Province of the
EASTERN CAPE
EDUCATION

NATIONAL
SENIOR CERTIFICATE

GRADE 11

NOVEMBER 2019

MATHEMATICAL LITERACY P1
MARKING GUIDELINE

MARKS: 100

Symbol	Explanation
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/Read from 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 9 pages.

NOTE/*LET WEL*:

- If a candidate answers a question TWICE, mark the FIRST attempt ONLY.
  Indien 'n kandidaat 'n vraag TWEE keer beantwoord, merk SLEGS die EERSTE poging.
- Consistent accuracy applies in ALL aspects of the marking guideline.
  Volgehoue akkuraatheid geld deurgaans in ALLE aspekte van die nasienriglyn.
- If a candidate crossed out an attempt of a question and did not redo the question, mark the crossed-out attempt.
  Indien 'n kandidaat 'n poging vir 'n vraag deurgetrek het en nie die vraag weer beantwoord het nie, merk die poging wat deurgetrek is.
- The mark for substitution is awarded for substitution into the correct formula.
  Die punt vir substitusie word vir substitusie in die korrekte formule toegeken.

QUESTION 1 [20]			
Ques.	**Solution**	**Explanation**	**T&L**
1.1.1	5 steps ✓✓ RT	2RT steps (2)	F L1
1.1.2	Cutting ✓✓ RT	2RT correct process Allow step 3 (2)	F L1
1.1.3	Estimated costs = \$0,90 + \$0,60 + \$0,25 + \$1,00 + \$0,40 ✓M = \$3,15 ✓M	1M adding correct values 1A answer (2)	F L1
1.1.4	www.graincreative.com ✓✓ RT	2RT correct website (2)	F L1
1.1.5	0,25 : 1,00 ✓RT 1 : 4 ✓CA	1RT correct values in ratio form 1CA simplified (2)	F L1
1.1.6	Time = 8:25 + 4:45 ✓M = 13:10 ✓CA **OR** 1 : 10 pm ✓CA	1M adding hours 1CA answer (2)	M L1
1.2.1	Frequency is the number of times shoe size appears. ✓✓A	2A Explanation (2)	D L1
1.2.2	Total number = 3 + 12 + 22 + 18 + 3 + 2 ✓M = 60 ✓A	1M addition 1A number of learners (2)	D L1
1.2.3	Size 6 ✓✓ RT	2RT correct size (2)	D L1
1.2.4	Probability is a chance of a specific event occuring. ✓✓ A	2A Explanation (2)	P L1
		[20]	

QUESTION 2: FINANCE [27]			
Ques.	**Solution**	**Explanation**	**Topic /Level**
2.1.1	61,50 cents per Kilowatt hour ✓✓ RT	2A correct value (2)	L1
2.1.2	Units used = 1 679 – 1 468 = 211 kWh ✓ A Step 1 = 150 kWh × 61,50 = 9 225 cents ✓ A Step 2 = 61 × 82,50 = 5 032,5 cents ✓ A Total charge = 9 225 + 5 032,5 = 14 257,5 ✓ CA $= \frac{14\,257,5}{100}$ ✓ C = R142,58 ✓ CA	1A total units 1A answer 1A multiplication 1CA total charge 1C Conversion 1CA converted answer in Rands and cent (6)	L3
2.2.1	Reduction = 2 499 – 1 948 = 551 ✓ M Percentage reduction = $\frac{551}{2\,499} \times 100$ ✓ M = 22% ✓	1M the reduction 1M fraction multiply by 100% (2)	L1
2.2.2	✓ M VAT amount = $\frac{15}{115}$ x 1 948 ✓ M = R254,09 ✓ A **OR** Price without VAT = $\frac{100}{115}$ x 1 948 ✓ M = R1 693,91 VAT = R1 948 – R1 693,91 ✓ M = R254,09 ✓ M	1M multiply by 15/115 1M multiply by 1 948 1A Correct answer 1M amount without VAT 1M subtraction 1A VAT	L1

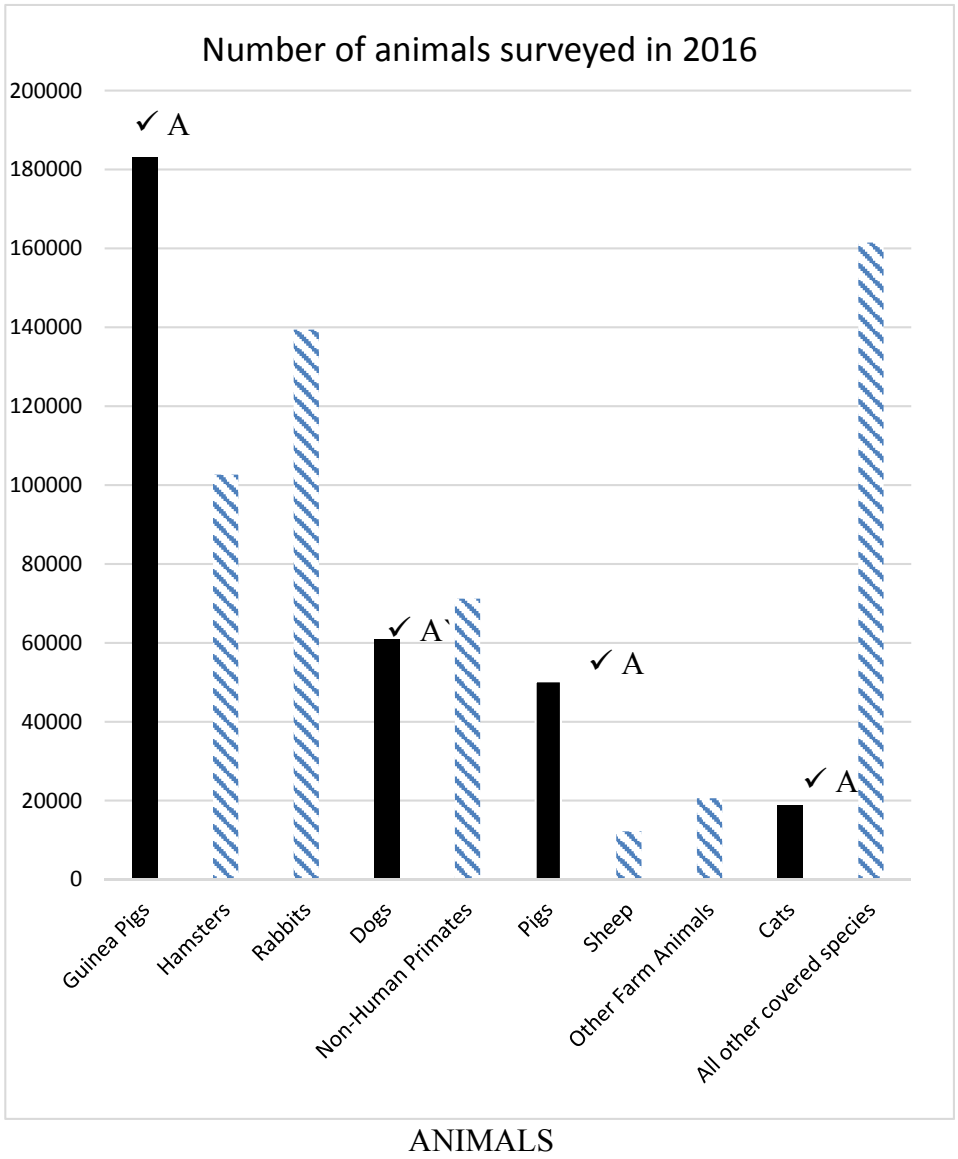
Ques.	Solution	Explanation	T&L
	OR Price without VAT = $\frac{1\,948}{1,15}$ ✓ M = R1 693,91 VAT = R1 948 – R1 693,91✓ M = R254,09 ✓ A	1M dividing by 1,15 1M subtraction 1A answer (3)	
2.3.1	Inflation is the increase of the price of a typical basket of goods and services calculated over a period of time. ✓✓ A **OR** Inflation is the measure of decrease in purchasing power of a nation's currency over a period of time. ✓✓ A	1A for the increase 1A for the period of time **OR** 1A for the decrease in purchasing power 1A for the period of time (2)	L1
2.3.2	Price of the laptop in 2018 = R5 999 ×104,5% ✓✓ M = R6 268,96 ✓ CA **OR** R5 999 ×1,045 ✓✓ M = R6 268,96 ✓ CA **OR** Increase = $\frac{4,5}{100}$ x 5 999 = R269,96 ✓ M 2018 price = 5 999 + 269,96 ✓ M = R6 268,96 ✓CA	1M Multiplication to get price of 2018 1M using 104,5% 1CA answer 2M Multiply by 1,045 1CA answer 1M for the increase 1M adding to 5 999 1CA Answer (3)	L2
2.4.1	Amount invested = $\frac{75}{100} \times 50\,000$ ✓ M = R37 500 ✓ A **OR** 0,75 × 50 000 ✓ M = R37 500 ✓ A	1M concept 75 % 1A answer (2)	L1

Ques.	Solution	Explanation	T&L
2.4.2	Interest in the first year $= \frac{7,5}{100} \times 37\,500$ ✓ M = R2 812,50 ✓ A Amount to be invested in 2nd year = R37 500 + R2 812,50 = R40 312,50 ✓ CA Interest in 2nd year $= \frac{7,5}{100} \times 40\,312,50$ = R3 023,44 ✓ CA Total interest in 2 years = 2 812,50 + 3 023,44 = R5 835,94 ✓CA **OR** Interest in the first year $= \frac{7,5}{100} \times 37\,500$ = R2 812,50 ✓ M End of first year = R37 500 + R2 812,50 = R40 312,50 ✓ M Interest in 2nd year $= \frac{7,5}{100} \times 40\,312,50$ = R3 023,44 ✓CA End of 2nd year = R40 312,50 + R3 023,44 = R43 335,94 Total interest in 2 years = R43 335,94 – R37 500 ✓ MA = R5 835,94 ✓A **OR** ✓ M R37 500 × 1,075 × 1,075 ✓ M ✓ CA = R43 335,9375 – R37 500 ✓ M = R5 835,94 ✓ CA	**CA from 2.4.1** 1M multiplying correct values 1A 1st year interest 1CA amount to be invested in 2nd year 1CA interest in 2nd year 1CA Total interest 1MA interest calculation 1MA Amount with interest 1CA interest 2nd year 1MA subtracting correct values 1CA interest over 2 years 2M multiply twice by 1,075 1CA answer 1M subtracting 37 500 1CA interest over two years (5)	L2
2.4.3	USA ($) $= \frac{10\,000}{14,38}$ ✓ M = $695,41 ✓ A	1M division 1A VSA dollar (2)	L2
		[27]	

QUESTION 3: MEASUREMENT [16]			
Ques.	**Solution**	**Explanation**	**T&L**
3.1	2 793 ✓ RT 3 000 ✓ A	1RT correct value 1A rounding **AO** (2)	L1
3.2	✓ C ✓ SF TSA = 2(21,5 cm × 10,25 + 21,5 cm × 6,5 cm + 6,5 cm ×10,25 cm) × 500 = 853,5 cm^2 × 500 = 426 750 cm^2 ✓ CA	1C to 10,25 cm 1SF substitution 1CA answer (3)	L2
3.3	Number of pallets = $\frac{2\,793}{500}$ ✓ MA = 5,586 ✓ S = 5 ✓ A	1MA dividing by 500 1S simplification 1A complete number of pallets on the truck. (3)	L1
3.4	$\frac{1\,637,5}{1\,000}$ ✓ C = 1,6375 tons ✓ A	1C conversion 1CA answer **NPR** (2)	L2
3.5	Bricks used = $\frac{3\,300-75}{50}$ ✓ SF Area of the house = $\frac{3\,225}{50}$ ✓ S = 64,5 m^2 ✓ CA ✓ unit	1SF substitution 1S simplification 1CA area 1U correct unit (4)	L2
3.6	Volume = 21,5 × 10,25 × 6,5 ✓ SF = 1 432,4375 cm^3 = 1 432,44 cm^3 ✓ S	1SF substitution 1S simplification **NPR** (2)	L2
		[16]	

QUESTION 4: MAPS and PLANS [15]			
Ques.	**Solution**	**Explanation**	**T&L**
4.1	Strip chart ✓✓ RT	2RT answer (2)	L1
4.2	964 km ✓✓ RT	2RT answer (2)	L1
4.3	7 Regional roads ✓✓ RT	2RT correct number (2)	L1
4.4	N2 ✓✓ RT	2RT National road (2)	L1
4.5	Total distance = 829 km – 460 km ✓ MA = 369 km ✓ A **OR** Total distance = 504 km – 135 km ✓ MA = 369 km ✓ A	1MA subtracting Correct values 1A answer (2)	L2
4.6	Speed = $\frac{259\text{ km}}{2,5}$ ✓ RT ✓ SF = 103,6 km/h ✓ CA	1RT kilometres 1SF substitution 1CA speed (3)	L2
4.7	Drive from Port Edward to Port St. Johns on the R61, turn right at junction and then left on N2. ✓ RT ✓ RT	1RT R61 and turn right 1RT turn left on N2 (2)	L2
		[15]	

QUESTION 5: DATA HANDLING [22]			
Ques.	**Solution**	**Explanation**	**T&L**
5.1	183 237, 161 467, 139 391, 102 633, 71 188, 60 979, 50 226, 20 597, 18 898, 12 196 ✓✓ A	2A arrangement (2)	L1
5.2	Median = $\frac{71\,188 + 60\,979}{2}$ ✓ SF ✓M = 66 083,5 ✓ A = 66 084	1SF substitution 1M median concept 1A answer **NPR** (3)	L2
5.3	% difference = 6,1% − 5,4% ✓ MA = 0,7 % ✓ SF	1MA subtracting correct values 1SF answer (2)	L1
5.4	$\frac{820\,812}{10}$ ✓ RT ✓M 82 081,2 ✓ CA	1RT 1M division by 10 1CA answer (3)	L2
5.5	Range = 171 375 −10 315 ✓ MA = 161 060 ✓ CA	1MA subtracting correct values 1CA answer (2)	L2
5.6	✓ M A = 100 – (20,3 + 14,6 + 18,0 + 7,1 + 5,4 + 1,2 + 3,3 + 2,5 + 20,5) = 100 − 92,9 % ✓ S = 7,1% ✓ A **OR** ✓M A = $\frac{57\,735}{834\,453} \times 100\%$ ✓M = 6,9% ✓A	1M subtracting from 100% 1S simplification 1A answer in% 1M for the correct fraction 1M for multiplication by 100% 1A answer in % **NOTE: different answers due to decimals.** (3)	L1

Ques.	Solution	Explanation	T&L
5.7	 1 Mark for each bar plotted correctly. (4)		
5.8	$P_{(animals)} = \frac{104\,183}{834\,453}$ ✓A ✓A $= 0,12$ ✓CA	1A numerator 1A denominator 1CA answer (3)	L2
		[22]	
		TOTAL:	**100**