

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2019

MATHEMATICAL LITERACY P2 MARKING GUIDELINE

MARKS: 75

Codes	Explanation
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
D	Define
J	Justification/Reason/Explain
S	Simplification
RD	Reading from a table OR a graph OR a diagram OR a map OR a plan
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding Off
AO	Answer only
NPR	No penalty for rounding OR omitting units

This marking guideline consists of 6 pages.

QUESTION 1 [26 marks]			
Question	Solution	Explanation	Topic and Level
1.1.1	$A = R10\,887,11 - R125,60 - R1,00 \quad \checkmark M$ $= R10\,760,51 \quad \checkmark CA$	1M subtracting R1 1CA for answer (2)	F L2
1.1.2	\checkmark Deposit = $R2,00 + R1,00 \times (\text{number of R100's})$ $\checkmark M$ Fees for 03/1/2019 = $R2 + R1 \times (R1\,000 \div R100)$ $= R2 + R10$ $= R12 \quad \checkmark A$ The statement is valid $\checkmark O$	1 Number of R100 1M Method 1A Answer 1CA Opinion (4)	F L4
1.1.3	Balance 28/1/19 = $R19\,718,01 + (R15 - R12) \quad \checkmark M$ $= R19\,721,01 \quad \checkmark CA$	1M Method 1 CA correct value (2)	F L3
1.1.4	$\checkmark M$ Bank fees = $R12 + R2,50 + R2,50 + R1,00 + R2,50$ $= R20,50 \quad \checkmark A$ His statement is not correct $\checkmark C$	1M adding values 1A correct value 1 Conclusion (3)	F L3
1.1.5	So that they can be able to do their daily operations. $\checkmark \checkmark O$ OR To be able to pay their employees $\checkmark \checkmark O$ OR That is their way of getting the income $\checkmark \checkmark O$ OR Accept other relevant reasoning.	2O Opinion (2)	F L4
1.2.1	$0,27 \times 1\,000 \quad \checkmark M$ $= 270 \text{ l} \quad \checkmark CA$	1M multiply by 1 000 1CA Answer (2)	M L4
1.2.2	Ratio: $= 1 + 3 + 5 = 9 \quad \checkmark M$ Cement = $\frac{1}{9} \times 270 \text{ l}$ $= 30 \text{ l} \quad \checkmark A$ Sand = $\frac{3}{9} \times 270 \text{ l}$ $= 90 \text{ l} \quad \checkmark A$ Gravel = $\frac{5}{9} \times 270 \text{ l}$ $= 150 \text{ l} \quad \checkmark A$	1M addition 1A correct value 1A correct value 1A correct value (4)	M L3

1.2.3	$\checkmark A$ $\text{Amount to be paid} = R45,75 \times (5 + 1) \times 2 \checkmark M$ $= R549 \checkmark CA$	1A Correct hours 1M multiply by 2 1CA Answer (3)	F L2
1.2.4	$\text{Total Costs} = R1\,524,99 + R549 \checkmark M$ $= R2\,073,99 \checkmark CA$ $\text{Total Savings} = (3,5\% \times R11\,560) \times 6 \text{ months}$ $= R2\,427,60 \checkmark A$ <p>Kim will have enough money for the project. $\checkmark C$</p>	1M adding material and cost 1CA Total Cost 1A Total Savings 1 Conclusion (4)	F L4
[26]			

QUESTION 2 [13 marks]			
Question	Solution	Explanation	Topic and Level
2.1.1	$\text{Area} = \pi r^2$ $= 3,142 \times 2,15 \times 2,15 \checkmark M$ $= 14,52 \text{ m}^2 \checkmark CA$	1M Using correct radius in the formula (M) 1CA for Answer (2)	M L2
2.1.2	$\text{Volume of the cylinder} = 14,52 \times 0,9 \checkmark SF$ $= 13,07 \text{ m}$ $= \frac{2}{3} \times 13,07 \checkmark M$ $= 8,71 \text{ m}^3$ There is enough sand to collect it free $\checkmark C$	1 SF 1CA from 2.1.1 1M Method using $\frac{2}{3}$ 1 for Conclusion (4)	M L3
2.2.1	$\text{Space prepared} = 3\% \times 929 \text{ m}^2 \checkmark M$ $= 27,87 \text{ m}^2 \checkmark CA$ $\text{Area of trampoline} = 14,52 \text{ m}^2$ He will have enough space $\checkmark O$	1M using 3% 1CA for Answer 1O for Opinion (3)	M L4
2.2.2	$\text{New premium} = (2,5\% \times R2\ 534) + (R2\ 534) \checkmark M$ $= R2\ 597,35 \checkmark CA$ His estimation is not correct. $\checkmark C$	1M Method using 2,5% 1M Adding 1CA Answer 1 Conclusion (4)	F L4
[13]			

QUESTION 3 [15 marks]			
Question	Solution	Explanation	Topic and Level
3.1.1	<p style="text-align: center;">✓</p> From Graaff-Reinet you go straight with the R75 route pass Jansenville, Wolwefontein, Kariega, pass Uitenhage until you reach Port Elizabeth ✓✓A	1 R75 2A Mention at least 2 towns (3)	MP L2
3.1.2	South East ✓✓ A	2A Correct direction (2)	MP L2
3.1.3	The boxes will be sent overseas. ✓✓O OR Any other logical reason.	2O Opinion (2)	MP L4
3.2.1	Distance from Addo to Uitenhage = 2 cm or 20 mm ✓M [Accept 1,9 – 2,4 cm] Scale: 1 : 2 500 000 Actual distance = 2 x 2 500 000 ✓M $= \frac{5\,000\,000}{100\,000} \quad \checkmark \text{ SF}$ $= 50 \text{ km} \quad \checkmark \text{ A}$	1M measure from map 1M using scale 1SF using correct values 1A Answer in km (4)	MP L4
3.2.2	$\text{Time} = \frac{\text{distance}}{\text{speed}} \quad \checkmark \text{ M}$ $= \frac{50 \text{ km}}{100 \text{ km/h}} \quad \checkmark \text{ SF}$ $= 30 \text{ min.} \quad \checkmark \text{ A}$ His prediction is not valid, he will reach PE at 10:30. ✓O	1M changing subject of formula 1 SF 1A Answer 1O Opinion (4)	MP L4
[15]			

QUESTION 4 [21 marks]			
Question	Solution	Explanation	Topic and Level
4.1.1	$\text{Average} = \frac{\text{Total of marks}}{\text{number of learners}}$ $= \frac{1960}{30} \checkmark A \checkmark M$ $= 65,33 \checkmark CA$	1A Adding total 1M Method divide by 30 1CA Answer (3)	Data L3
4.1.2	Mode is the number that appears the most on the data. $\checkmark E$ $\checkmark A$ Mode = 57% therefore her statement is invalid. $\checkmark C$	1 Explanation 1 Correct mode 1 Conclusion (3)	Data L4
4.2.1	$A = 8 \checkmark A$ $B = 6 \checkmark A$	1A for 8 1A for 6 (2)	Data L2
4.2.2	$P(\text{less than } 60\%) = \frac{(6+4+2+0)}{30} \times 100 \checkmark M$ $= 40\% \checkmark CA$	1M finding probability 1CA Answer CA (2)	Data L3
4.3.1	$A = 100\% - (6+5+12+71)\% \checkmark M$ $= 6\% \checkmark A$ Semi-detached houses = $6\% \times 324\,292 \checkmark M$ $= 19\,457,52$ $= 19\,458 \checkmark CA$	1M Subtracting from 100% 1A Answer 1M finding 6% 1CA Answer (4)	Data L3
4.3.2	Flush toilets = $90\% \times 324\,292 \checkmark M$ $= 291\,862,8 \checkmark CA$ $= 291\,863 \checkmark R$	1M using 90% 1CA Answer 1R Rounding up (3)	F L2
4.3.3	Ratio = $12\% : 6\% \checkmark M$ $= 2 : 1 \checkmark S$	1M using correct percentages 1 Simplification (2)	Data L2
4.3.4	Granny flats $\checkmark \checkmark O$ <p style="text-align: center;">OR</p> RDP houses $\checkmark \checkmark O$ Accept any other relevant answer.	2O Opinion (2)	Data L4
		[21]	
		TOTAL: 75	