



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

GRADE 10

NOVEMBER 2020

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

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 5 pages.

QUESTION 1 [30 marks]			
Quest.	Solution	Explanation	Topic and Level
1.1.1	White sugar = $\frac{3}{4}$ cup $= \frac{3}{4} \times 250 \text{ ml}$ ✓M $= 187 \text{ ml}$ ✓CA	1 M Multilpy 1 CA Answer (2)	M L3
1.1.2	2 dozen = $12 \times 2 = 24$ ✓A 24 muffins = $\frac{1}{4} \times 2$ cups ✓M $= \frac{1}{2}$ cup ✓A	1 A total of muffins 1 M Multiply 1A Answer (3)	M L3
1.1.3	Total time = $10 + 25 = 35 \text{ min}$ ✓M $= 10\text{h}18 + 35 \text{ min}$ ✓M $= 10\text{h}35$ ✓CA	1 M Adding time 1 M Addition 1 CA Answer (3)	M L2
1.1.4	Degrees Celsius = $(^{\circ}\text{F} - 32^{\circ}) \div 1,8$ ✓SF $= (400^{\circ}\text{F} - 32^{\circ}) \div 1,8$ ✓M $= 204,4 \text{ }^{\circ}\text{C}$ ✓A	1 SF Substitution 1 M Method 1 A Answer (3)	M L2
1.1.5	1 cup milk = 250 ml ✓SF $= \frac{250}{1\,000}$ ✓M $= 0,25 \text{ l milk}$ ✓A	1 SF Substitution 1 M divide by 1 000 1 A Answer (3)	M L3
1.1.6	To raise school funds ✓✓ O To complete school project ✓✓O OR Accept any logical explanation	2 O Opinion 2 O Opinion (4)	M L4
1.2.1	Circumference = $3,2 + 3 + 1,7 + 2$ (✓A) + 1 $+ 1,5$ (✓A) ✓M $= 12,4 \text{ m}$ ✓CA	2 A for 1,5 m and 2 m 1 M Addition 1 CA Answer (4)	M L3
1.2.2	Area = $l \times b$ $= (3,2 \times 3) - (2 \times 1,5)$ ✓SF $= 9,6 - 3$ ✓M $= 6,6 \text{ m}^2$ ✓CA	1SF Substitution 1 M Subtracting 1 CA Answer (3)	M L2
1.2.3	Height $40 \text{ cm} = 0,4 \text{ m}$ ✓C Volume = $3,2 \times 3 \times 0,4$ ✓SF $= 3,84 \text{ m}^3$ ✓M $= 3\,840\,000 \text{ cm}^3$ $= \frac{3\,840\,000}{1\,000} \text{ ml}$ ✓S $= 3\,840 \text{ litres}$ ✓C	1C Conversion 1SF Substitution 1 M Method 1 S Simplification 1C Conversion (5)	M L3
		[30]	

QUESTION 2 [13 marks]			
Quest.	Solution	Explanation	Topic and Level
2.1.	$\text{Radius} = \frac{1}{2} \times \text{diameter} \checkmark \text{M}$ $= \frac{1}{2} \times 0,3 \text{ m}$ $= 0,15 \text{ m} \checkmark \text{CA}$	1M to get radius 1 CA Answer (2)	M L2
2.2	$\text{Volume} = \pi r^2 \times h \checkmark \text{SF}$ $= 3,142 \times (0,15)^2 \times 1,2 \text{ m} \checkmark \checkmark \text{M}$ $= 0,084 834 \text{ m}^3 \checkmark \text{C}$ $= 84,834 \text{ l} \checkmark \text{CA} \checkmark \text{A}$	1 SF Substitution in 1 M Multiplication 1 M Multiplication 1 C Conversion 1CA Answer 1 A correct unit (6)	M L3
2.3	$\text{Circumference} = \pi d$ $= 3,142 \times 0,3 \checkmark \text{SF}$ $= 0,9 426 \text{ m} \checkmark \text{S}$ $= 94,26 \text{ cm} \checkmark \text{C}$	1 SF Substitution 1S Simplification 1C Conversion (3)	M L2
2.4	Job Creation $\checkmark \checkmark \text{O}$ OR To keep the environment clean. Accept any other logical explanation.	2 O Opinion (2)	M L4
[13]			

QUESTION 3 [20 marks]			
Quest.	Solution	Explanation	Topic and Level
3.1	Rectangle ✓A Circle ✓A	1A 1 st shape 1A 2 nd shape (2)	M L2
3.2	Diameter = $3,9 - (0,15 \times 2 \text{ m})$ ✓SF ✓M = 3,6 m ✓A	1SF Substitution 1M Method 1A and Correct unit (3)	M L2
3.3	Radius (r) = 1,8 m Area of floor = $(3,9 \times 4,1) + \frac{1}{2} \pi r^2$ ✓S = 15,99 + 5,09 m ✓M = 21,08 m ✓CA	1S Substitution 1M Addition 1CA Answer (3)	M L3
3.4	Area of Part A = $3,9 \times 4,1$ ✓SF ✓M = 15,99 ✓A	1 SF Substitution 1M Multiplication 1A Answer (3)	M L2
3.5	Area of one tile = 30×30 = $0,3 \times 0,3$ ✓C = 0,09 m ✓A Total of tiles = $\frac{15,99}{0,09}$ ✓M = 177,7 ✓CA = 178 tiles ✓R	1C Conversion 1A Area of one tile 1M Division 1CA Answer 1R Rounding (5)	M L3
3.6	Number of boxes = $\frac{178}{10}$ ✓M = 17,8 ✓A = 18 boxes ✓R The statement is valid. ✓C	1M Divide by 10 1A number of boxes 1 R Correct rounding 1C Conclusion (4)	M L3
			[20]

QUESTION 4 [12 marks]			
Quest	Solution	Explanation	Topic and Level
4.1	Ratio scale ✓A 1 unit on scale represents 15 000 000 units in reality ✓✓A	1A Correct scale 2A Interpretation (3)	MP L2
4.2	North East ✓✓A	2A correct direction (2)	MP L2
4.3	4 cm or 40 mm ✓A Actual Distance = $4 \times 15\,000\,000$ ✓M = 60 000 000 cm = $\frac{60\,000\,000}{100\,000}$ ✓M = 600 km ✓CA [Allow variance from 3,9 – 4,1 km]	1A Accurate measure 1M Multiplication 1M Dividing 1CA Answer (4)	MP L3
4.4	Western Cape ✓A Probability = $\frac{1}{9}$ ✓M = 0,11 ✓R	1A Correct province 1M Division 1R Rounding (3)	P L3
		[12]	
		TOTAL: 75	