



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2020

**MATHEMATICAL LITERACY P2
MARKING GUIDELINE
(EXEMPLAR)**

MARKS: 100

Symbol	Explanation
M	Method
M/A	Method with Accuracy
MCA	Method with Consistent Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table OR Reading from a graph OR 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 OR Reason
AO	Answer only
NPR	No penalty for rounding

This marking guideline consists of 5 pages.

QUESTION 1 [21 MARKS]			
Ques.	Solution	Explanation	Topic & Level
1.1.1	Temperature reading = 30 °C ✓✓A	2A Correct reading (2)	M L1
1.1.2	°F = 100 °F ✓✓A	2A °F (2)	M L1
1.1.3	Minimum °Fahrenheit = minus 42°F OR -42°F ✓✓A	2A Min °F (2)	M L1
1.1.4	Thermometer 1 : Thermometer 2 = $\frac{90}{9} : \frac{20}{2}$ ✓RD ✓M = 9 : 2 ✓CA	1RD Both values correct 1M Correct order 1CA Simplified ratio (3)	M L1
1.2.1	Number of houses = 18 ✓✓A	2A Correct number of houses (2)	M L1
1.2.2	Hospital ✓✓A	2A Correct building (2)	M L1
1.2.3	Café ✓✓A	2A Correct business (2)	M L1
1.2.4	Length of the bar = 1,5 cm ✓✓A	2A Correct length (2)	M L1
1.2.5	1,5 cm on the map represents 50 yards in reality ✓✓A	CA from 1.2.4 2A Explanation (2)	M L1
1.2.6	3 houses ✓✓A	2A Number of houses more (2)	M L1
		[21]	

QUESTION 2 [26 MARKS]			
Ques.	Solution	Explanation	Topic & Level
2.1.1	Circumference is the distance or length around the lamp shade ✓✓A	2A Explanation (2)	M L1
2.1.2	$\text{Radius} = \frac{200}{10} \checkmark C$ $= \frac{20}{2} \checkmark M$ $= 10 \text{ cm } \checkmark CA$	1C mm to cm 1M Divide by 2 1CA Radius (3)	M L2
2.1.3	Circumference of lamp shade = $\pi \times \text{diameter}$ $= 3,142 \times 20 \text{ cm } \checkmark SF$ $= 62,84 \text{ cm } \checkmark MCA$	CA from 2.1.1 1SF Substitution 1MCA Circumference (2)	M L2
2.1.4	Height of lamp shade = $20 \text{ cm} \times 1,65 \checkmark M$ $= 33 \text{ cm } \checkmark A$ Statement invalid ✓O	1M Multiply by 1,65 1A Height 1O Invalid (3)	M L4
2.1.5	Area of lampshade = $\pi \times \text{radius} \times \text{radius}$ $= 3,142 \times 10 \text{ cm} \times 10 \text{ cm } \checkmark SF$ $= 314,2 \text{ cm}^2 \checkmark MCA$ Area including wastage = $314,2 \text{ cm}^2 \times 1,0425 \checkmark M$ $= 327,5535 \text{ cm}^2 \checkmark CA$ $\approx 328 \text{ cm}^2 \checkmark R$	CA from 2.1.1 1SF Substitution 1MCA Area of lamp shade 1M Multiply by 1,0425 1CA Area including wastage 1R Nearest cm^2 (5)	M L3
2.2.1	Number of parts = 22 parts ✓✓A	2A Number of parts (2)	M&P L2
2.2.2	$P_{(\text{set screw})} = \frac{2 \checkmark A}{22} \checkmark MCA$ $= 0,090909 \dots$ $\approx 0,091 \checkmark R$	CA from 2.2.1 1A Number of set screws 1MCA 1R 3 dec places (3)	P L2
2.2.3	To prevent shocking ✓✓R <p style="text-align: center;">OR</p> For safety purposes Accept any other relevant reasons	2R Reason (2)	M&P L4
2.2.4	Bulbs can break/damage ✓✓R	2R Explanation (2)	M&P L4
2.2.5	To connect Stem 2 with Stem 3 ✓✓A	2A Explanation (2)	M&P L4

QUESTION 3 [33 MARKS]			
Ques.	Solution	Explanation	Topic & Level
3.1.1	Southwest ✓✓A North ✓✓A	2A Southwest 1A North (4)	M&P L2
3.1.2	Scale refers to the relationship (ratio) between distance on a map and the corresponding distance on the ground (reality) ✓✓A	2A Definition (2)	M&P L1
3.1.3	Measure bar = 1,8 cm ✓A (Accept 1,7 cm to 1,9 cm) 1,8 cm = 2 km 1,8 cm = 200 000 cm ✓C ∴ 1 cm = 111 111, 111 ✓S ∴ 1 : 111 000 ✓R	1A Measure bar 1C km to cm 1S Simplification 1R Nearest '000 (4)	M&P L3
3.1.4	Speed = $\frac{\text{Distance}}{\text{Time}}$ $65 \text{ km/h} = \frac{18,2 \text{ km}}{\text{Time}}$ ✓M Time = $\frac{18,2 \text{ km}}{65 \text{ km/h}}$ ✓M = 0,28...h ✓A = 16,8 min ✓C = 17 minutes Time of arrival = 14:53 + 17 minutes ✓M = 15:10 ✓CA	1SF Substitution 1M Changing subject of formule 1A Time in hours 1CA Time in min 1M Add times 1CA Arrival time (6)	M&P L3
3.1.5	Because of the (Indian) ocean ✓✓R	2R Reason (2)	M&P L4
3.2.1	Steak = 0,454 kg ✓✓A	2A Kilogram (2)	M L1
3.2.2	Salt = $0,5 \times 5 \text{ ml}$ = 2,5 ml ✓MA Black pepper = $0,25 \times 5 \text{ ml}$ = 1,25 ml ✓CA Total = 2,5 ml + 1,25 ml = 3,75 ml ✓CA	1MA Millilitres 1CA Millilitres 11CA Total (3)	M L2
3.2.3	1 cup broth = 250 ml ✓MA $\frac{3}{4}$ cup whipping cream = $0,75 \times 250 \text{ ml}$ = 187,5 ml ✓MA $\frac{1}{4}$ cup sour cream = $0,25 \times 250$ = 62,5 ml ✓MA Total = 250 ml + 187,5 ml + 62,5 ml = 500 ml = 0,5 litres ✓CA Statement is valid ✓O	1MA 250 ml 1MA 187,5 ml 1MA 62,5 ml 1CA Litre 1O Valid (5)	M L4

3.2.4	Cooking time ✓M = (3 min × 2) + 8 min + 1 min + 1 min + 2 min + 20 min + 2 min = 40 minutes ✓CA	✓MCA 1M Multiply by 2 1MCA Adding all times 1CA Total time (3)	M L2
3.2.5	Time for preparation should also be considered. ✓✓A	2A Reason (2)	M L4

QUESTION 4 [20 MARKS]			
Ques.	Solution	Explanation	Topic & Level
4.1.1	6 seats ✓✓A	2A No of seats (2)	M&P L1
4.1.2	Raised Seating Area = 112 seats ✓A Flat Seating Area = 85 seats ✓A Difference = 112 – 85 ✓M = 27 seats ✓CA	1A Seats in RSA 1A Seats in FSA 1M Subtract 1CA Difference (4)	M&P L3
4.1.3	$P_{(L\text{-row})} = \frac{12}{197}$ ✓A ✓MCA	1A Numerator 1MCA Denominator (CA from 4.1.2) (2)	M&P L2
4.1.4	Walk to A5, then turn right ✓A Walk straight pass the Row D ✓A Third Row (G) third seat ✓A Accept any other relevant responses	1A Straight 1A Turn right 1A 3 rd row, 3 rd seat (3)	M&P L4
4.2.1	Volume of drum = $\pi \times \text{radius} \times \text{radius} \times \text{height}$ ✓C ✓A = 3,142 × 29 cm × 29 cm × 93 cm ✓SF = 245 745, 246 cm ³ ✓CA Litres = 245 745, 246 cm ³ ÷ 1 000 cm ³ = 245,745 litres ✓CA	1C mm to cm 1A Radius 1SF Substitution 1CA Volume 1CA Litres (5)	M L3
4.2.2	<ul style="list-style-type: none"> The volume of advertisement refers to the maximum the drum can hold. ✓✓A The calculated volume refers to the entire drum. ✓✓A 	2A 1 st Reason 2A 2 nd Reason (4)	M L4
		TOTAL:	100