

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2018

MATHEMATICAL LITERACY P1 MARKING GUIDELINE

MARKS: 75

INSTRUCTIONS AND INFORMATION FOR MARKING	
Symbol	Explanation
M	Method
MA	Method with accuracy
A	Accuracy
CA	Consistent accuracy
RT/RG/RM	Reading from a table/graph/map
SF	Correct substitution in a formula
P	Penalty, e.g. for no units, incorrect rounding off etc.
S	Simplification
R	Rounding off
NPR	No penalty rounding or omitting units
AO	Answers only full marks
C	Conversion

This marking guideline consists of 7 pages.

QUESTION 1			
Quest	Solution	Explanation	L/T
1.1			
1.1.1	R499,00 ✓✓	2RT Reading value from table Answer (2)	L1 F
1.1.2	Total cost price = $90\% \times R499,00$ ✓ = R449,10 ✓ OR Total cost price = $\frac{10}{100} \times R499 = R49,90$ ✓ R499,00 – R49,90 = R449,10 ✓	1M 1 CA 1M 1CA Answer (2)	L1 F
1.1.3	Original price of item = $R499,00 \div 1,15$ ✓ = R433,91 ✓ = R434,00 ✓	1M Answer 1Divide by 1,15 1CA Answer (3)	L1 F
1.1.4	Deposit amount = $\frac{15}{100} \times 499,00$ ✓ = R74,85 ✓ OR $85\% \times R499,00 = R424,15$ ✓ R499,00 – R424,15 = R74,85 ✓	1M Method 1CA Answer 1M Method 1CA Answer (2)	L1 F

Quest	Solution	Explanation	L/T
1.1.5	Length = 120 cm ÷ 100 ✓ = 1,2 metres ✓	1M division by 100 1C 2MA Answer (2)	L1 M
1.2	Discrete data is usually whole values / collected by counting people or objects. ✓ ✓ Accept any relevant explanation.	2A explanation (2)	L1 D
1.3	This means that every 1 unit on the plan is equivalent to 100 units in real life. ✓ ✓ Accept any relevant explanation.	2A explanation (2)	L1 MP
		[15]	
QUESTION 2			
Quest	Solution	Explanation	L/T
2.1			
2.1.1	R13,27 ✓ ✓	2RT Reading from the table (2)	L1 F
2.1.2	$\% \text{ change} = \frac{R13,89 - R13,27}{R13,27} \times 100\% \quad \checkmark$ $= \frac{R0,62}{R13,27} \times 100\% \quad \checkmark$ $= 4,67\% \quad \checkmark$	1SF 1S 1CA (3)	L2 F
2.2			
2.2.1	Cost = R0,80 × 30 ✓ = R24,00 ✓	1M Multiply by 30 1CA amount (2)	L2 F
2.2.2	Time (hrs.+ min) = 2 × 60 + 30 ✓ = 150 minutes ✓ = 150 × 0,90 ✓ = R135,00 ✓	1M 1C 1M multiply by 90 cents 1CA answer (4)	L2 F

Quest	Solution	Explanation	L/T
2.2.3	Cost in rands = $\frac{R135,00}{30}$ ✓ = R4,50 per day ✓	1M 1CA amount Answer from 2.2.2 (2)	L1 F
2.3	Add parts: $2 + 3 = 5$ Mandy will receive: $\frac{2}{5} \times R500$ ✓ = R200 ✓	1M 1CA amount (2)	L2 F
2.4			
2.4.1	R200 or two hundred rands ✓✓	2RG (2)	L2 F
2.4.2	2 people ✓✓	2RG (2)	L2 F
2.4.3	Costs = $R800 \div 9$ ✓ = R88,888 = R88,89 ✓	1M 1CA simplification NPR (2)	L2 F
		[21]	
QUESTION 3			
Quest	Solution	Explanation	L/T
3.1			
3.1.1	10 : 15 ✓ 2 : 3 ✓ OR 1:1,5 ✓✓	1MA Correct ratio 1CA simplification answer is given as a unit ratio (2)	L1 M
3.1.2	Water: $1,5 \times 500 \text{ ml} = 750 \text{ ml}$ ✓ Salt: $1,5 \times 5 \text{ ml} = 7,5 \text{ ml}$ ✓	1MA 1MA (2)	L2 M
3.1.3	Flour (grams) = $0,25 \times 1\,000$ ✓ = 250 grams ✓	1M 1CA (2)	L1 M

Quest	Solution	Explanation	L/T
3.2	$\text{Perimeter fence} = 2(6,5 \text{ m} + 0,8 \text{ m}) + 2(4,5 \text{ m} + 0,8 \text{ m}) \checkmark$ $= 2(7,3 \text{ m}) + 2(5,3 \text{ m}) \checkmark$ $= 14,6 \text{ m} + 10,6 \text{ m} \checkmark$ $= 25,2 \text{ m} \checkmark$ <p style="text-align: center;">OR</p> $\text{Perimeter fence} = 2(650 + 80) + 2(450 + 80) \checkmark$ $= 1\,460 \text{ cm} + 1\,060 \text{ cm} \checkmark$ $= 2\,520 \text{ cm} \div 100 \text{ cm} \checkmark$ $= 25,2 \text{ m} \checkmark$	1A adding correct lengths 1C conversion to m 1CA simplification 1CA answer 1A adding correct lengths 1CA simplification 1C conversion to m 1CA answer (4)	L3 M
3.3			
3.3.1	$90^\circ\text{F} \checkmark\checkmark$	2RT Accept 89 to 91 °F (2)	L1 M
3.3.2	$^\circ\text{F} = \frac{9}{5} \times 32^\circ + 32^\circ \checkmark$ $= 57,6 + 32^\circ \checkmark$ $= 89,6^\circ$ $= 90^\circ\text{F} \checkmark$	1SF 1Simplification 1CA answer (3)	L2 M
		[15]	

QUESTION 4			
Quest	Solution	Explanation	L/T
4.1	Distance (in km) = $15 \text{ cm} \times 3\,750\,000$ ✓ $= 56\,250\,000 \div 100\,000$ ✓ $= 562,5 \text{ km}$ ✓	1M 1C 1CA answer (3)	L1 MP
4.2	Length $500 \text{ mm} \div 100 \text{ mm} = 5 \text{ tins}$ ✓ Width $300 \text{ mm} \div 100 \text{ mm} = 3 \text{ tins}$ ✓ Height $240 \text{ mm} \div 120 \text{ mm} = 2 \text{ tins}$ ✓ Total number of tins $5 \times 3 \times 2$ ✓ = 30 tins ✓	1M dividing 1M dividing 1M dividing 1M multiplying 1CA simplification (5)	L2 MP
[8]			
QUESTION 5			
Quest	Solution	Explanation	L/T
5.1			
5.1.1	Mode 55 ✓✓	2RT (2)	L1 D
5.1.2	Mean is a type of average obtained when all the scores are added together and then divided by the number of scores. ✓✓ Accept any relevant explanation.	2A explanation (2)	L1 D
5.1.3	44; 46; 47; 49; 50; 51; 52; 53; 55; 55; 55; 58; 60; 62; 64 ✓ Median = $\frac{53 + 55}{2}$ $= \frac{108}{2}$ ✓ $= 54$ ✓	1M arranging values in ascending order 1M simplifying 1A correct value (3)	L1 D

Quest	Solution	Explanation	L/T
5.1.4	Range = 64 - 44 ✓ = 20 ✓	1M 1A (2)	L1 D
5.2			
5.2.1	A = 327 - 212 ✓ B = 212 + 101 ✓ = 115 ✓ = 313 ✓ OR A = 487 - 372 ✓ B = 800 - 487 ✓ = 115 ✓ = 313 ✓	2 MA for A value 2MA for B value 2MA for A value 2MA for B value (4)	L1 D
5.3	P(Girl) = $\frac{473}{800}$ ✓ = 0,59125 x 100 ✓ = 59,125% = 59,13% ✓	1RT numerator 1M multiply by 100 CA answer NPR (3)	L1 P
		[16]	
	TOTAL:	75	