Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 10

NOVEMBER 2017

MATHEMATICAL LITERACY P2 MARKING GUIDELINE

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 off OR omitting units

This marking guideline consists of 5 pages.

KEY TO TOPIC SYMBOL:

F = Finance; M = Measurement; MP = Maps, Plans and other Representations
DH = Data Handling; P = Probability

QUESTION 1 [21 marks]

Ques	Solution	Explanation	Topic & Level
1.1.1	Purchases for the month ✓ M = 476,00 + 135,50 + 99,50 + 77,50 + 129,50 + 57,00 = R975,00 ✓A	1M Adding purchases 1A Total purchases (2)	F L2
1.1.2	Interest per month = $\frac{0,31}{12}$ ✓ M = 0,025833333 ✓ A Interest on outstanding amount = 0,025833333 × 1215,80 ✓ M = R31,40816667 ≈ R31,41 ✓ CA **OR** Interest payable = $\frac{31}{100}$ × 1215,80 ✓ M = $\frac{376}{12}$ ✓ M ✓ M ≈ R31,41 ✓ M	1M Divide by 12 1A Monthly interest 1M Multiply by 1215,80 1CA Interest amount 1M Multiply by 1215,80 1A Annual interest 1M Divide by 12 1CA Interest amount (4)	F L3
1.1.3	Percentage = $\frac{327,34}{1\,636,71}$ ✓MA × 100% ✓ M = 19,9998778 % = 20 % ✓ CA	1MA Numerator and denominator 1M Multiply by 100 1CA Percentage (3)	F L2
1.1.4	Dress did not fit. ✓✓ A **OR** Dress was too small. ✓✓ A **OR** Dress was too big. ✓✓ A **OR** Dress had a factory fault.✓✓ A **Accept any other relevant reason**	2A Reason (2)	DH L4
1.1.5	It is unhygienic. ✓✓ A **OR** It could have been fitted on.✓✓ A **OR** It is stated on the cash slip that underwear may not be returned. ✓✓ A **Accept any other logical reason**	1A Reason (2)	DH L4
1.2.1	The data is discrete, ✓ A because the Bunny Chows are counted / whole numbers ✓✓ O	1A Correct type 2O Opinion (3)	DH L4
1.2.2	It cannot be said with certainty, because the days of the week are not given in the graph. ✓✓ A	2O Opinion (2)	P L4
1.2.3	Day 27 to Day 28 decreased, ✓ A Day 28 to Day 30 increased ✓ A and Day 30 to Day 31 decreased ✓ A	1O Decrease 27-28 1O Increase 28-30 1O Decrease 30-31 (3)	DH L4

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QUESTION 2 [22 marks]

Ques	Solution	Explanation	Topic & Level
2.1.1	Fee for 2016 **(A)** = R3,00 + R1,30 / R100 = 3,00 + 0,013 × 500 ✓ SF ✓ M = 3,00 + 6,5 = R9,50 ✓ CA Fee for 2017 = R10,70 Difference in price = R10,70 – R9,50 = R1,20 ✓ CA **OR** Fee for 2016 **(A) =** 1,3 × 5✓ M = 6,5 + 3✓ M = R9,50 ✓ CA Fee for 2017 = R10,70 Difference in price = R10,70 – R9,50 = R1,20 ✓ CA	1SF Substitution 1M Multiply 500 1CA Fee 1CA Difference 1M Multiply by 5 1M Adding 3 1CA Fee 1CA Difference (4)	F L3
2.1.2	Percentage change – Withdrawal (Own Bank) = $\frac{10,70-10,45}{10,45}$ × 100% ✓ F = 2,4 % ✓ CA Percentage change – Withdrawal (Other Bank) = $\frac{16,70-16,45}{16,45}$ × 100% = 1,5 % ✓ CA 50% more = 1,5 × 1,5 = 2,25 % ✓ CA ∴2,25 % ≠ 2,4% Statement is invalid ✓ CA	1F Correct formula 1CA Percentage 1CA Percentage 1MA Calculate 50% increase 1O Invalid (5)	F L4
2.2.1	Grams of yeast = $\frac{1}{4}$ × 28 ✓ M = 7 gram ✓ A	1M Multiply by 28 1A Number in grams (2)	M L2
2.2.2	**°C = (°F – 32) ÷ 1,8** = (115 °F – 32) ÷ 1,8 ✓ SF = 83 ÷ 1,8 ✓S = 46,11111111 = 46 °C ✓ CA	1SF Substitute correct value 1S Simplification 1R Nearest °C (3)	M L3
2.2.3	Measurement of loaf pans in inches = 9 inch × 5 inch Measurement of loaf pans in centimetres = 22,86 cm × 12,7 cm 9 inch × 2,54 = 22,86 cm ✓ MA 5 inch × 2,54 = 12,7 cm ✓ CA She is using the correct loaf pans ✓ O	1MA Multiply by 2,54 1CA Convert 5 inch to cm 1O Correct pans (3)	M L4
2.2.4	Total time = Mixing + Rising + Panning + Baking ✓ M = 8 minutes + 90 minutes + 30 minutes + 30 minutes = $\frac{158}{60}$ ✓ CA = 2,63... hours ✓ CA = 2 hours 38 minutes ✓ CA Statement is not valid ✓ O	1M Adding all the times (minimum) 1CA Total time 1CA Answer in hours 1CA Convert to hours and minutes 1O Invalid (5)	M L3&4

QUESTION 3 [19 marks]

Ques	Solution	Explanation	Topic & Level
3.1.1	✓ RD Guests to invite = 112 – 2 ✓M = 110 guests ✓ CA	1RD Number of seats 1M Subtract 2 1CA Number of guests (3)	MP L2
3.1.2	For easy movement. ✓✓ A **OR** Uncomfortable to sit on the short side. ✓✓ A **Accept any other logical reason.**	2O Reason (2)	MP L4
3.1.3	✓ A Walk pass the dance floor, pass the podium and turn left. ✓ A **OR** **Accept any other logical explanation.**	1A Pass dance floor 1A Direction (2)	MP L4
3.1.4	Probability of guest sitting at table with even number $= \frac{1}{7}$ ✓ A ✓ A = 0,142857142 = 0,143 ✓ CA	1A Numerator 1A Denominator 1CA Answer to 3 decimal places (3) **Answer must not be greater than 1**	P L2
3.1.5	Floor Area of hall = length × width = 15,5 m × 9 m ✓ SF = 139,5 m^2 ✓ CA Area of Dance floor = $\frac{1}{3}$ × 139,5 m^2 = 46,5 m^2 ✓ CA	1SF Substitution 1CA Floor Area 1CA Area of dance floor (3)	M L3
3.2	Hiring of the venue: R3 500,00 Draping and décor: R4 750,00 Cost for DJ = R250 × 6 hours = R1 500 ✓ CA Catering = (R200 × 100 guests) + (R100 × 13) ✓ MA = R20 000 + R1 300 = R21 300 ✓ CA Total cost = R3 500,00 + R4 750,00 + R1 500 + R21 300 ✓ M = R31 050 ✓ CA Statement invalid ✓ MA	CA from 3.1.1 1CA Cost for DJ 1MA 200 × 100 and 100 × 13 1CA 1M Adding all values 1CA Total cost 1O Invalid (6)	F L3&4

QUESTION 4 [13 marks]

Ques	Solution	Explanation	Topic & Level
4.1	Statement invalid ✓ A The distance between the two towns is not the same ✓✓ A	1A Invalid 2O Explanation (3)	MP L4
4.2.1	Mean temperature $= \frac{16+17+17+17+16+15+13+14+13+14}{10}$ ✓ M ✓ M $= \frac{152}{10}$ = 15,2 °C ✓ CA	1M Adding all values 1M Dividing by 10 1CA Mean temperature (3)	DH L3
4.2.2	Order -4; -2; -1; -1; 0; 1; 1; 1; 1; 1 ✓ M Median = $\frac{0+1}{2}$ ✓ M $= \frac{1}{2}$ = 0,5 °C ✓ CA	1M Ascending or descending 1M Concept of median 1CA Median value (3)	DH L2
4.2.3	Modal value = 1 °C ✓✓ A	2A Modal value (2)	DH L2
4.3	Probability of rain = Impossible ✓✓ A **OR** Probability of rain = $\frac{0}{10}$ ✓ A ✓ A **OR** Probability of rain = 0 % ✓✓ A **OR** Probability of rain = None ✓✓ A	2A Impossible 1A Numerator 1A Denominator 2A 0% 2A None (2)	P L2
		TOTAL:	**75**

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