPED BY TOP BEST ATHLETES.

ATHLETE	NATIONALITY	DISTANCES IN METRES	HEIGHT IN METRES
Cheswill Johnson	South Africa	7.78	1.80
Chenoult Coetzee	Namibia	7.78	1.90
Goodness Iredia	Nigeria	7.75	1.98
Emmanuel Njoku	Nigeria	7.72	1.70
Thapelo Monaiwa	Botswana	7.68	1.89
Tafadzwa Chikomba	Zimbabwe	7.59	1.78
Appolinaire Yinra	Cameroon	B	1.70
Raymond Nkwemy Tchomfa	Cameroon	7.47	1.72
Buli Melaku	Ethiopia	7.32	1.79
Romoe N'tia	Benin	7.29	1.81
Louai Lamraoui	Algeria	7.29	1.90
Komi Bernard Konu	Togo	7.25	1.77

[Adapted from 2024 African Championships in Athletics. Wen.wikipedia.org]

Use TABLE 6 above to answer that questions that follow.

- 4.2.1 The median distance jumped by the top best athletes is 7,58m.
Determine the missing value B. (3)
- 4.2.2 Determine the percentage of selecting an athlete who jumped between the median distance and the shortest distance from the top best athletes. (3)
- 4.2.3 Show that the 25th percentile of the athletes' height is 1,745m. (2)
- 4.2.4 Use the heights of the athletes to complete the frequency table by writing answers for A, B, C and D in the ANSWER BOOK. (4)
- 4.2.5 Use the data on heights of the athletes to draw a suitable graph that can best represent the data. (4)

[34]

QUESTION 5

- 5.1 Mr Makhombothi, the sports organiser at Martin Academy, is planning a four-day educational tour to Mbombela for 99 learners. Transport costs R300,00 per learner, while 4 accompanying teachers travel free of charge. The total budget for the trip is R120 000, 00.

The table below shows the quotation for the trip to Mbombela

TABLE 7: COST QUOTATION FOR THE SCHOOL TRIP TO MBOMBELA.

ITEM	DESCRIPTION	COST
Accommodation	3 nights	R150,00 per person per night
Transport	2 days	R3 000,00
Activities	Mbombela Museum	R5 150,00 teachers included
	Kruger National Park	R200 per person
	Botanical gardens	Free
Meals	Day 1: dinner	Breakfast: R50,00 per person
	Day 2: 3 full meals	Full day: R160,00 per person per day
	Day 3: 3 full meals	
	Day 4: break fast	Dinner: R120 per person

Use TABLE 7 to answer the questions that follow.

- 5.1.1 One teacher claimed that the total cost of transport and accommodation will be more than a third of the budgeted amount.

Verify, showing ALL calculations whether the claim is correct.

(8)

- 5.1.2 Mr Makhombothi during his presentation in a SGB meeting claims that the total cost of the trip will not cost more than R125 000,00.

Verify showing ALL calculations whether his claim is correct.

(9)

- 5.1.3 Determine how much each learner will pay for the trip rounded to the nearest R10,00.

(6)

- 5.2 Noel wants to study medicine. He recently got a scholarship to enrol in one of the universities in the United Kingdom (UK), and his annual tuition fee for undergraduates is approximately 12 000,00 USD. He decides to buy a round-trip ticket from South Africa to the United Kingdom that cost R11 015, 00.

TABLE 8: EXCHANGE RATES BETWEEN DIFFERENT COUNTRIES.

CURRENCY	UNITS PER ZAR	ZAR PER UNIT
US dollars (USD) (\$)	0,053788	18,5915074
Euro (EUR) (€)	0,051610	19,37608991
British pound (GBP) (£)	C	23,16584428
Indian rupee (INR)	4,658130	0,2146784225
Swiss franc (CHF) (fr.)	0,048845	20,47292456

[Adapted from <https://www.x-rates.com/table/?from=ZAR&amount=1>]

Use TABLE 8 and the information above to answer the questions that follow.

- 5.2.1 Calculate the value of the rate C. (2)
- 5.2.2 Write down the two currencies that have the closest values in the "Units per ZAR" column. (2)
- 5.2.3 Identify the second strongest currency against the South African Rand. (2)
- 5.2.4 Determine his annual tuition fee in Indian rupees. (4)

[33]

TOTAL: 150



MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

SCHOOL NAME:

DISTRICT:

NAME &
SURNAME

CLASS

DATE:

SUBJECT	MATHEMATICAL LITERACY P1
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[illegible]

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Please turn over

FOLLOW THESE INSTRUCTIONS CAREFULLY.

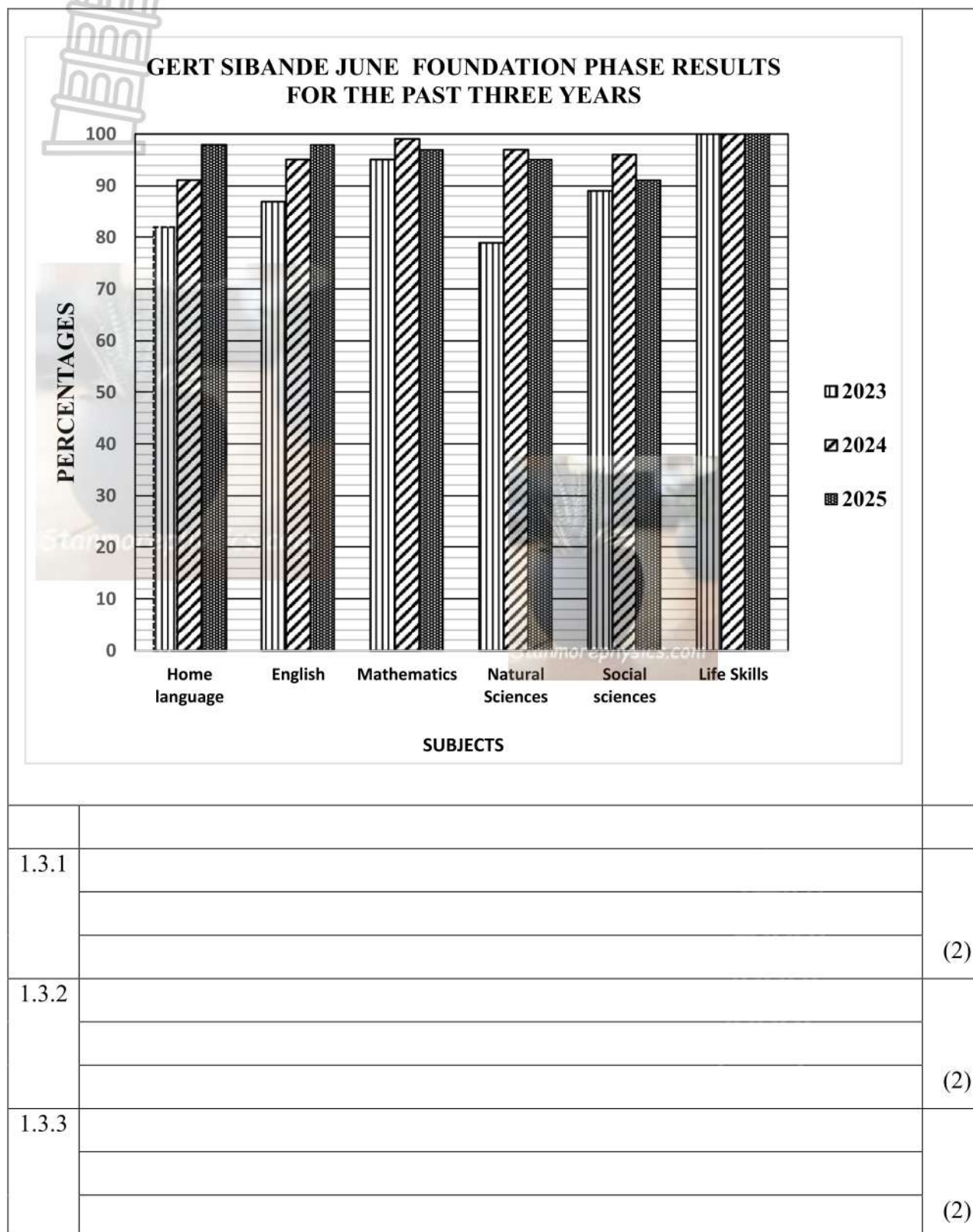
1. Clearly write the NAME of your school and your NAME in the spaces provided.
2. Answer ALL questions in the space provided in the ANSWER BOOK ONLY. If you require additional space for answers.
 - 2.1 Use the additional space provided at the end of the ANSWER BOOK.
 - 2.2 When answering a question in the additional space, indicate clearly the question number in the column on the left-hand side.
3. No pages may be torn from this answer book.
4. Candidates may not retain an ANSWER BOOK or remove it from the examination room.
5. Answers must be written in black/blue ink as distinctly as possible.
6. Do not write in the margins.
7. Draw a neat line through any work that must not be marked.

QUESTION 1

	Solution	Marks
1.1.1		(2)
1.1.2		(2)
1.1.3		(2)
1.1.4		(2)
1.1.5		(2)
1.2.1		(2)
1.2.2		(2)
1.2.3		(2)
1.2.4		(2)
1.2.5		(2)

QUESTION 1.3

ANNEXURE A



	Solution	Marks
1.3.4		(3)
		[29]



QUESTION 2.1

ANNEXURE B

TABLE 3 BELOW SHOWS TAX RATES FROM 1 MARCH 2024 TO 28 FEBRUARY 2025.

Tax bracket	Taxable income (R)	Tax Rates (R)
A	0 – 237 100	18% of taxable income
B	237 101 – 370 500	42 678 + 26% of taxable income above 237 100
C	370 501 – 512 800	77362 + 31% of taxable income above 370 500
D	512 801 – 673 000	121 475 + 36% of taxable income above 512800
E	673 001 – 857 900	179147 + 39% of taxable income above 673 000
F	857 901 – 1 817 000	251 258 + 41% of taxable income above 857900
G	1 817 001 and above	644 489 + 45% of taxable income above 1817000

REBATES AND TAX THRESHOLD 2024/2025

REBATES	AMOUNT	TAX THRESHOLD
Below 65	R17 235	R95 750
Secondary (65 and older)	R9 444	R148 217
Tertiary (75 and older)	R3 145	R165 689

MEDICAL TAX CREDITS PER MONTH FOR 2024/2025

Taxpayer	R364
Taxpayer and one dependent	R728
Each additional dependent	R246

[adapted from www.sars.gov.za]

QUESTION 2

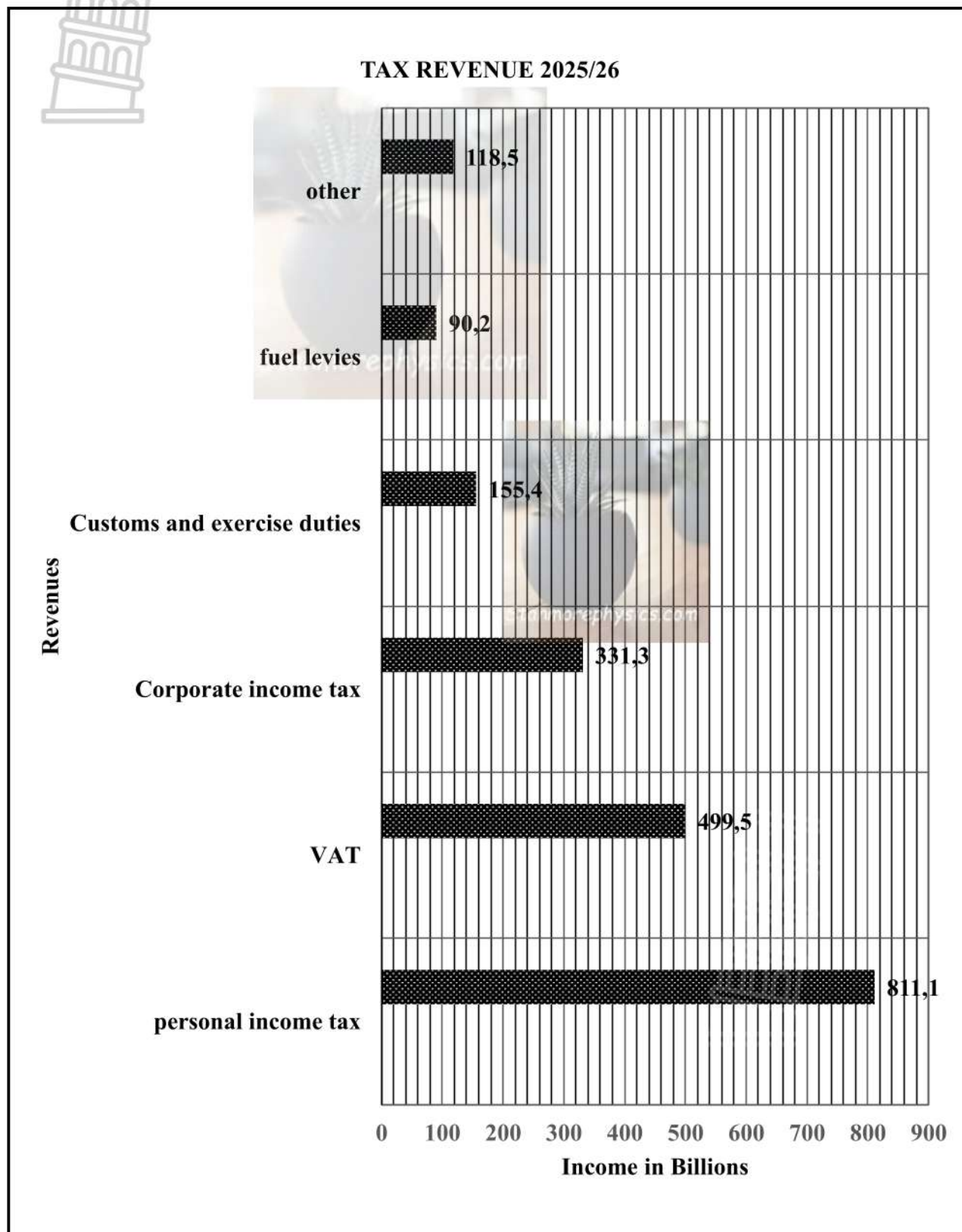
	Solution	Marks
2.1.1		(2)
2.1.2		(2)
2.1.3		(2)
2.1.4		(9)
2.2.1		(5)

2.2.2			
			(9)
			(29)



QUESTION 3.1

ANNEXURE C



	Solution	Marks
3.1.1		(2)
3.1.2		(5)
3.1.3		(2)



QUESTION 3.2

ANNEXURE D

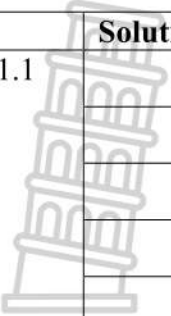
TABLE 4 SHOWING A LOG OF COMMUNITY SOCCER TEAMS IN FERNIE.

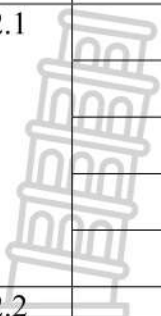
Teams	P	W	D	L	GF	GA	GD	PTS
Blairemore	7	6	1	0	21	4	17	19
MT Valencia	6	4	2	0	15	5	10	14
Mpuluzi all Stars	6	4	2	0	11	2	9	14
Abagijimi	6	4	1	1	13	6	7	13
Syde United	6	4	0	2	18	8	10	12
Mid Express	7	3	2	2	8	7	1	11
Fernie Masters	6	3	2	1	7	10	-3	11
Super Strikers	6	3	1	2	10	7	3	10
FC Sport.com	6	3	1	2	10	13	-3	10
Manchester united	6	3	0	3	10	11	-1	9

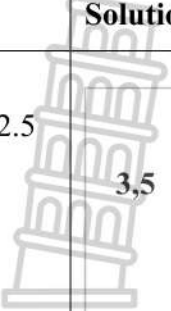
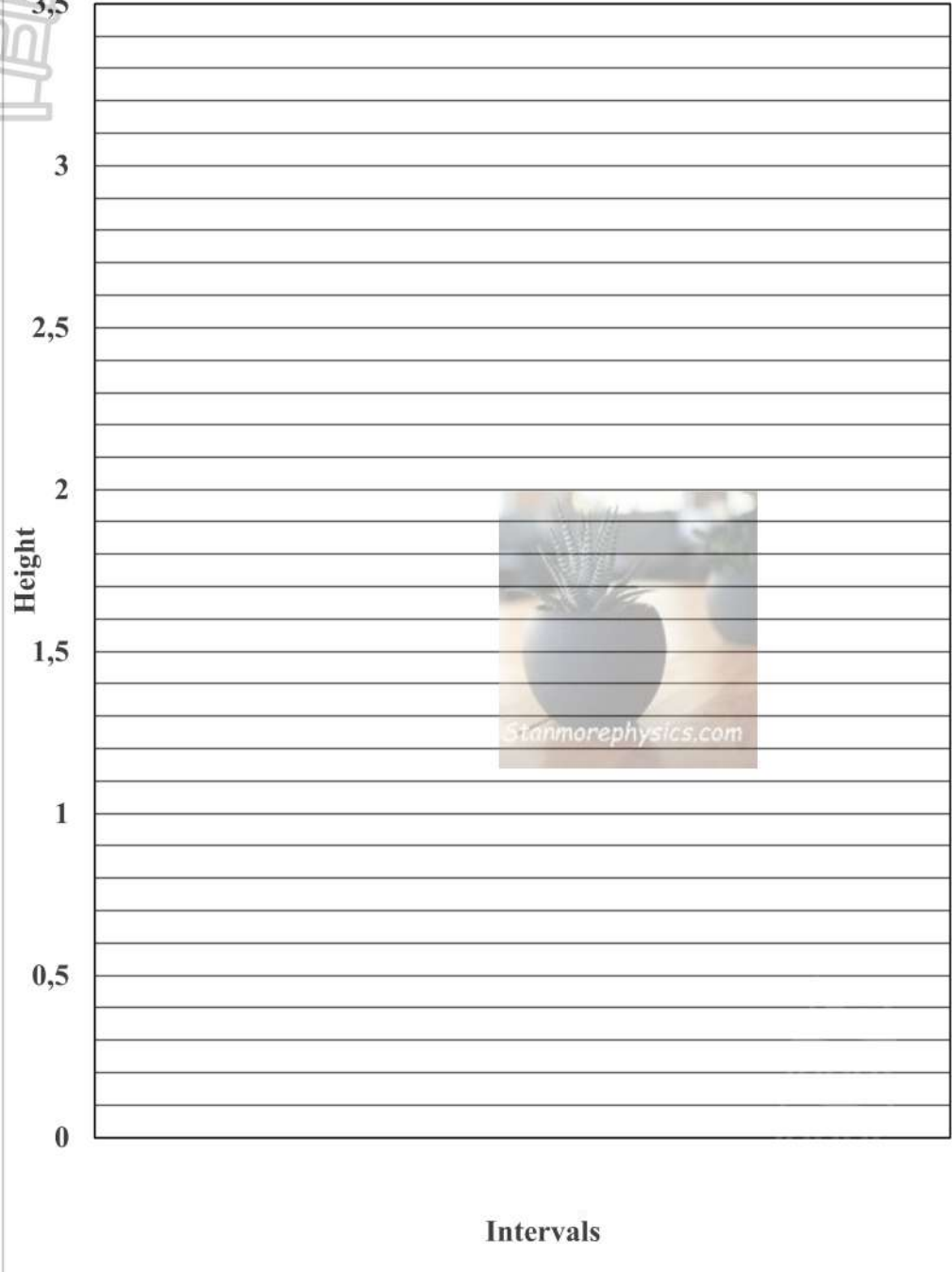
EXPLANATION OF LETTERS IN THE TABLE		POINTS EARNED
P: Played games	GF: Goal scored by the team	Win = 3 points
W: Win	GA: Goal scored against the team	Draw = 1 points
D: Draw	GD: Goal difference	Loose = 0 points
L: Loose	PTS: Points	

	Solution	Marks
3.2.1		(2)
3.2.2		(2)
3.2.3		(4)
3.3.1		(2)
3.3.2		(2)
3.3.3		(4)
		[25]

QUESTION 4

	Solution	Marks
4.1.1		(4)
4.1.2		(5)
4.1.3		(5)
4.1.4		(4)

	Solution	Marks																																
4.2.1		(3)																																
4.2.2		(3)																																
4.2.3		(2)																																
4.2.4	<table><thead><tr><th>Height</th><th>Tally</th><th>Frequency</th><th>Cumulative Frequency</th></tr></thead><tbody><tr><td>1,70 – 1,75</td><td>///</td><td>3</td><td>3</td></tr><tr><td>1,75 – 1,80</td><td>///</td><td>3</td><td>B =</td></tr><tr><td>1,80 – 1,85</td><td>//</td><td>A =</td><td>8</td></tr><tr><td>1,85 – 1,90</td><td>/</td><td>1</td><td>09</td></tr><tr><td>1,90 – 1,95</td><td>//</td><td>C =</td><td>11</td></tr><tr><td>1,95 – 2,00</td><td>/</td><td>1</td><td>12</td></tr><tr><td>Total</td><td></td><td>12</td><td>D =</td></tr></tbody></table>	Height	Tally	Frequency	Cumulative Frequency	1,70 – 1,75	///	3	3	1,75 – 1,80	///	3	B =	1,80 – 1,85	//	A =	8	1,85 – 1,90	/	1	09	1,90 – 1,95	//	C =	11	1,95 – 2,00	/	1	12	Total		12	D =	(4)
Height	Tally	Frequency	Cumulative Frequency																															
1,70 – 1,75	///	3	3																															
1,75 – 1,80	///	3	B =																															
1,80 – 1,85	//	A =	8																															
1,85 – 1,90	/	1	09																															
1,90 – 1,95	//	C =	11																															
1,95 – 2,00	/	1	12																															
Total		12	D =																															

	Solution	Marks
4.2.5 	HEIGHTS OF ATHLETES Height  Intervals	(4)
		[34]

QUESTION 5

Solution	Marks
5.1.1	(8)
5.1.2	(9)

	Solution	Marks
5.1.3		(6)
5.2.1		(2)
5.2.2		(2)
5.2.3		(2)
5.2.4		(4)
		[33]

	Additional space	Marks





education

MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

NASIONALE SENIOR SERTIFIKAAT

GRADE/GRAAD 12

MATHEMATICAL LITERACY P1
WISKUNDIGE GELETTERDHEID V1
SEPTEMBER 2026

MARKING GUIDELINES / NASIENRIGLYNE

MARKS/PUNTE: 150

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 the table/graph/map/diagram/document <i>Lees vanaf tabel/grafiek/kaart/diagram/document</i>
SF	Correct substitution in a formula/Korrekte vervanging in 'n formule
O	Opinion/Example/Explanation/Opinie/Voorbeeld/Verduideliking
P	Penalty e.g. for no units, incorrect rounding off, etc <i>Penalisasie, bv, Vir geen eenhede, verkeerde afronding, ens,</i>
R	Rounding off/Afronding
NPR	No penalty for rounding/Geen penalisasie vir afronding nie
AO	Answer only/Slegs antwoord
MCA	Method with constant accuracy/Metode met volgehoue akkuraatheid

These marking guidelines consist of 19 pages./ Hierdie nasienriglyne bestaan uit 19 bladsye

NOTE

- If a candidate answers a question TWICE, only mark the FIRST attempt,
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version,
- Consistent accuracy (CA) applies in all aspects of the marking guidelines; however, it stops at the second calculation error,
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra incorrect item presented,
- Rounding is an independent mark,
- General principle of marking, if the candidate makes one mistake one mark is deducted,
- A conclusion mark can only be given if relevant calculations precede it,
- No penalty for rounding (NPR) if the first decimal is correct,

LET WEL:

- As 'n kandidaat 'n vraag TWEE KEER beantwoord, merk slegs die EERSTE poging,
- As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging,
- Volgehoue akkuraatheid (CA) word in alle aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout,
- Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem het en ekstra antwoorde gee, penaliseer vir elke ekstra verkeerde item,
- Afronding tel as 'n afsonderlike punt,
- Die algemene beginsel van merk as 'n leeder een fout maak, word een punt afgetrek,
- 'n Gevolgtrekkingspunt kan slegs gegee word indien relevante berekening dit voorgaan,
- Geen penalisering vir ronding (NPR) as die eerste desivermenigvuldiging korrek is nie,

QUESTION/VRAAG 1 [29 MARKS/PUNTE] ANSWER ONLY FULL MARKS			
Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
1.1.1	F ✓✓ A	2A correct definition/ korrekte definisie (2)	F L1 E
1.1.2	G ✓✓ A	2A correct definition/ korrekte definisie (2)	D L1 E

Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
1.1.3	D ✓✓ A	2A correct definition/ korrekte definisie (2)	D L1 E
1.1.4	E ✓✓ A	2A correct definition/ korrekte definisie (2)	D L1 E
1.1.5	A ✓✓ A	2A correct definition/ korrekte definisie (2)	P L1 E
1.2.1	Value Added Tax/Belasting op toegevoegde waarde ✓✓ A	2A correct answer/ korrekte antwoord (2)	F L1 E
1.2.2	Block 5/Blok 5 ✓✓ A	2A correct block/ korrekte blok (2)	F L1 E
1.2.3	12 ✓✓ A	2A correct number of kl/ korrekte aantal kl (2)	F L1 M
1.2.4	Stepped graph / trap grafiek` Multiple bar graph/ Compound bar graph/ Histogram/ ✓✓ A Stepped line function.	2A correct type of graph. Korrekte tipe grafiek (2)	F L1 E
1.2.5	R310,08 –R51, 70 ✓ MA R258,38 ✓ A	1MA subtracting correct Values/aftrek van die korrekte waardes 1A correct difference/korrekte verskil (2)	F L1 E

Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
1.3.1	2023 ✓✓A	2A correct year/ korrekte jaar (2)	D L1 E
1.3.2	Life Skills/ Lewensvaardigheid ✓✓A	2A correct subject/ korrekte vak (2)	D L1 E
1.3.3	Continuous/ Kontinue ✓✓A	2A correct answer/ Korrekte antwoord (2)	D L1 E
* 1.3.4	✓RT 95:100 ✓A 19:20 ✓A	1RT both correct values/ beide korrekte waardes 1A correct order/ korrekte orde 1A correct simplification/ korrekte vereenvoudiging (3)	F L1 E
		[29]	

QUESTION/VRAAG 2 [29 MARKS/PUNTE]			
Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
2.1.1	R42 678 ✓✓A	2A correct amount/ <i>korrekte bedrag</i> (2)	F L1 E
2.1.2	7 ✓✓A	2A correct number of Bracket / <i>korrekte aantal klasse</i> (2)	F L1 E
2.1.3	✓RT $\frac{18}{100} \times R237\ 100$ ✓MA R42 678	1RT R237 100 1MA multiplying correct amount by 18% / <i>vermenigvuldiging die</i> <i>korrekte bedrag met 18%</i> (2)	F L2 M
Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
* 2.1.4	Pension/<i>Pensioen</i> = $\frac{7,5}{100} \times R20\ 220,50$ = R1 516,54 ✓A Taxable income/<i>Belasbare inkomste</i> = = R20 220,50 – R1 516,54 ✓MCA = R18 703,96 × 12 ✓M = R224 447,52 + R20 220,50 ✓M = R244 668,02 ✓CA OR R20 220,50 × 12 ✓M = R242 646 × $\frac{7,5}{100}$ ✓M = R242 646 – R18 198,45 ✓MCA = R224 447,55 + R20 220,50 ✓M ✓CA	1A correct pension fund/ <i>korrekte pensioenfonds</i> 1MCA subtracting pension fund/ <i>trek pensioenfonds af.</i> 1M multiplying by 12/<i>vermenigvuldiging met 12</i> 1M adding bonus/<i>plus bonus</i> 1CA taxable income/<i>belasbare Inkomste</i> OR 1M multiplying by 12/<i>vermenigvuldiging met 12</i> 1M multiplying by $\frac{7,5}{100}$ 1MCA subtracting pension fund/ <i>trek pensioenfonds af.</i> 1M adding bonus/<i>plus bonus</i> 1CA taxable income/<i>belasbare inkomste</i>	F L3 M

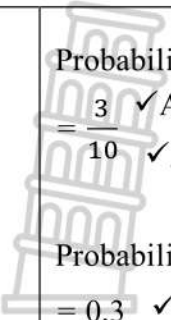
	$= R244\ 668,05$ <i>Tax / Belasting</i> $= R42\ 678 + 0,26 \times (R244\ 668,02 - R237\ 100)$ ✓SF $= R42\ 678 + R1967,69$ $= R44\ 645,69 - R17\ 235 - R9\ 444$ ✓RT $= R17\ 966,69 - R14\ 640$ ✓M $= R3326,69 \div 12$ $= R277,22$ ✓CA	1SF substituting correct taxable income/ <i>vervang korrekte belasbare inkomte in</i> 1RT both rebates/ <i>beide korting</i> 1M subtracting tax credits/ <i>trek belasatings krediet af</i> 1CA monthly income tax/ <i>maandlikse inkomste belasting</i> (9)	
Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
2.2.1	Amount to be invested / <i>Bedrag wat belê moet word</i> ✓MA $= R1300 \times 24$ $= R31\ 200$ ✓A Total Amount/ <i>Totale bedrag</i> $= \frac{6,6}{100} \times R31\ 200$ ✓MCA $= R2\ 059,20 \times 3$ ✓M $= R6\ 177,60 + R31\ 200$ $= R37\ 377,60$ ✓CA OR $R1\ 300 \times \frac{6,6}{100}$ ✓M $= R85,80 \times 3$ $= R257,40$ ✓CA Total amount = $R257,40 + R1\ 300$ ✓MCA $= R1\ 557,40 \times 24$ ✓M $= R37\ 377,60$ ✓CA	1 MA multiplying R1 300 by 24 / <i>vermenigvuldiging R1 300 met 24</i> 1A correct amount Invested/ <i>korrekte bedrag belê</i> 1MCA multiply amount by 6,6%/ <i>vermenigvuldiging bedrag met 6,6%</i> 1M multiplying period 1CA investment amount/ <i>beleggingsbedrag</i> OR 1M multiplying by $\frac{6,6}{100}$ 1CA amount 1MCA adding amounts 1M multiplying by 24 1CA total amount (5)	F L2 M

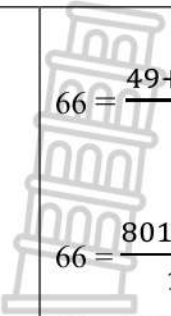
Que/ Vraag	Solution/Oplossing	Explanation/ Verduideliking	T/L
2.2.2	ABC bank interest/ABC bank rente = R37 377,60 – R31 200 = R6 177,60 ✓MCA ABSA bank Year 1 = $\frac{9,02}{100} \times R31\ 200$ ✓MA = R2 814,24 R2 814,24 + R31 200 = R34 014,24 ✓A Year 2 = $\frac{9,02}{100} \times R34\ 014,24 = R3\ 068,08$ R3 068,08 + R34 014,24 = R37 082,32 ✓CA Six months = $\frac{4,51}{100} \times R37\ 082,32 = R1\ 672,41$ ✓A R1 672,41 + R37 082,32 = R38 752, 73 ✓CA Interest = R2814,26 + R3068,08 + R1622,4 ✓MCA = R7554,73 ✓CA OR R38 754,73 – R31 200 = R7 554,73 Her claim is invalid/Haar stelling is nie geldig nie ✓O OR Year/Jaar 1 = $\frac{109,02}{100} \times R31\ 200$ ✓MA = R34 014,24 ✓A	CA from question 2.2.1 CA vanaf vraaf 2.2.1 1MCA calculating Interest / bereken die rente 1MA multiplying/ vermenigvuldiging $\frac{9,02}{100} \times R31\ 200$ 1A correct first year Amount/ korrekte bedrag vir eerste jaar 1CA second year amount/ bedrag tweede jaar 1A correct interest rate 4,51 / korrekte rentekoers 4,51 1CA Total after 2,5 years/ Totaal na 2,5 jaar 1MCA adding values/ aftrek van waardes 1CA interest/Rente OR 1O opinion/Opsie OR 1MA multiplying/ vermenigvuldiging $\frac{109,02}{100} \times R31\ 200$ 1A correct first year Amount/ korrekte bedrag vir eerste jaar	F L4 M

	Year 2/Jaar 2 = $\frac{109,02}{100} \times R34\ 014,24$ $= R37\ 082,32$ ✓CA ✓A Year 3/Jaar 3 = $\frac{104,51}{100} \times R37\ 082,32$ $= R38\ 754,73$ ✓CA Interest = $R38\ 754,73 - R31\ 200$ ✓MCA $= R7\ 554,73$ ✓CA Her claim is invalid/Haar stelling is nie ✓O geldig nie	1CA second year amount/ <i>bedrag tweede jaar.</i> 1A correct interest rate/ <i>korrekte rentekoers</i> 1CA Total after 2,5 years/ <i>Totaal na 2,5 jaar</i> 1MCA subtracting values/ <i>af trek van waardes</i> 1CA interest/<i>Rente</i> 1O opinion/<i>Opsie</i> (9)	
		[29]	



QUESTION/VRAAG 3 [25 MARKS/PUNTE]			
Que/ Vraag	Solution/Oplossing	Explanation/ Verduideliking	T/L
3.1.1	Personal Income Tax/Personal Inkomste Belasting ✓✓A	2A correct revenue/ korrekte inkomste (2)	D L1 E
3.1.2	Total Revenue/ Totale inkomste ✓M = R811,1 + R499,5 + R331,3 + R155,4 + R90,2 + R118,5 = R2 006 billions/miljard ✓CA P (fuel levy)/P(brandstof fooi) $= \frac{90,2}{2\,006} \times 100 \quad \checkmark \text{RT} \quad \checkmark \text{M}$ $= 4,496510469\% \quad \checkmark \text{CA}$	1M adding all values/ optel van alle waardes 1CA simplification / vereenvoudiging 1RT for/vir R90,2 1 M multiplying by 100/ Vermenigvuldiging met 100 1CA simplification/ Vereenvoudig NPR (5)	P L2 E
3.1.3	Four hundred and ninety nine billion five hundred million rands/ Vierhonderd nege-en-negentig miljard vyfhonderd miljoen rand ✓✓A	2A correct wording/ korrekte bewoording (2)	D L1 E
3.2.1	✓MA (3 × 3) + (2 × 1) 11 OR ✓MA 9 + 2 ✓MA = 11	1 MA multiplying 3 by 3/ Vermenigvuldig 3 met 3 1MA multiplying 2 by 1/ vermenigvuldig 2 met 1 OR 1MA the value 9 1MA the value 2 (2)	D L2 E

3.2.2	 Probability/ <i>Waarskynlikheid</i> $\frac{3}{10}$ ✓A OR/OF Probability/ <i>Waarskynlikheid</i> $= 0,3$ ✓✓A OR/OF Probability/ <i>Waarskynlikheid</i> $= 30\%$ ✓✓A	1A Numerator/<i>Teller</i> 1A Denominator/ <i>Noemer</i> OR/OF 2 A Probability as decimal/ <i>Waarskynlikheid as 'n desimaal</i> OR/OF 2 A Probability as percentage/ <i>Waarskynlikheid as 'n persentasie</i> (2)	D L1 E
3.2.3	7 8 10 10 10 11 13 15 18 21 ✓A IQR/IKO = $Q_3 - Q_1$ $= 15 - 10$ ✓SF $= 5$ ✓CA Their claim is valid/<i>Hulle stelling is geldig</i> ✓O	 1A correct order/<i>korrekte volgorde</i> 1SF substitution / <i>invervanging</i> 1CA simplification/ <i>vereenvoudiging</i> 1O conclusion/ <i>opinie</i> (4)	D L4 M
3.3.1	Number of learners / <i>Aantal leerders</i> $= 1 + 1 + 2 + 3 + 4 + 3 + 1$ ✓M $= 15$ ✓CA	1M adding all values/ <i>optel van alle waardes</i> 1CA number of learners/ <i>aantal leerders.</i> (2)	D L1 E
3.3.2	Population : all the learners from that school ✓✓A <i>Bevolking: al die leerders van daardie skool</i> All high school learners/ Grade 12 learners at Chief DT Dlamini Sec School	2A correct population/ <i>korrekte bevolking</i> (2)	D L1 M

3.3.3	 $66 = \frac{49+53+120+3P+268+207+104}{15} \checkmark \text{MA}$ $66 = \frac{801 + 3P}{15} \checkmark \text{M}$ $3P = 990 - 801 \checkmark \text{S}$ $3P = 189$ $P = 63 \checkmark \text{CA}$	1MA adding the values / <i>Tel die waardes bymekaar</i> 1M mean concept/ kkonsep van gemiddeld 1S subject of the formula/ <i>Onderwerp van die formule</i> 1CA the value of P/ <i>die waarde van P</i> (4)	D L3 M
		[25]	



QUESTION/VRAAG 4 [34 MARKS/PUNTE]			
Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
* 4.1.1	$\text{Cost/Koste} = \frac{R62}{2} \checkmark M$ $= R31 \checkmark A$ $= \frac{R31}{R105} \times 100$ $\checkmark RT$ $= 29.52 \% \checkmark CA$	1M dividing price by 2, /deel prys met 2 1A correct price / korrekte prys 1RT R105 1CA percentage/ persentaise (4)	F L2 E
4.1.2	$\text{Weight / Gewig} = \frac{7}{4} \times 70g \checkmark MA$ $= 122,5 g \checkmark A$ $= \frac{122,5g}{7g} \checkmark MA$ $= 17,5 \text{ packets/ pakke} \checkmark R$ $= 18 \text{ packets/pakke} \times R5 \checkmark M$ $= R90,00$ OR/OF $\checkmark MA$ $70 \div 4 = 17.5 \checkmark A$ $\approx 18 \text{ packets/pakke} \checkmark R$ $\checkmark RT$ $= 18 \times R5 \checkmark MA$ $= R90,00$	1MA multiplying correct Values/ vermenigvuldig korrekte waardes 1A weight/ gewig 1MA dividing the weight by 7g/ deel gewig met 7g 1R rounding / afronding 1M multiplying R5 / vermenigvuldig R5 OR/OF 1MA dividing correct values/deel korrekte waardes 1A correct number of packets./korrekte hoeveelheid pakke 1R rounding/afronding 1RT cost of yeast/koste van gis 1MA multiplying correct Values / vermenigvuldig korrekte waardes (5)	F L3 M

4.1.3	Total cost / Totale koste $= R105,00 + R50,00 + R62,00 + R90,00$ $= R307$ ✓CA Income/Inkomste = $R375 \times R1,00$ $= R375$ ✓A Profit/Wins = $R375 - R307$ $= R68,00$ ✓CA	CA from question 4.1.2 CA vanaf vraag 4.1.2 1MA adding all ingredients / <i>tel al die bestandele op</i> 1CA total cost/totale koste 1A income/inkomste 1MCA subtracting /aftrek 1CA profit/wins (5)	F L3 M
4.1.4	✓MCA $= \frac{68}{307} \times 100$ ✓M $= 22,15\%$ ✓A Claim is valid / Stelling is geldig ✓O	CA from/van 4.1.3 1MCA multiplying / <i>vermenigvuldig</i> 1M percentage concept/ konsep <i>vir persentasies</i> 1A correct percentage/ <i>korrekte persentasie</i> 1O conclusion/ Opinie (4)	F L4 M
Que/ Vraag	Solution/Oplossing	Explanation/ Verduideliking	T/L
4.2.1	✓M $\frac{B + 7,59}{2} = 7,58$ ✓M $B + 7,59 = 15,16$ $B = 7,57$ ✓CA	1M adding value including B/ <i>tel waardes op insluitend B</i> 1M median concept/ median <i>konsep</i> 1CA correct value of B/ <i>korrekte waarde van B</i> (3)	D L2 M
4.2.2	✓RT $P = \frac{5}{12} \times 100$ $= 41,67\%$ ✓CA	1RT Numerator/Teller 1RT denominator/ Noemer 1CA percentage/ persentasies NPR (3)	P L2 E

4.2.3	✓MA 1,70; 1,70; 1,72; 1,77; 1,78; 1,79; 1,80; 1,81; 1,89; 1,90; 1,90; 1,98 Lower quartile/ Onderste kwartiel = $\frac{1,72+1,77}{2}$ ✓MA = 1,745	1MA correct order/ korrekte volgorde 1MA dividing correct values/ deel met die korrekte waardes (2)	D L3 M																																
4.2.4	<table border="1"> <thead> <tr> <th>Height/ Hoogte</th><th>Tally/ Telling</th><th>Frequency/ Frekwensie</th><th>Cumulative Frequency/ Kumulatiewe frekwensie</th></tr> </thead> <tbody> <tr> <td>1,70 – 1,75</td><td>///</td><td>3</td><td>3</td></tr> <tr> <td>1,75 – 1,8</td><td>///</td><td>3</td><td>6 ✓A</td></tr> <tr> <td>1,8 – 1,85</td><td>//</td><td>A = 2 ✓A</td><td>8</td></tr> <tr> <td>1,85 – 1,90</td><td>/</td><td>1</td><td>9</td></tr> <tr> <td>1,90 – 1,95</td><td>//</td><td>C = 2 ✓A</td><td>11</td></tr> <tr> <td>1,95 – 2,00</td><td>/</td><td>1</td><td>12</td></tr> <tr> <td>TOTAL/ TOTAAL</td><td></td><td>12</td><td>✓A D = 12</td></tr> </tbody> </table>	Height/ Hoogte	Tally/ Telling	Frequency/ Frekwensie	Cumulative Frequency/ Kumulatiewe frekwensie	1,70 – 1,75	///	3	3	1,75 – 1,8	///	3	6 ✓A	1,8 – 1,85	//	A = 2 ✓A	8	1,85 – 1,90	/	1	9	1,90 – 1,95	//	C = 2 ✓A	11	1,95 – 2,00	/	1	12	TOTAL/ TOTAAL		12	✓A D = 12	1A correct value of the Frequency/ korrekte waarde van die frekwensie 1A correct value of cumulative frequency/ korrekte waarde vir kumulatiewe frekwensie 1A correct number of Tally/korrekte aantal tellings 1A correct value of total of cumulative frequency/korrekte waarde vir totale kumulatiewe frekwensie	D L3 M
Height/ Hoogte	Tally/ Telling	Frequency/ Frekwensie	Cumulative Frequency/ Kumulatiewe frekwensie																																
1,70 – 1,75	///	3	3																																
1,75 – 1,8	///	3	6 ✓A																																
1,8 – 1,85	//	A = 2 ✓A	8																																
1,85 – 1,90	/	1	9																																
1,90 – 1,95	//	C = 2 ✓A	11																																
1,95 – 2,00	/	1	12																																
TOTAL/ TOTAAL		12	✓A D = 12																																

OR				OR
Height/ Hoogte	Tally/ Telling	Frequency / Frekwensie	Cumulative Frequency/ Kumulatiewe frekwensie	1A correct value of the Frequency/ korrekte waarde van die frekwensie 1A correct value of cumulative frequency/ korrekte waarde vir kumulatiewe frekwensie 1A correct number of Tally/korrekte aantal tellings 1A correct value of total of cumulative frequency/korrekte waarde vir totale kumulatiewe frekwensie
1,70 – 1,75	///	3	3	
1,76 – 1,80	////	4	B = 7 ✓A	
1,81 – 1,85	/	A = 1 ✓A	8	
1,86 – 1,90	///	3	11	
1,91 – 1,95		C = 0 ✓A	11	
1,96 – 2,00	/	1	12	
TOTAL/ TOTAAL		12	D = 12 ✓A	OR 1A correct value of the Frequency/ korrekte waarde van die frekwensie 1A correct value of cumulative frequency/ korrekte waarde vir kumulatiewe frekwensie 1A correct number of Tally/korrekte aantal tellings 1A correct value of total of cumulative frequency/korrekte waarde vir totale kumulatiewe frekwensie
OR				
Height/ Hoogte	Tally/ Telling	Frequency / Frekwensie	Cumulative Frequency/ Kumulatiewe frekwensie	
1,70 – 1,74	///	3	3	
1,75 – 1,79	///	3	B = 6 ✓A	
1,80 – 1,84	///	A = 2 ✓A	8	
1,85 – 1,89	/	1	9	
1,90 – 1,94	//	C = 2 ✓A	11	
1,95 – 2,00	/	1	12	
TOTAL/ TOTAAL		12	D = 12 ✓A	(4)

Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
* 4.2.5	HEIGHTS OF ATHLETES/HOOGTE VAN ALTETE 1A correct type of graph / <i>korrekte tipe grafiek</i> 1A correct intervals / <i>korrekte intervalle</i> 1A two correct bars / <i> twee korrekte stawe</i> 1CA any bar graph / <i> enige staafgrafiek</i> (4)		D L3 M
		[34]	

QUESTION//VRAAG 5 [33 MARKS/PUNTE]			
Que/ Vraag	Solution/Oplossing	Explanation/ Verduideliking	T/L
* 5.1.1	Transport/Vervoer = $R300 \times 99 + R3\,000$ ✓MA $= R29\,700 + R3\,000$ ✓RT $= R32\,700$ ✓A Accommodation/Akkommodasie = $R150 \times 103$ $= R15\,450 \times 3$ $= R46\,350$ ✓A Total/Totaal = $R32\,700 + R46\,350$ ✓M $= R79\,050$ ✓CA Third/Derde = $\frac{120\,000}{3}$ = $R40\,000$ ✓A Their claim is valid/Hulle stelling is geldig ✓O	1MA multiplying R300 by 99 and adding R3000 / vermenigvuldig R300 met 99 en plus R3000 1RT number of learners/aantal leerders 1A transport cost/ Vervoer koste 1A accommodation cost/akkommodasie 1M adding both cost/tel beide kostes op 1CA total cost/totale koste 1A the third/Derde 1O correct conclusion/korrekte gevolgtrekking (8)	F L4 M

Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
5.1.2	✓MCA Activities /Aktiwiteite = $R200 \times 103 + R5\ 150$ = $R25\ 750$ ✓CA Meals/Maalte: Breakfast / Ontbyt = $R50 \times 103$ = $R5\ 150$ ✓A Dinner/Aandete = $R120 \times 103$ = $R12\ 360$ ✓A Meals for day 2 and 3 / Maalte vir dag 2 en 3 : $S3 = R160 \times 2 \times 103$ ✓M = $R32\ 960$ ✓CA Total / Totaal = $R32\ 700 + R46\ 350 + R25\ 750 + R5\ 150 + R12\ 360$ + $R32\ 960$ = $R155\ 270$ ✓CA The claim is incorrect/Die stelling is nie korrek nie ✓O	CA from question 5.1.1/ CA van vraag 5.1.1 1MCA multiplying R200 by 103 and adding 5 150/ vermenigvuldig R200 met 103 en plus R5 150 1CA cost of activities/ koste van aktiwiteite 1A total breakfast/ total ontbyt 1A total dinner/totaal aandete 1M multiplying R160 by 2 and 103/ vermenigvuldig R160 met 2 en 103 1CA cost for meals/ koste van die maalte 1MCA adding values/Tel waades op 1CA simplification/ Vereenvoudig 1O conclusion/ gevolgtrekking (9)	F L4 M

Que/ Vraag	Solution/Ooplossing	Explanation/ Verduideliking	T/L
5.1.3	Accommodation/Akkommodasie = $R150 \times 3$ = R450 ✓A Transport / Vervoer = $R300 + \frac{3\,000}{103}$ ✓A = R329,13 Museum = $R5\,150 \div 103$ = R50,00 ✓A Kruger = R200 Meals/Maalte = $R120 + R50 + R160 \times 2$ = R490 ✓A Total cost = $R450 + 329,13 + R50 + R200 + R490$ ✓M = R1 519,13 = R1 520,00 ✓R	1A accommodation cost/ Akkommodasie koste 1A transport cost/ Vervoer kost 1A Museum Cost/Koste 1A cost of Meals/koste van maalte 1M adding all cost/ optel van alle koste 1R rounding total cost/Afronding van totale koste (6)	F L2 M
5.2.1	$C = \frac{1}{23,165844284}$ ✓RT = 0,043167 ✓A	1RT 23,165044284 1A correct exchange rate/ korrekte wisselkoers (2)	F L2 M
5.2.2	USD (US dollar/Amerikaanse dollar) ✓A EUR (Euro/Euro) ✓A	1A 1st correct currency/ 1^{ste} korrekte geldeenheid 1A 2nd correct currency/ 2^{de} korrekte geldeenheid (2)	F L1 M

Que/ Vraag	Solution/Oplissing	Explanation/ Verduideliking	T/L
5.2.3	Swiss Franc / Switserse Frank ✓✓A	2A correct currency/ korrekte wisselkoers (2)	F L1 E
5.2.4	✓RT $12\,000 \times 18,5915074$ ✓MA $\frac{R223\,098,0888}{0,2146784225}$ ✓M 1 039 219, 90 indian rupees / Indiese roepies ✓CA	1RT 12 000 USD 1MA multiplying by 18,5915074 / vermenigvuldig met 18,5915074 1M dividing by 0,2146784225 / dividing by 0,2146784225 1 CA amount in indian Rupees/ aantal indiese roepies (4)	F L2 M
		[33]	
		TOTAL MARKS:150 TOTALE PUNTE:150	

Marking guideline notes		
1.3.4	If 1 value is incorrect.	1/3 marks
2.1.4	No pension calculation	6/9 marks
	No bonus added	7/9 marks
4.1.1	Accept : $\frac{31}{120} \times 100$ $= 25,83\%$	4/4 marks
4.2.5	Drawing a bar graph from the heights in TABLE 6 and not using the frequency table. Y axis – Heights X axis – Nationalities / Athletes	4/4 marks
5.1.1	Calculated without the fixed R3 000: $R300 \times 99$ $= R29\ 700$ $R29\ 700 + R46\ 350$ $= R76\ 050$	7/8 marks
5.13	If divided by 99 instead of 103	5/6 marks