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Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

NOVEMBER 2022

MATHEMATICAL LITERACY P1 MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
MCA	Method with consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table/Reading from a graph/Read 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 rounding

This marking guideline consists of 7 pages.

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QUESTION 1: FINANCE AND DATA HANDLING [19]			
Ques	**Solution**	**Explanation**	**T&L**
1.1.1	Clerk/Cashier ✓✓ RT	2RT correct occupation (2)	F L1
1.1.2	Total deductions = R650 + R774 + R61,25 ✓ M = R1 485,25 ✓ A **OR** Total deductions = R6 125–R4 639,75 ✓ M = R1 485,25 ✓ A	1M adding the deductions 1A answer 1M subtracting 1A answer (2)	F L1
1.1.3	Overtime = R25 × 45 ✓ RG ✓ M = R1 125	1RG values R25 and 45 1M multiplication (2)	F L1
1.1.4	Net pay is the amount received by employee after subtracting total deductions ✓ from gross income ✓J	2J explanation (2)	F L1
1.1.5	Increase = $\frac{7,5}{100}$ × 5 000 ✓ MA ✓M = R375 ✓A	1MA percentage of 7,5% 1M multiplication with R5 000 1A answer (3)	F L1
1.2.1	Histogram ✓✓ RT	2RT correct answer (2)	D L1
1.2.2	✓M Total = 30 + 25 + 40 + 35 + 25 + 20 + 15 + 10 + 10 + 5 = 215 ✓CA	1M addition 1CA answer (2)	D L1
1.2.3	40 ✓✓ RG	2RG answer (2)	
1.2.4	$\frac{68}{100}$ × 50 = 34 marks ✓M✓ A	1M multiplication with % with 50 1A answer (2)	D L1
		[19]	

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QUESTION 2: FINANCE [33]			
Ques.	**Solution**	**Explanation**	**T&L**
2.1.1	R2 470 783 ✓✓ RT	2RT correct lump sum payable to beneficiaries (2)	F L1
2.1.2	✓RT R2 836 836 – R166 417 ✓ M = R2 670 419 ✓CA	1RT correct value for 2022 1M subtraction R166 417 from the value of 2022 1CA correct answer (3)	F L1
2.1.3	2022 Annual amount = R26 383 × 12 ✓ M = R316 596 ✓ S = R316 600 ✓ R	1M multiplying the correct value by 12 1S simplification 1R correct rounding (3)	F L2
2.1.4	Difference in lump sums for 2022 and 2021 = R919 363 – R884 198✓ RT = R35 165 ✓ CA R35 165 is not more than R35 615 statement is invalid. ✓ J	1RT and subtracting correct values R919 363 and R884 198 1CA simplification 1J justification. (3)	F L4
2.1.5	Advantage: It is a saving for the future ✓✓ J One gets income after retiring Beneficiaries get some income when the breadwinner has passed on. **Choose ONE or ANY relevant answer.**	2J any correct reason given (2)	F L4
2.2.1	Selling price for Samsung Galaxy A72 = R7 499,25 + R2 497,75 ✓M = R9 999,00 ✓A	1M addition 1A answer (2)	F L1
2.2.2	Total profit = R1 099,75 + R2 499,75 + R3 699,75 + R7 249,75 ✓M = R14 549,00 Total income = (3 299,25 + 1099,75 + 7499,25 + 2499,75 + 11099,25 + 3699,75 + 21749,25+7249,75) = R58 196,00 ✓M Ratio of total profit : total income = R14 549,00 : R58 196,00 ✓M = 1 : 4 ✓CA	1M adding the total costs 1M adding the profits 1M forming ratio 1CA reduced to simplest ratio form (4)	F L3
2.2.3	A31 cellphones ordered = $\frac{2}{3}$ × 15 = 10 ✓A A72 cellphones ordered = $\frac{1}{3}$ ×15 = 5 ✓A Cost price of A31: 10 × R3 299,25 = R32 992,50 ✓MCA Cost price of A72: 5 × R7 499,25 = R37 496,25 ✓MCA ✓MCA Total cost price of the order = R32 992,50 + R37 496,25 = R70 488,75	1A for number of A31 phone ordered 1A for number of A72 phone ordered. 1MCA cost price for A31 1MCA cost price for A72 1MCA addition (5)	F L4

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Ques	Solution	Explanation	T&L
2.2.4	Percentage decrease $= \frac{\text{R3 299,25} - \text{R3 399,75}}{\text{R3 399,75}} \times 100\%$ ✓SF ✓SF $= -2,96\%$ ✓S $= 3,0\%$ ✓R	1SF substituting the numerator values 1SF substituting denominator value 1S simplification 1R rounding **(NPR for negative answer)** (4)	F L3
2.3	Amount charged : 6,110 × R16,992900 = 103,826619 : 4,073 × R17,326130 = 70,56932749 : 2,817 × R24,06370 = 67,7874429 } ✓M Total: R242,18 ✓S Amount charged including VAT: R24 2,18 × 1,15 ✓M = R278,51 ✓CA INVALID statement ✓J	1M multiplying by the rate 1S simplification 1M VAT calculation 1CA simplification 1J justification (5)	F L4
		[33]	

QUESTION 3: DATA HANDLING AND PROBABILITY [19]

Ques.	Solution	Explanation	T&L
3.1	April 2018 ✓✓ RT	1RT for the month 1RT for the year correct (2)	D L1
3.2	✓ RT Range = R59 960 – R52 361 ✓M = R7 599 million ✓CA	1RT identifying the values 1M subtraction 1CA answer (3)	D L2
3.3	✓ A Six hundred and sixty-six billion, four hundred and twenty-four million ✓A	1A value of billions 1A value of millions (2)	D L1
3.4	Mean sales in millions = $\frac{666\,424\,000}{12}$ ✓RT ✓M = R55 535 333,33 ✓A	1RT value of the numerator 1M dividing by 12 1A correct answer (3)	D L2
3.5	Descending order: 59 960; 59 270; 58 435; 57 915; 56 846; **55 646**; **54 981**; 54 467; 54 249; 53 844; 52 718; 52 361 ✓M Median in millions = $\frac{55\,646 + 54\,981}{2}$ ✓M = R55 313,50 ✓CA	1M arranging in descending/ascending order 1M concept of median. 1CA answer (3)	D L3

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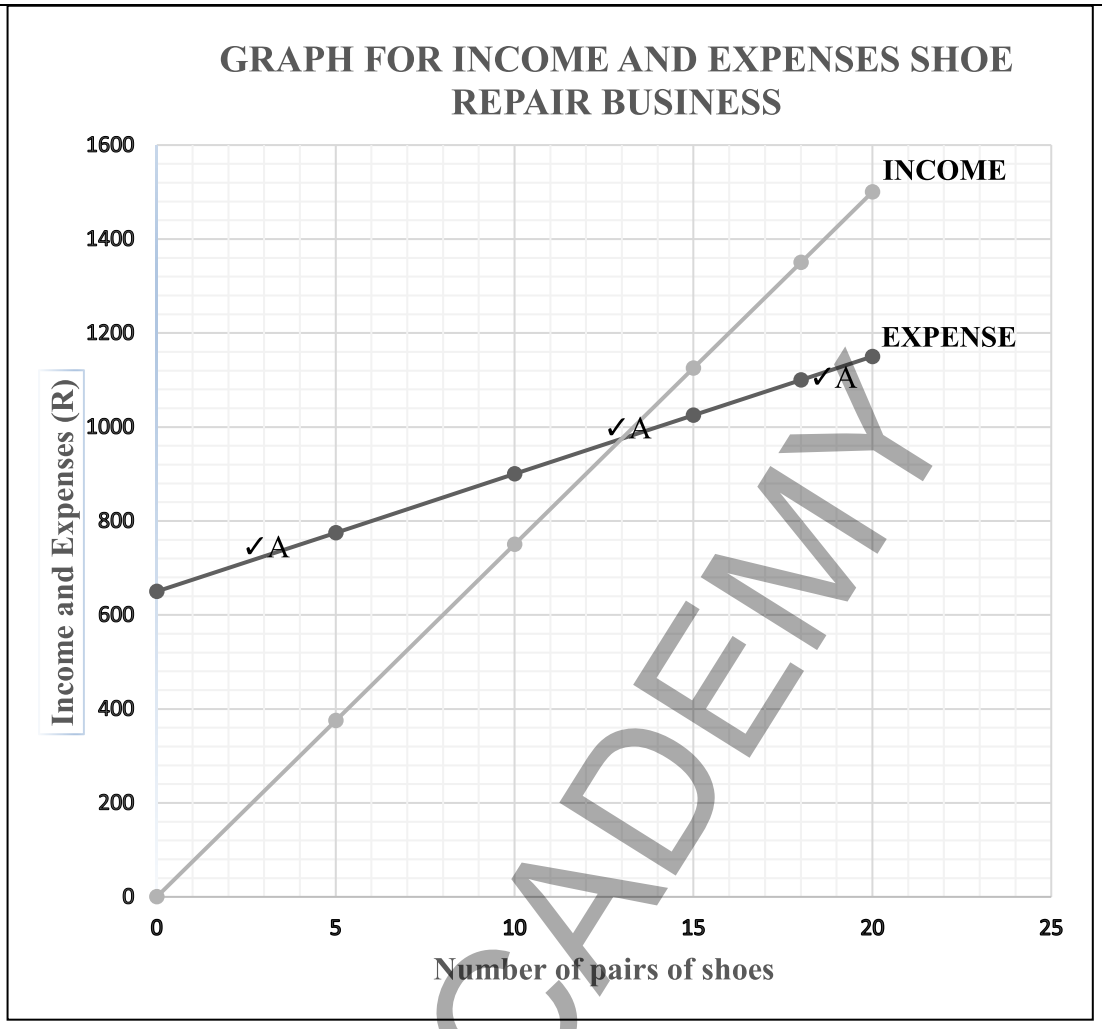
3.6	Annual % increase rate on monthly premium ✓RT $= \frac{60\,406}{666\,424} \times 100\%$ ✓ M = 9,06 % ✓ CA	1RT correct values 1M calculation of percentage. 1CA answer **(NPR)** (3)	D L2
3.7	P (month with decline from 2018 to 2019) = $\frac{5}{12}$ ✓✓A ✓A	2A identifying the number of 5 months 1A answer denominator (3)	P L3
		[19]	

QUESTION 4: DATA HANDLING [29 MARKS]

Ques.	Solution	Explanation	T&L
4.1.1	R650 ✓✓ RT **OR** Fixed cost = R250 + 400 ✓ RT = R650 ✓ A	2RT value from expenses formula **OR** 1RT for adding both values 1A answer (2)	F L1
4.1.2 (a)	**A** = R650 + R25 × 20 = R1 150 ✓ A ✓ SF	1SF substitution in expenses formula 1A simplification and answer (2)	F L2
4.1.2 (b)	Total expenses = R775 + R900 + R1 150 ✓ MCA = R2 825 ✓ S ✓M Total Income = R375 + R750 + R1 500 = R2 625 ✓ S Expenses – Income = R2 825 – R2 625 ✓ MCA = R200	**1MCA adding the expenses with CA from 4.1.2** 1S simplification 1M adding income values 1S simplification IMCA subtracting the two values that give the loss of R200 (5)	F L4

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4.1.3	 Starting point (0;650) ✓A Any other correctly plotted point ✓A Joining points with a straight line ✓A (3)		F L2
4.1.4	Number of pair of shoes = 13 at break-even point ✓✓RT	2RT value of 13 from graph (2)	F L2
4.2	1 Japanese yen (¥) = R0,1352364 (¥) 25 000 = R? Amount received = 25 000 × R0,1352364 ✓✓MA = R3 380,91 ✓A	2MA multiplication of the two values 1A answer **(Accept R3 380,90)** (3)	F L2

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<table>
<tr><td>4.3.1</td><td>
<table>
<tr><th rowspan="2">Weight Category</th><th colspan="2">Female</th><th colspan="2">Male</th></tr>
<tr><th>Tally</th><th>Frequency</th><th>Tally</th><th>Frequency</th></tr>
<tr><td>50–59</td><td>//</td><td>2</td><td>/</td><td>1</td></tr>
<tr><td>60–69</td><td>////</td><td>4</td><td>//</td><td>2 ✓A</td></tr>
<tr><td>70–79</td><td>////</td><td>4</td><td>///</td><td>5 ✓A</td></tr>
<tr><td>80–89</td><td>/</td><td>1</td><td>///</td><td>3 ✓A</td></tr>
<tr><td>90–99</td><td>/</td><td>1</td><td>/</td><td>1 ✓A</td></tr>
<tr><td>100–109</td><td>/</td><td>1</td><td>0</td><td>0 ✓A</td></tr>
</table>
</td><td>1A tally and frequency for each row of males
(5)</td><td>D
L2</td></tr>
<tr><td>4.3.2</td><td>60–69 ✓RT
70–70 ✓RT</td><td>1RT for correct category
1RT for correct category
(2)</td><td>D
L2</td></tr>
<tr><td>4.3.3</td><td>5 + 3 = 8
✓✓RT</td><td>2RT for the correct answer of 8
(2)</td><td>D
L3</td></tr>
<tr><td>4.3.4</td><td>✓RT
P(more than 70 kg) = $\frac{16}{25} \times 100\%$ ✓M
= 64% ✓A</td><td>1RT for the correct value of numerator and denominator
1M percentage calculation
1A answer (3)</td><td>P
L3</td></tr>
<tr><td></td><td></td><td>[29]</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td>TOTAL: 100</td><td></td></tr>
</table>

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