**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

MATHEMATICAL LITERACY P2

MARKING GUIDELINES

JUNE 2019

SYMBOL	EXPLANATION
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/Reading from a graph
F	Choosing the correct formula
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off
J	Justification/Reason

MARKS: 75

This marking guidelines consists of 7 pages.

MARKING GUIDELINES

Ques	Solution	Explanation	Taxonomy levels
	QUESTION 1 [21 MARKS]		
1.1	Expense (R) = R200✓ + R5 × number of passengers✓	1A fixed value 1MA multiplication (2)	L2
1.2	Expense (R) = R200 + R5 × 7✓ 　　　　= R200 + R35✓ 　　　　= R235✓	1SF substitution 1S simplification 1A answer (3)	L2
1.3	**TABLE: Phemelo's Income** See table and graph below	Table: 1A any two correct points 1A any two correct points 1A any two correct points Graph: 1CA starting point 1CA break-even pint 1CA end point 1A joining the points 1A naming graph (8)	L3
1.4	No, ✓ because the break-even point is between 13 and 15 passengers. **Accept the break-even point is between 12,5 and 15 passengers.**	1O opinion 2J justification (3)	L4
1.5	˚F = 1,8 × 37˚ + 32˚✓ 　= 66,6˚✓ + 32˚ 　= 98,6˚✓ 　= 99˚✓ The passenger is correct. ✓	1SF substitution 1S simplification 1A answer 1R rounding 1O opinion	L4

For 1.3 TABLE: Phemelo's Income

Number of passengers	0	5	10	15	20	25	
Income	0	100	200	300	400	500	✓✓✓

Phemelo's Expenses and Income

	OR $99°$ ✓ $= 1,8 \times °C + 32°$ $1,8 \times °C = 99° - 32°$ $°C = 67° \div 1,8$✓ $= 37,2222°$✓ $= 37°$✓ The passenger is correct. ✓	**OR** 1SF substitution 1S simplification 1A answer 1R rounding 1O opinion (5)	
	QUESTION 2[19 MARKS]		
2.1.1	To minimise water that spill out of the pool when people are swimming. ✓✓ **OR** When people get into the swimming pool the water will rise to a higher level. Accept any relevant reason.	2A answer (2)	L4
2.1.2	Area = side × side $= 32,8084 \times 32,8084$✓ $= 1\,076,39111$✓ $\approx 1\,077$ feet²✓✓	1SF substitution 1A answer 1R rounding (3)	L2

2.1.3	radius = $32,8084 \div 2 = 16,4042$ feet✓
	radius = $16,4042 \div 3,28084$ ✓$=5$ m✓
	Volume of circular $= \pi \times r^2 \times h$
	               $= 3,142 \times (5)^2 \times 2$ m✓
	
	               $= 157,1$ m³ ✓
	
	                $= 157,1$ kilolitres✓
	OR
	radius = $32,8084 \div 2 = 16,4042$ feet✓
	height = $2 \times 3,28084$ ✓$=6,56168$ m✓
	Volume of circular $= \pi \times r^2 \times h$
	              $= 3,142 \times (16,4042)^2 \times 6,56168$ m✓
	
	              $= 5547,934675$ feet³ ✓
	
	           $= \dfrac{5547,934675 \text{m}^3}{(3,28084)^3}$
	
	             $= 157,1$ kilolitres✓
		1A radius in feet
		1C conversion
		1A radius in metres
		
		1SF substitution
		1S simplification
		1A volume kilolitres
		OR
		1A height in feet
		1C conversion
		1A height in metres
		
		1SF substitution
		1S simplification
		
		1A volume in kilolitres
		         (6)
			L3

2.2				
	Calc.	**Cost**	1M multiplication	L3
	R9,54× 6 ✓	R57,24✓	1CA answer	
	R13,62× 6	R81,72		
	R17,89× 6	R107,34✓	1A calculation and cost	
	R20,70× 6	R124,24		
	R23,66× 6	R141,96	1A calculation and cost	
	R25,57× 12	R306,84	1A calculation and cost	
	R27,36× 30	R820,80✓		
	R29,29× 78	R2 284,62	1CA total cost	
	Total cost	R3 924,76✓		

Total cost including VAT = R3 924,76 $\times \frac{115}{100}$✓ = R4 513,47✓ **OR** **Total cost including VAT** = R3 924,76 $\times \frac{15}{100}$ + R3 924,76 = R588,71✓ + R3 924,76 = R4 513,47✓	1M calculating VAT 1CA cost including VAT **OR** 1CA VAT amount 1CA cost including VAT (8)	

QUESTION 3[13 MARKS]

3.1.1	The school did not receive the expected number of learners ✓✓ **OR** Some learners were transferred to other schools before the end of the year. ✓✓ **OR** Less number of learners enrolled✓✓	2Answer (2)	L4
3.1.2	Water ✓and sanitation✓ Telephones✓ Electricity✓ Gardening✓ Cleaning✓ **Accept any relevant answer**	2A any two correct answer (2)	L4

3.1.3	Percentage = $\frac{420\ 000}{993\ 500}$ ✓×100%✓
	        = 42%✓
	 The claim is valid. ✓
	 OR
	 Amount = $\frac{40}{100}$× R993 500✓✓
	       = R397 400 ✓ (it is less than R420 000)
	 The claim is valid ✓
		1RT correct values
		 1M multiplication
		 1A answer
		 1O opinion
		 OR
		 1RT correct value
		 1M multiplication
		 1A answer
		 1O opinion (4)
			L4

3.2.1	Time = 30 min + 45 minutes + 45 Minutes ✓
	       = 120 minutes✓
	       = 2 hours✓
		1M adding
		 1A time in minutes
		 1A time in hours
		 (3)
			L2

3.2.2	To prepare children to sleep. ✓✓ **OR** To develop listening skill✓✓ **OR** To improve vocabulary✓✓ **OR** To develop oral communication skills✓✓ **OR** Helps kids to bond with their teachers. ✓✓ **Accept any relevant reason**	2J reasoning (2)	L4

	QUESTION 4[22 MARKS]		
4.1.1	The decrease in the general price of goods and services✓✓ **OR** It means deflation✓✓ **OR** Inflation decline	2A answer (2)	L4
4.1.2	Amount $= \frac{75}{14,2417}$✓ $= 5,26622524 €$✓ $= 5,26622524 \times 1,15\$$✓ $= 6,056159026 \$$✓	1M dividing 1S simplification 1M multiplication 1A answer **NPR** (4)	L3
4.1.3 (a)	2016 monthly rental fee $= \frac{100}{110,61}$✓$\times 1654$ EGP✓ $= 1\ 495,344001$ EGP✓ **OR** 2016 monthly rental fee increase $= \frac{10,61}{110,61}\times 1654$ EGP✓ $= 158,6559986$✓ 2016 monthly rental fee $= 1\ 654 - 158,6559986$ $= 1\ 495,344001$EGP✓	1A fraction 1M multiplication 1A answer **NPR** **OR** 1M multiplication 1S simplification 1A answer **NPR** (3)	L2
4.1.3 (b)	South Africa: % increase $= \frac{rental\ (2018) - rental\ (2016)}{rental\ in\ 2016} \times 100\%$ % increase $= \frac{R7\ 175 - R6\ 350}{R6\ 350} \times 100\%$✓ $= 13\%$✓ Egypt: % increase $= \frac{rental\ (2018) - rental\ (2016)}{rental\ in\ 2016} \times 100\%$ % increase $= \frac{1654 - 1495,3}{1495,3} \times 100\%$ $= 10,6\%$✓ The claim is not valid. ✓	1SF substitution 1A answer 1CA answer 1Opinion **NPR** (4)	L4

4.2.1	Up✓✓ **OR** above ✓✓Church Square	2A answer (2)	L2
4.2.2	Take Rissik street, ✓ turn right into Nelson Mandela drive, ✓ turn left into Pretorius Street, ✓destination is on the right. ✓ **OR** Go north towards Park street✓, turn left into Schoeman street immediately right into Nelson Mandela, ✓ turn left into Pretorius street, ✓ destination in on the right. ✓	1A direction and street 1A direction and street 1A destination (4)	L3
4.2.3	Actual distance = 6 × 100 000 cm = 600 000 cm✓ Distance on map = $\frac{600\,000cm}{75\,000}$✓ = 8cm✓ **OR** Actual distance = $\frac{75\,000cm}{100\,000}$✓ = 0,75 km Distance on map = 6 × $\frac{1\,cm}{0,75}$✓ = 8cm✓	1C conversion 1M using scale 1A answer (3)	L3
TOTAL MARK : 75			

PAPER ANALYSIS

QUESTION	L2	L3	L4	FINANCE	MEASUREMENT	MAPS, PLANS AND OTHER REPRESENTATIONS OF THE REAL WORLD
1.1	2			2		
1.2	3			3		
1.3		8		8		
1.4			3	3		
1.5			5		5	
2.1.1			2		2	
2.1.2	3				3	
2.1.3		6			6	
2.2		8		8		
3.1.1			2	2		
3.1.2			2	2		
3.1.3	4			4		
3.2.1	3				3	
3.2.2			2		2	
4.1.1			2	2		
4.1.2		4		4		
4.1.3(a)	3			3		
4.1.3(b)			4	4		
4.2.1	2					2
4.2.2			4			4
4.2.3		3				3
TOTAL MARK	**20**	**29**	**26**	**45**	**21**	**9**
EXPECTED MARK	**15**	**30**	**30**			
ATUAL %	**25**	**39**	**35**			
EXPECTED %	**25**	**35**	**40**			