GAUTENG PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

JUNE EXAMINATION
GRADE 12

2025

MATHEMATICAL LITERACY

(PAPER 1)

MATHEMATICAL LITERACY P1

C2601E

X05

TIME: 2 hours

MARKS: 100

9 pages + an addendum with 3 annexures

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EDUCATION
REPUBLIC OF SOUTH AFRICA

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 4.1

3. Number your answers correctly according to the numbering system used in this question paper.

4. Start EACH question on a NEW page.

5. An approved calculator (non-programmable and non-graphical) may be used, unless stated otherwise.

6. Show ALL calculations clearly.

7. Round-off ALL final answers appropriately according to the given context, unless stated otherwise.

8. Indicate units of measurement, where applicable.

9. Write neatly and legibly.

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Please turn over

QUESTION 1

1.1   Rise and Shine Primary School presented its budget for the 2023/2024 financial year at its Annual General Meeting (A.G.M.). TABLE 1 below is an extract of the actual income for 2023 and the expected income for 2024.

TABLE 1: ACTUAL AND EXPECTED INCOME FOR RISE AND SHINE PRIMARY SCHOOL FOR 2023/24

INCOME	2023 (ACTUAL) (IN RAND)	2024 (EXPECTED) (IN RAND)
SCHOOL FEES 2024 　　Total expected roll: 825 learners 　　Exemptions: 64 　　Non-payers: 97 　　Total paying pupils: 664 　　　　Grade 1 – 7: 605 @ R11 500/year 　　　　Grade R　　: **A** @ R15 000/year 　　LESS DISCOUNT		 6 957 500 885 000 (117 300)
Total school fees		7 725 200
Government subsidy Section 21	591 396	634 890
Grade R subsidy	143 340	154 900
Exemption reimbursement	26 000	34 860
Tuckshop rental	36 250	72 500
Uniform sales	85 600	87 000
Fundraising	144 550	145 000
Interest on investments	32 000	35 600
Other sources	121 800	89 600
TOTAL	**8 180 936**	**8 979 550**

Use TABLE 1 above to answer the questions that follow.

1.1.1   Define the term *income* in this context.   (2)

1.1.2   Write down the total school fees expected in 2024 in words.   (2)

1.1.3   Calculate the value of **A**, the number of Grade R learners expected in 2024.   (2)

1.1.4   Calculate the difference between the total income in 2023 and 2024.   (2)

1.1.5   Identify the type of income that doubled in 2024.   (2)

1.1.6   Calculate the monthly school fees for Grade R learners.   (2)

1.2 | Ms Msimang, the hockey coach at Rise and Shine Primary School measured and recorded the heights (in cm) of the Under-13 team players as follows:

| 150 | 159 | 144 | 146 | 159 | 135 | 156 | 159 | 144 | 158 | 149 |

Use the information above and answer the questions that follow.

1.2.1   State whether the above data is categorical or numerical.   (2)

1.2.2   Write down the modal height of the hockey team in metres.   (2)

1.2.3   Arrange the heights of the players in descending order.   (2)

1.2.4   Calculate the median of the data set.   (2)

[20]

QUESTION 2

2.1 | Mr Yusuf is a 38-year-old quantity surveyor at Arrow Quantity Surveyors. He earns a gross monthly salary of R45 000. He contributes 7,5% of his salary to a pension fund and pays R3 200 per month for medical aid, which covers him and three dependants.

Use the tax table in ANNEXURE A to answer the questions that follow.

2.1.1   What does the abbreviation SARS stand for?   (2)

2.1.2   Calculate Mr Yusuf's annual taxable income.   (4)

2.1.3   Determine his annual medical tax credit.   (3)

2.1.4   Hence, calculate the annual income tax he had to pay for the 2024/2025 tax year.   (5)

2.2 | Padel is a sport similar to traditional tennis but played on a smaller court, and with a few key differences. Below is an advertisement for the Nox MM2 Hybrid Pro padel racket. The price in the advertisement below includes VAT.

> Save
> 50%
>
> **Nox**
> MM2 Hybrid Pro Tear Drop Padel Racket
>
> **R2 499**
>
> Retail: R5 000
>
> Stanmorephysics.com

[Source: *Balwinpaddle.co.za*]

Study the information above and answer the questions that follow.

2.2.1   Calculate the cost of the NOX MM2 Hybrid Pro, excluding VAT.   (3)

2.2.2   Calculate the percentage decrease in the price of the padel racket, rounded to the nearest whole number. You may use the following formula:

$$\textbf{Percentage decrease} = \frac{\textbf{\textit{New price} − \textit{Old price}}}{\textbf{\textit{Old price}}} \times \textbf{100}$$
    (3)

2.2.3   The Nox MM2 Hybrid Pro padel racket is priced at R2 499 in South Africa. A similar racket is available in the United States for USD 180. A padel player claims that it will be cheaper to purchase the racket in the United States. Verify, showing all calculations, whether the player's statement is valid if the current exchange rate is 1 USD = ZAR 18,19.   (4)

[24]

QUESTION 3

3.1 Formula 1 racing is a high-speed motorsport where drivers compete in specially designed single-seater cars on various international tracks. It is also known for its cutting-edge technology, precision driving, and global fan base. The table below shows the 2024 Formula 1 Drivers' Standings, ranking the top drivers in the championship by points earned in each race based on their finishing positions.

TABLE 3: FORMULA 1 DRIVERS' STANDINGS

POSITION	DRIVER	NATIONALITY	CAR	POINTS
1	Max Verstappen	Netherlands	Red Bull Racing	362
2	Lando Norris	United Kingdom	McLaren	315
3	Charles Leclerc	Monaco	Ferrari	291
4	Oscar Piastri	Australia	McLaren	251
5	Carlos Sainz	Spain	Ferrari	240
6	Lewis Hamilton	United Kingdom	Mercedes	189
7	George Russell	United Kingdom	Mercedes	177
8	Sergio Pérez	Mexico	Red Bull Racing	150
9	Fernando Alonso	Spain	Aston Martin	62
10	Nico Hulkenberg	Germany	Haas Ferrari	**A**

[Adapted from *www.formula1.com*]

PLEASE DETACH THIS ADDENDUM WITH 4 PAGES.

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JUNE EXAMINATION
GRADE 12

2025

MATHEMATICAL LITERACY

(PAPER 1)

ADDENDUM

4 pages with 3 annexures

ANNEXURE A

QUESTION 2.1

TABLE 2: 2024/2025 TAX YEAR (1 March 2024 – 28 February 2025)

	ANNUAL TAXABLE INCOME (R)	RATES OF TAX (R)
A	1 – 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	77 362 + 31% of taxable income above 370 500
D	512 801 – 673 000	121 475 + 36% of taxable income above 512 800
E	673 001 – 857 900	179 147 + 39% of taxable income above 673 000
F	857 901 – 1 817 000	251 258 + 41% of taxable income above 857 900
G	1 817 001 and above	644 489 + 45% of taxable income above 1 817 000

TAX REBATE	TAX YEAR
	2024/2025
Primary	R 17 235
Secondary (65 years and older)	R 9 444
Tertiary (75 years and older)	R 3 145

Medical Monthly Tax Credit	
For the tax payer and one dependant	R 728
For each additional dependant	R 246

[Adapted from *www.sars.gov.za*]

ANNEXURE B

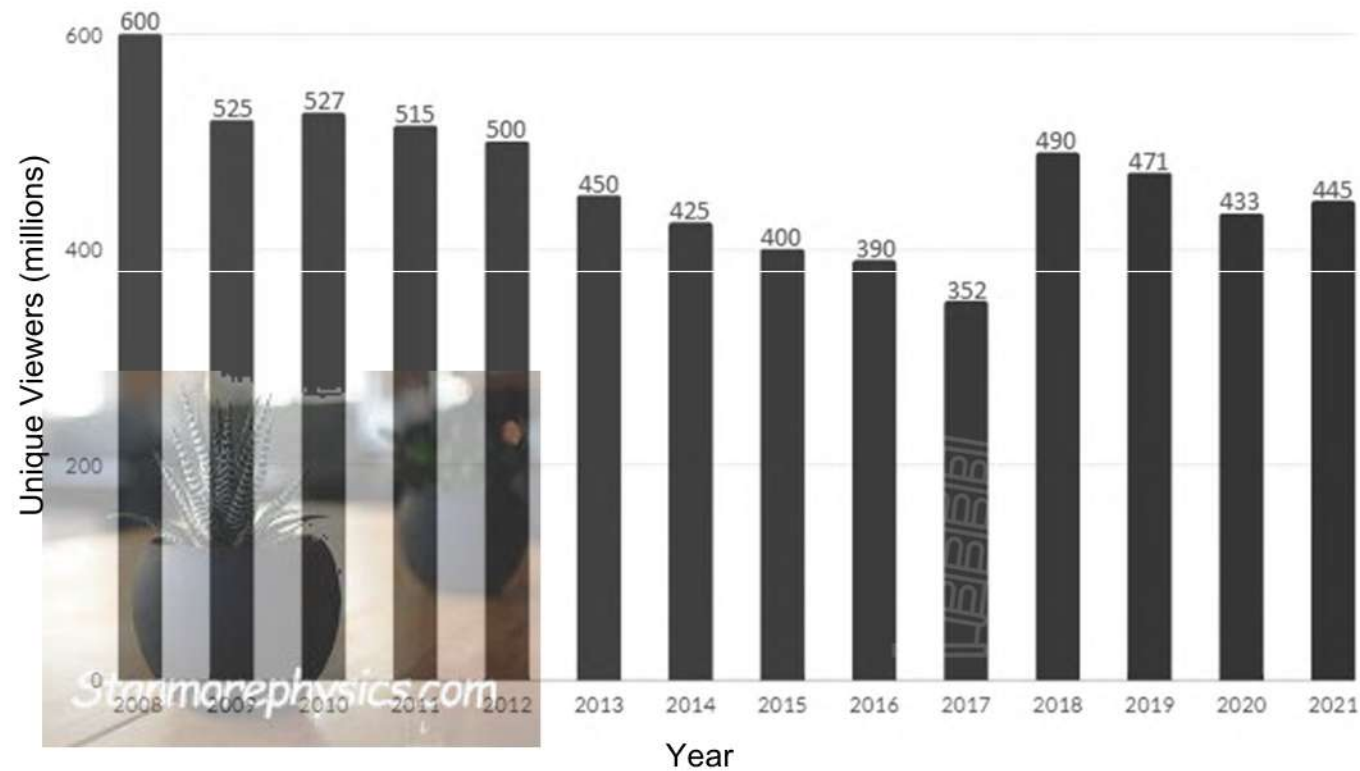**QUESTION 3.2**

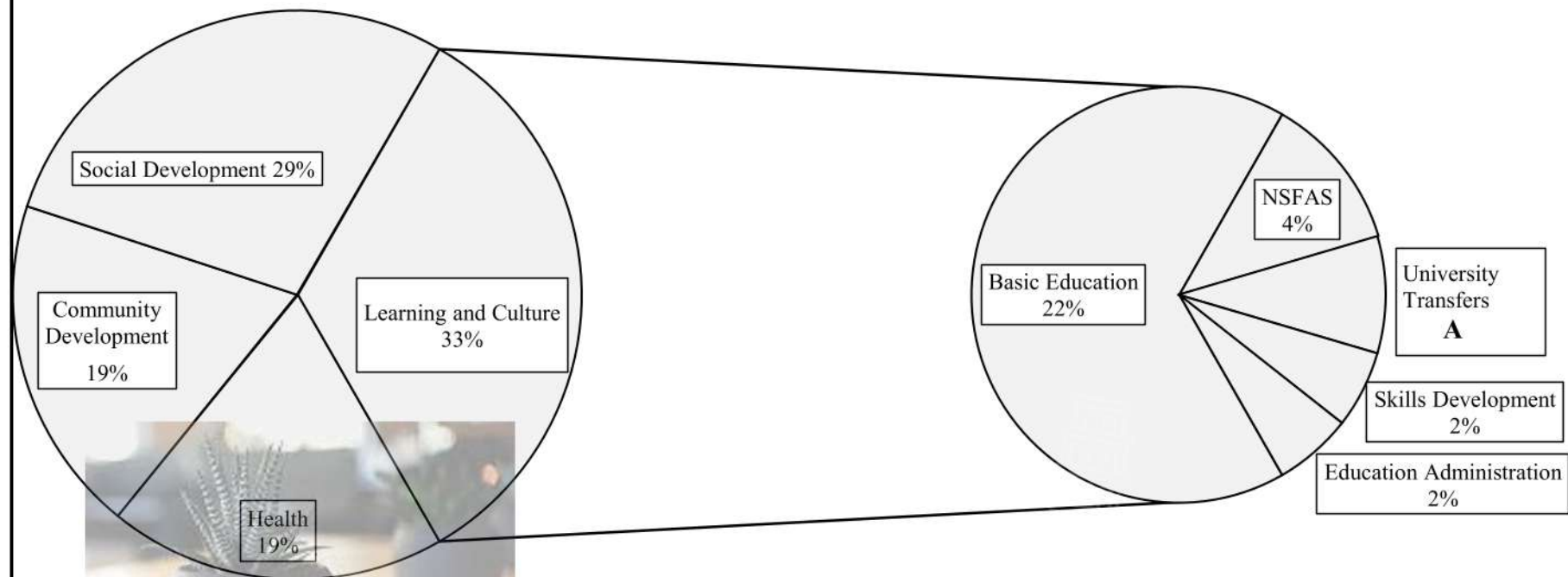# FORMULA 1s UNIQUE VIEWERSHIP OVER THE YEARS

2008 – 2021 (in millions)

[Source: *reddit.com*]

ANNEXURE C

QUESTION 4.1

2023/24 CONSOLIDATED BUDGET FOR SOCIAL SERVICES

Social Development 29%

Community Development 19%

Learning and Culture 33%

Health 19%

Basic Education 22%

NSFAS 4%

University Transfers **A**

Skills Development 2%

Education Administration 2%

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Study the information in TABLE 3 and answer the questions that follow.

3.1.1   Identify the driver with the second-highest points.   (2)

3.1.2   Is the data represented in the points column continuous or discrete? Explain your answer.   (4)

3.1.3   Calculate the value of **A**, if the range of the points is 331.   (3)

3.1.4   Determine the interquartile range for the number of points scored by the Formula 1 drivers.   (6)

3.1.5   Determine the probability, as a decimal, of selecting a Formula 1 driver who drives a Ferrari.   (3)

3.2   Unique viewership is a benchmark used in media and broadcasting to count the total number of distinct individuals who watched at least one race during a season. Each person is only counted once, regardless of how many races they watched or how frequently they tuned in.

Use ANNEXURE B to answer the following questions.

3.2.1   Describe the general trend in unique viewership from 2014 to 2017.   (2)

3.2.2   Determine the mean of the unique number of viewers for Formula 1 racing from 2008 to 2021.   (3)

3.2.3   How might a decrease in unique viewership affect sponsors of Formula 1?   (2)

[25]

QUESTION 4

4.1 The Minister of Finance is responsible for presenting the government's budget in February of each year.

ANNEXURE C shows the consolidated government expenditure on Social Services for the 2023/24 financial year. A total of R1,35 trillion was allocated to Social Services for this year.

1 trillion = 1 000 billion

1 000 000 000 000 = 1 trillion

Study ANNEXURE C and answer the following questions.

4.1.1	Calculate the value of **A**, the percentage budgeted for University Transfers.	(3)
4.1.2	Calculate the amount of money budgeted for Basic Education. Write down the answer in billions.	(3)
4.1.3	If the amount budgeted for Social Services makes up 60,3% of the total government expenditure for the 2023/24 financial year, calculate the total government expenditure in trillions.	(4)
4.1.4	Discuss TWO ways in which government generates funds/revenue to cover its budget.	(4)

4.2 Municipalities across South Africa publish their electricity tariffs annually in compliance with regulations.

Sam works from home most of the time and recently discovered that his electricity bill has increased significantly.

TABLE 4 below shows information regarding electricity tariffs published by the City of Tshwane for the 2022/23 and 2023/24 financial years.

TABLE 4: CITY OF TSHWANE ELECTRICITY TARIFFS FOR 2022–2024 FINANCIAL YEARS.

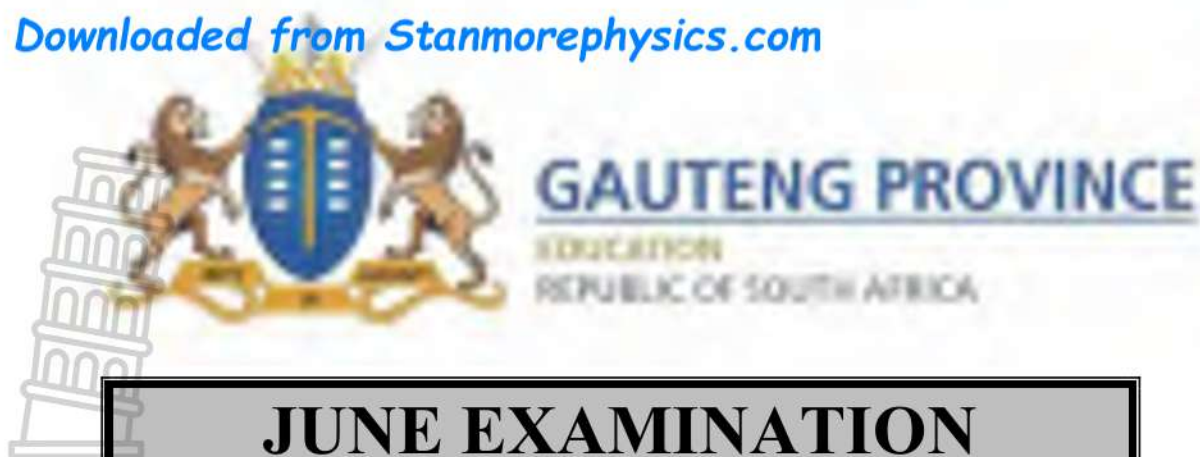| BLOCK	2022/23 TARIFF (R/KWH)	2023/24 TARIFF (C/KWH)
1 (0 to 100 kWh)	2, 0970	270,33
2 (101 to 400 kWh)	2, 4541	316,37
3 (401 to 650 kWh)	2, 6738	344,67
4 (more than 650 kWh)	2, 8824	371,58
	NB: All tariffs exclude 15% VAT.	

[Adapted from *www.gpwonline.co.za*]

Use the information above and answer the questions that follow.

4.2.1 Define the term tariff in this context. (2)

4.2.2 Determine the number of kWh allocated in block 3. (2)

4.2.3 Calculate the tariff, including VAT, for block 1 for 2023/24 in rands. (3)

4.2.4 In June 2024 Sam spent R1 941,42, including VAT, on electricity. Calculate the number of units (kWh) of electricity he used for the month. (8)

4.2.5 Suggest TWO ways in which Sam can reduce his electricity usage. (2)

[31]

TOTAL: 100

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JUNE EXAMINATION
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MARKING GUIDELINES

MATHEMATICAL LITERACY

(PAPER 1)

SYMBOL	EXPLANATION
M	**Method**
MA	Method with accuracy
MCA	Method with consistent accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT	Reading from a table/graph/document/diagram
SF	Correct substitution in a formula
O	Opinion/Explanation
P	Penalty e.g. for no unit, incorrect rounding-off, etc.
NPR	No penalty for correct rounding
NPU	No penalty for omitting unit, but wrong unit is penalised
AO	Answer only

KEY TO SUBJECT SYMBOLS:

M = Measurement; MP = Maps, Plan and other representations; P = Probability

6 pages

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	MARKING GUIDELINES	MATHEMATICAL LITERACY (PAPER 1)	GR12 0625

QUESTION 1 [20 marks]   ANSWER ONLY FULL MARKS

Q	Explanation	Awarding of marks	Marks	T&L
1.1.1*	Income is the amount of money that the school receives. ✔✔	2A Correct Definition.	(2)	F 1
1.1.2	✔ Seven million, seven hundred and twenty-five thousand two hundred rand ✔	2A amount in words. **NPU**	(2)	F 1

1.1.3	A = 664 – 605 ✔
	   = 59 ✔
	      OR
	A = R885 000 ÷ R15 000 ✔
	   = 59 ✔
		1MA subtracting correct values
		1 A simplification
		   OR
		1MA Dividing correct values
		1 A simplification
			(2)	F 1

1.1.4	✔ Difference = R8 979 550 – R8 180 936 = R798 614 ✔	1MA subtracting correct values 1A answer	(2)	F 1
1.1.5	Tuckshop rental ✔✔	2RT correct income type Accept Tuckshop	(2)	F 1
1.1.6	Monthly fees = R15 000 ÷ 12 ✔ = R 1250 ✔	1MA dividing correct values by 12 1A answer	(2)	F 1
1.2.1	Numerical ✔✔	2A choosing correct data classification	(2)	DH 1
1.2.2	Modal height = 1,59 m ✔✔	2RT correct answer (Accept 159) **NPU**	(2)	DH1
1.2.3*	159 159 159 158 156 150 149 146 144 144 135 ✔✔	2RT correct order (accept height in meters)	(2)	DH 1
1.2.4	150 ✔✔	2 A correct median	(2)	DH 1

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QUESTION 2 [24 marks]

Q	Explanation	Awarding of marks	Marks	T&L
2.1.1	**South African Revenue Service.**✓✓A	2A explanation	(2)	F1
2.1.2	**Gross Annual income** R45 000 × 12 = R540 000✓ Pension Fund: 7,5% × R540 000 = R40 500 ✓ **Taxable Income:** = Annual Gross Income − Pension Contribution = R540 000 − R40 500 ✓ = R499 500 ✓	1M monthly × 12 & answer 1MA calculate 7,5% of salary. (accept 45 000 × 7,5% = R3375. R3375 × 12 = 40500✓) 1M subtraction of pension fund 1CA simplification	(4)	F3
2.1.3*	Medical Tax Rebate = 728 + (246 × 2) ✓ = R1 220 = R1 220 × 12 ✓ = R14 640 ✓	1A answer when × 246 by 2 1M answer multiplied by 12 1CA answer	(3)	F3
2.1.4	=77 362 + 31% [(499 500 − 370 500)] ✓ = 117 352 ✓ = 117 352 − 17 235 ✓ − 14 640 ✓ = R85 477 ✓	CA 2.1.2 and 2.1.3 1SF substitution into formula 1S simplification 2 subtracting rebates/ medical credit 1CA simplification	(5)	F3
2.2.1 *	= 2 499 ✓ ÷ 1,15 ✓ = 2 173,04 ✓ **OR** = 2 499✓ × $\frac{15}{115}$✓ = 325,96 = 2 499 − 325,96 = 2 173,04✓	1RT correct value 1M calculating excl VAT 1S Simplification 1RT correct value 1M calculating VAT 1S simplification	(3)	F2
2.2.2	= $\frac{2\ 499 - 5\ 000}{5\ 000}$ ✓ × 100✓ MA = -50.02% decrease ✓A Accept 50%	2MA substitution into formula. 1A answer in percentage **NPR** **AO**	(3)	F2
2.2.3	180 ✓ × 18,19 ✓ = R3 274,20 ✓ Cheaper to purchase the racket in South Africa. ✓	1RT correct amount in dollars 1MA multiply by correct exchange rate	(4)	F4

	or	1S simplification		
	$2499 \div 18.19$ ✓ $= \$137.38$✓	10 opinion		
	$\$137.38 < \$180$✓			
	Cheaper to purchase the racket in South Africa. ✓			

QUESTION 3 [25 marks]

Q	Explanation	Awarding of marks	Marks	T&L
3.1.1 *	Lando Norris ✓✓	2RT corerct driver	(2)	DH 1
3.1.2 *	The data is **discrete** ✓✓ because points are counted in whole numbers, and fractional points are not possible in this context. ✓✓	2A type of data 2O explanation	(4)	DH 2
3.1.3	Range = Max Value − Min value ✓ $331 = 362 - A$ $A = 362 - 331$ ✓ $A = 31$ ✓	1A concept of range 1M Changing subject of the formula 1CA answer	(3)	DH 3
3.1.4	Arrange values in ascending order: 31, 62, 150, 177, 189, 240, 251, 291, 315, 362 ✓ $Median = \frac{189 + 240}{2}$ $= 214,5$ $Q1 = 150$ ✓ $Q3 = 291$ ✓ $IQR = Q3 - Q1$ ✓ $= 291 - 150$ ✓ $= 141$ ✓	1A arranging values in ascending order 1RT answer Q1 1RT answer Q3 1MA concept of IQR 1SF Substitution in formula 1CA answer	(6)	DH 3
3.1.5	$= \frac{3 ✓}{10 ✓}$ $= 0,3$ ✓	1A numerator 1A denominator 1CA simplification **Accept** $\frac{2}{10}$ $= 0,2$ **AO**	(3)	P3
3.2.1	From 2014 to 2017, the unique viewership **decreased**. ✓✓	2O decrease/decline	(2)	L4
3.2.2	$\frac{600 + 525 + 527 + 515 + 500 + 450 + 425 + 400 + 390 + 352 + 490 + 471 + 433 + 445}{14}$ $= 465,93$ $= 465$ ✓	1A adding correct values 1MA dividing by 14 1R Rounding Accept 466	(3)	DH 3
3.2.3	A decrease in unique viewership may result in **lower brand exposure** for sponsors, potentially leading to reduced sponsorship deals and investment in Formula 1. ✓✓	2O explanation Accept any reasonable explanation.	(2)	L4

5

QUESTION 4 [31 marks]

Q	Explanation	Awarding of marks	Marks	T&L

4.1.1	✓ ✓
	A = 33% – (22% + 4% + 2% + 2%)
	  = 3% ✓
	     OR
	33 ✓ – 30✓
	= 3 ✓
		1RT using 33% in the calculation
		1MA subtracting values
		1CA answer
		
		NPU
			(3)	DH 2

4.1.2	✓
	Budgeted amount = 22% × R1, 35 trillion
	        = R0, 297 trillion ✓
	        = R297 000 000 000 ✓
	          OR
	       R297 Billion
	
	OR
	Budgeted amount
	  = 22% ✓ × R1 350 000 000 000 ✓
	  = R297 000 000 000 ✓
		1MA multiply by 22%
		1S answer in trillions
		1A amount in billions
		
		1MA multiply by 22%
		1S answer in trillions
		1A amount in billions
			(3)	DH 2

4.1.3	Total government expenditure
	  = R1,35 trillion ÷ 60,3% ✓✓
	  = R2,23880597 ✓
	  = R2,2388 trillion ✓
		2MA dividing correct values
		1CA answer
		1R rounding off correctly
		(Accept 2.24 Trillion or 2.239 Trillion)
			(4)	DH 3

4.1.4	Income tax – deducting a certain portion of money from the citizens' salaries/wages/ earnings ✓✓ Charging VAT – consumption tax levied on the consumption of goods and services ✓✓ Import duty – tax levied on imported goods	2O type of tax and explanation 2O type of tax and explanation **Accept any TWO revenue sources** **NB: Must provide explanation for second mark.**	(4)	DH 4
4.2.1	✓✓ Tariff – Cost of electricity per unit/kWh	2A definition	(2)	F 1
4.2.2	Number of units = 650 – 400 kWh ✓ = 250 kWh ✓	1A subtracting 400 kWh 1CA answer	(2)	F 2

4.2.3	✓
	Tariff including VAT = 270,33c × 1,15
	            = 310,8795c ✓
	            = R3,11 ✓
	      OR
		1MA increasing correct tariff by 15%
		1CA tariff incl. VAT in cents
		1CA answer in rands
			(3)	F 2

Tariff including VAT ✔ $= (270,33c \times 15\%) + 270,33$ $= 310, 8795c$ ✔ $= R3,11$ ✔ **OR** $270,33 \div 100 = 2,7033$ **2.7033×1.15** $= R3,11$	NPR		

Q	Explanation	Awarding of marks	Marks	T & L

4.2.4	Amount excl. VAT = R1 941, 42 ÷ 1,15
	         = R1 688,19 ✔
	
	Block 1 = R2,7033 × 100 = R270, 33✔
	Block 2 = R3,1637 × 300 = R949,11✔
	
	Amount spent in block 3 ✔
	     = R1 688,19 – (R270,33 + R949,11)
	     = R468,75 ✔**A**
	Number of units in block 3
	     = R468,75 ÷ R3,4467 ✔
	     = 135, 9996518 kWh ✔
	Total number of kWh
	     = 100 + 300 + 135, 9996518
	     = 535, 999…
	     = 536 kWh ✔
		1A correct value excluding VAT
		
		MA correct answer block 1
		MA correct answer block 2
		
		1MCA calculating block 3 amount
		1A block 3 amount
		
		1 calculating number of units in block 3
		1CA number of units in block 3
		1A answer
		NPR
		(535.999…award full marks without rounding)
			(8)	F 3

4.2.5	• Switch off his geyser when not in use. ✔ • Use a gas stove to cook. • Invest in a solar system. • Invest in energy efficient appliances. ✔	1O first suggestion 1O second suggestion **NB: Accept any reasonable suggestion**	(2)	F 4
			[31]	

TOTAL: 100

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Notes		
1.1.2	If the word school is omitted	1/2
1.2.3	If one value omitted	1/2
	If more than one value omitted	Zero
2.1.3	If 246 not multiplied by 2	2/3
2.2.1	$= 5000 \checkmark \div 1{,}15 \checkmark$ $= 4347.83 \checkmark$ Or $= 5\,000 \checkmark \times \frac{15}{115} \checkmark$ $= 652.17$ $= 5\,000 - 652.17$ $= 4\,347.83 \checkmark$	3/3 3/3
3.1.1	If answer is 315 (points)	Zero
4.2.1	Accept Unit R/kWh or cents/kWh	2/2

MARKING GUIDELINES	MATHEMATICAL LITERACY (PAPER 1)	GR12 0625

TAXONOMY LEVEL GRID

TOTAL: | 100 |

JUNE EXAMINATION

TASK: | 2025 | GRADE: | 12 |

Question Number	TL 1	TL 2	TL3	TL4
1.1.1	2F			
1.1.2	2F			
1.1.3	2F			
1.1.4	2F			
1.1.5	2F			
1.1.6	2F			
1.2.1	2F			
1.2.2	2F			
1.2.3	2F			
1.2.4	2F			
2.1.1	2F			
2.1.2			4F	
2.1.3			3F	
2.1.4			5F	
2.2.1		3F		
2.2.2		2F		
2.2.3				4F
3.1.1	2D			
3.1.2		4D		
3.1.3			3D	
3.1.4			6D	
3.1.5			3W	
3.2.1				2F
3.2.2			3D	
3.2.3				2F
4.1.1		3D		
4.1.2		3D		
4.1.3		4D		
4.1.4				4D
4.2.1	2F			
4.2.2	2F			
4.2.3	3F			
4.2.4			8F	
4.2.5				3F
Total	31	19	35	15
%				
100	31	19	35	15

Finance 65 %
Data handling 32 %
Probability 3%