



# **NATIONAL SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2023**

## **MATHEMATICAL LITERACY P1 MARKING GUIDELINE**

**MARKS: 100**

<b>Symbol</b>	<b>Explanation</b>
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table/Reading from a graph/Reading from a map
F	Choosing the correct formula
SF	Substitution in a formula
J	Justification
P	Penalty, e.g., for no units, incorrect rounding off etc.
R	Rounding Off/Reason
AO	Answer only
NPR	No penalty for correct rounding

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This marking guideline consists of 6 pages.

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QUESTION 1 [23 MARKS]			
Ques.	Solution	Explanation AO: FULL MARKS	T&L
1.1.1	$A = R33\ 150 + R1\ 625 \checkmark MA$ $= R34\ 775 \checkmark A$	1MA for adding correct values 1A answer (2)	F L1
1.1.2	$R33\ 150 \div 26 \checkmark MA$ $= R1\ 275,00 \checkmark A$	1MA for dividing correct values 1A answer (2)	F L1
1.1.3	$B = R7\ 927,86 - (R375 + R850,25 + R1\ 500) \checkmark MA$ $= R7\ 927,86 - R2\ 725,25$ $= R5\ 202,61 \checkmark A$	1MA for subtracting correct values 1A answer (2)	F L1
1.1.4	Percentage = $\frac{\checkmark RT}{R7\ 927,86} \times 100 \checkmark M$ $= 10,72\% \checkmark CA$	1RT correct values 1M multiplying by 100 1CA answer (3)	F L1
1.2.1	$R22,50 \checkmark \checkmark RT$	2RT reading correct value (2)	F L1
1.2.2	Vaal Plaza Main line $\checkmark \checkmark RT$	2RT correct tollgate (2)	F L1
1.2.3	$140 : 225 \checkmark RT$ $28 : 45 \checkmark A$	1RT correct values 1A simplifying correctly (2)	F L1
1.2.4	$R271,00 \times 2 \checkmark MA$ $= R542,00 \checkmark A$	1MA multiplying correct rate by 2 1A answer (2)	F L1
1.3.1	Pie Chart $\checkmark \checkmark RT$	2RT correct graph (2)	D L1
1.3.2	Percentage comedies = $100\% - (21\% + 6\% + 24\% + 11\%) \checkmark MA$ $= 38\% \checkmark A$	1MA subtracting 1A percentage (2)	D L1
1.3.3	Number of romance = $24\% \times 220 \checkmark MA$ $= 52,8$ $= 53\ \text{students} \checkmark A$	1MA multiplying correct percentage 1A correct answer Accept 52 (2)	D L1
		[23]	

QUESTION 2 [25 MARKS]			
Ques	Solution	Explanation/Marks AO: FULL MARKS	T/L
2.1.1	$\begin{aligned} & \checkmark M \quad \checkmark RT \\ \text{Jan 2023: } & R12,47 \times 1,069 = R13,33 \quad \checkmark A \\ & \checkmark MA \\ \text{Feb 2023: } & R13,33 \times 1,07 = R14,26 \quad \checkmark CA \end{aligned}$	1RT correct rate 1M multiplying 1A answer 1MA multiplying with correct rate 1CA answer (5)	F L3
2.1.2	Prices increased $\checkmark A$ Prices still went up, but by a lower percentages/ the percentages are not negative. $\checkmark O$	1A increased 1O reason (2)	F L4
2.2.1	$\checkmark A \quad \checkmark A$ 7 May 2023	1A 7 <sup>th</sup> 1A May (2)	F L1
2.2.2	$\begin{aligned} \text{Total} &= R349 \times 3 \quad \checkmark MA \\ &= R1\,047 \quad \checkmark A \\ &\approx R1\,000 \quad \checkmark R \end{aligned}$	1MA multiplying by 3 1A answer 1R rounding to nearest 1 000 (3)	F L2
2.2.3	$\begin{aligned} \text{Labour per hour} &= R6\,500 \div 7,5 \text{ hrs} \quad \checkmark MA \\ &= R866,67 \quad \checkmark A \end{aligned}$	1MA dividing by 7,5 1A correct answer (2)	F L2
2.2.4	$\begin{aligned} \text{Total} &= R5\,499 + R1\,047 + R1\,699 + R6\,500 \quad \checkmark M \\ &= R14\,745 \times 1,15 \quad \checkmark MA \\ &= R16\,956,75 \quad \checkmark CA \end{aligned}$	CA from 2.2.2 1M adding values 1MA multiplying by 1,15 1CA answer (3)	F L2
2.2.5	$\begin{aligned} \% \text{ change} &= \frac{5\,795 - 5\,499}{5\,499} \times 100\% \quad \checkmark MA \\ &= 5,38\% \quad \checkmark CA \\ \therefore \text{Valid} &\quad \checkmark O \end{aligned}$	1RT correct values 1MA correct % calculation 1CA simplification 1O statement (4)	F L4
2.3	$\begin{aligned} \text{Block 1: } & 600 \text{ kWh} \times 229,00c = 137\,400c \quad \checkmark MA \\ \text{Block 2: } & 112 \text{ kWh} \times 278,46c = 31\,187,52c \quad \checkmark MA \\ \text{Total} &= 168\,587,52c \div 100 \quad \checkmark C \\ &= R1\,685,88 \quad \checkmark CA \end{aligned}$	1MA multiplying Block 1 1MA answer Block 2 1C divide by 100 1CA answer (4)	F L3
		<b>[25]</b>	

QUESTION 3 [19 MARKS]			
Ques	Solution	Explanation	T&L
3.1	Forty-five million eight hundred thousand dollars ✓✓RT	2RT correct value (2)	D L1
3.2	Median: $\checkmark$ RT 5; 25; 47; 50; <u>52</u> ; 55; 55; 80; 90 $\checkmark$ MA $= \$52\,000\,000 / \$52\text{ million } \checkmark$ A	1RT correct values 1MA method median 1A correct answer (3)	D L3
3.3	Federer total = $\$121,2 - \$30,5 \checkmark$ M $= \$90,7\text{ million } \checkmark$ A  Total = $\$130 + \$121,2 + \$115 + \$95 + \$92,8 + \$92,1$ $+ \$90,7 + \$90 + \$83,9 \checkmark$ M $= \$910,7\text{ million} / \$910\,000\,000 \checkmark$ CA	1M subtracting 1A simplification  1M adding 1CA simplification (4)	D L3
3.4	Mean = $\frac{\$451,7}{9} \checkmark$ M $\checkmark$ MA  $= \$50,2\text{ million} / \$50\,200\,000 \checkmark$ CA	1M adding values 1MA dividing by 9 1CA answer (3)	D L2
3.5	Percentage = $\frac{55}{115} \times 100 \checkmark$ MA  $= 47,83\% \checkmark$ A	1MA correct values multiply by 100 1A simplification (2)	D L2
3.6	70 : 90 $\checkmark$ RT 7 : 9 $\checkmark$ CA	1RT correct values 1CA simplification of ratio (2)	D L2
3.7	Probability = $\frac{4}{9} \checkmark$ RT $\checkmark$ RT  $= 0,444 \checkmark$ CA	1RT numerator 1RT denominator 1CA rounding to 3 decimal places (3)	P L2
		[19]	

QUESTION 4 [33 MARKS]			
Ques	Solution	Explanation/Marks	T&L
4.1.1	Dependent: Amount in Rands ✓RT Independent: Number of curry bunnies ✓RT	1RT dependent 1RT independent (2)	F L1
4.1.2	R250 ÷ 10 ✓MA = R25,00 ✓A	1MA dividing by 10 1A simplification (2)	F L1
4.1.3	Total Expenses = 450 + (10 × number of curry bunnies) ✓RT ✓RT	1RT fixed cost 1RT cost per curry bunny (2)	F L2
4.1.4	<p style="text-align: center;"><b>Income and Expenses of Curry Bunny Sales</b></p>	<p>1A starting point 1A 2 correct points 1A end point (3)</p>	F L2
4.1.5	Profit ONE month = R5 000 – R2 450 = R2 550 ✓A  Profit FOUR months = R2 550 × 4 ✓MA = R10 200 ✓CA  ∴ Valid ✓O	1A profit one month  1MA profit 4 months 1CA answer  1O statement (4)	F L4
4.2.1	A = 20 + 13 ✓RT = 33 ✓A	1RT adding correct values 1A answer (2)	D L2
4.2.2	15:00 – 17:59 ✓✓A	2A correct answer (2)	D L2
4.2.3	18:00 – 20:59 ✓✓RT	2RT correct time interval (2)	D L2

Ques	Solution	Explanation/Marks	T&L
4.2.4	$6,5 \ell \times 77 = 500,5 \ell \quad \checkmark \text{MA}$ Cost = $500,5 \ell \times R21,92 \quad \checkmark \text{M}$ $= R10\,970,96 \quad \checkmark \text{CA}$	1MA calculating litres 1M multiplying 1CA answer (3)	D L3
4.2.5	$\text{Probabilty} = \frac{32}{77} \quad \checkmark \text{RT}$ $\checkmark \text{RT}$	1RT numerator 1RT denominator (2)	P L2
4.3.1	BANK B $\checkmark \text{RT}$ Interest amount is the same for each year. $\checkmark \text{O}$	1RT correct bank 1O statement/opinion (2)	F L2
4.3.2	BANK A: $R1\,277,29 \times 1,085 \quad \checkmark \text{MA}$ $= R1\,385,86 \quad \checkmark \text{A}$ Difference = $R1\,385,86 - R1\,340 \quad \checkmark \text{M}$ $= R45,86$ $\therefore \text{Valid} \quad \checkmark \text{O}$	1MA multiplying by rate 1A simplification 1M difference 1O statement (4)	F L4
4.3.3	$68,49 \times 19,83 \quad \checkmark \text{MA}$ $= R1\,358,16 \quad \checkmark \text{A}$ $\therefore \text{Yes, she will have enough.} \quad \checkmark \text{O}$	1MA multiplying by exchange rate 1A simplification 1O statement (3)	F L4
		[33]	
<b>TOTAL: 100</b>			