Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

NOVEMBER 2018

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/Reading 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 6 pages.

QUESTION 1 [21]			
Ques	**Solutions**	**Explanation**	**T&L**
1.1.1	R2 578 799 Two million, five hundred and seventy eight thousand seven hundred and ninety nine rand ✓✓A	2A Write in words (2)	F L1
1.1.2	% Deposit = $\frac{386\,819{,}85}{2\,578\,799} \times 100$ ✓M ✓M = 15% ✓A	1M Correct values 1M Multiply by 100 1A Answer in % (3)	F L1
1.1.3	R386 819,85 ✓A Transaction Cost = R5,75 + R1,10 × $\frac{386\,819{,}85}{100}$ ✓M = R5,75 + R4 255,02 = R4 260,77 ✓CA	1A Correct value 1M Dividing by 100 1CA Transaction cost (3) **NPR**	F L1
1.2.1	Distance = 82,3 – 26,9 ✓M✓RT = 55,4 km ✓ CA	1RT Correct distances 1M Subtraction 1CA Distance (3)	M L1
1.2.2	Time taken = 04:54:45 – 03:05:14 ✓M = 01:49:31 ✓CA	1MA Subtracting correct times 1CA Time (2)	M L1
1.2.3	Distance in metres = 68,9 × 1 000 ✓C = 68 900 m ✓A	1C Multiply by 1 000 1A Distance in metres (2)	M L1
1.3.1	12, 8, 7, 5, 2, ✓RG ✓M	1RG Correct values 1M Descending order (2)	D L1
1.3.2	Bar graph **OR** Column graph ✓✓ A	2A Correct graph (2)	D L1
1.3.3	Total number of houses = 12 + 8 + 7 + 5 + 2 ✓RG = 34 ✓A	**CA from 1.3.1** 1RG Values from the graph 1A Number of houses (2)	D L1
			[21]

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QUESTION 2 [29]			
Ques	**Solution**	**Explanation**	**T&L**
2.1.1	R2 250 ✓✓ RT	2RT Break-even amount (2)	F L1
2.1.2	Cost of A = R1 500 + R5,00(50) ✓SF = R1 500 + R250 ✓ S = R1 750 ✓CA	1SF Substitution 1S Simplification 1CA Answer (3)	F L1
2.1.3	Income = R15,00 × 250 ✓✓ = R3 750,00	1RT Correct values 1M Multiplication (2)	F L1
2.1.4	Profit = Income – Expenses = R5 250 – R3 250 ✓RT ✓M = R2 000 ✓A	1RT Correct values 1M Subtraction 1M Profit (3)	F L1
2.2.1	1st year = R60 000 × 8,5% ✓M = R5 100 ✓A	1M Multiplication 1CA Interest (2)	F L2
2.2.2	1st year total amount = R5 100 +R60 000 ✓M = R65 100 ✓ CA 2nd year total amount = R65 100 × 8,5 % = R5 533,50 ✓CA Total at the end of 2 years = R65 100 + R5 533,50 ✓M = R70 633,50 ✓CA	**CA from 2.2.1** 1M Adding interest 1CA Amount 1CA % calculation 1M Adding interest 1CA Total amount (5)	F L2
2.3.1	Water used = 587-561 = 26 kℓ ✓M Cost = (0 × 6 kℓ) ✓A + (20 × R10,02) ✓ M = R200,40 ✓CA Total cost = 200,40 + 80,70 = R281,10 ✓CA	1M Water used 1RT Free kℓ 1M Multiplying by R10,02 1CA Water cost 1CA Cost including additional charge (5)	F L2
2.3.2	VAT amount = R80,70 × 15% ✓M = R12,105 ✓S = R12,10 ✓R	1M Multiplying 1S Simplification 1R Rounding (**Accept R 12,11**)(3)	F L1

2.4.1	Inflation rate is a measure of inflation expressed in % showing the increase in price of goods and services. ✓✓A **OR** The rate at which price increases over time if there is a decline in the purchasing value of-money ✓✓A	2A Explanation (2)	F L1
2.4.2	Price of brown bread in 2017 = (1 + 6,59 %) × R9,99 ✓ M = R10,65 ✓ A	1M Multiply correct values 1A Cost (2)	F L1
			[29]

QUESTION 3 [17]			
Ques	**Solution**	**Explanation**	**T&L**
3.1.1	12 miles ✓ RT Distance = 12 × 1,609 = 19,308 km ✓A	1RT Correct value 1A Answer in km **NPR** (2)	M L1
3.1.2	Humidity of Cape Town = $\frac{68}{100}$ ✓ RT = $\frac{17}{25}$ ✓ A	1RT Correct value 1A Simplified fraction (2)	M L1
3.1.3	Time of sunset in Cape Town = 17:27 12-hour format = 05:27 pm ✓✓ A	2A Correct time (2)	M L1
3.1.4	°F = (°C × 1,8) + 32 = (17 × 1,8) + 32 ✓ SF = 62,6 ✓ S = 63 °F ✓ R	1SF Correct value 1S Simplification 1R Rounding (3)	M L2
3.2.1	Volume = Length × Width × Height = 30 in × 12 in × 7,1 in ✓ SF = 2 556 in^3 ✓S ✓A	1SF Substitution 1S Simplification 1A Correct unit (3)	M L2

3.2.2	Volume of the tank = 2 556 in^3 × 85% ✓M = 2 172,6 in^3 ✓CA Increased volume after stones added = 2556 × 97% = 2479,32 in^3 ✓CA Volume of stones = 2479,32 – 2 172,6 ✓M = 306,72 in^3 ✓CA **OR** Volume of stones = 97% - 85% ✓M ✓M = 12% × 2556 ✓M ✓M = 306,72 in^3 ✓CA	**CA from 3.2.1** 1M Multiply by 85% 1CA Volume 1CA Volume 1M subtraction 1CA Volume 1M Using correct values 1M Subtraction 2M Multiplication by 12% and 2556 1CA Volume of stones (5)	M L3
			[17]

QUESTION 4 [13]			
Ques	**Solutions**	**Explanation**	**T&L**
4.1	Hartford ✓✓RM	2RM Correct city (2)	M&P L1
4.2	Distance on the map = 7,5 cm 2,5 cm = 100 miles ✓M $\frac{7,5}{2,5}$ = 3 cm ✓S 3 × 100 = 300 miles ✓CA	1M Scale measure **(use the scale as from actual map)** 1S Division 1CA Multiply by 100 (3)	M&P L2
4.3	84✓and 87 ✓ RG **OR** 81,✓88 and 90 ✓RG	2RG Combination of roads (2)	M&P L1
4.4	North East ✓✓A	2A Correct direction (2)	M&P L1
4.5	Road 80 ✓✓ RG	2RG Correct road (2)	M&P L1
4.6	Probability = $\frac{\mathbf{8}}{\mathbf{16}}$ ✓ RG ✓ RG	1A Numerator 1A Denominator (2)	P L2
			[13]

QUESTION 5 [20]			
Ques	**Solutions**	**Explanation**	**T&L**
5.1	Poults not hatched in December = 28 795 – 25 422 ✓M = 3 373 ✓CA	1M Subtracting correct values 1CA Not hatched (2)	D L1
5.2	Mean = 28 927 + 28 409 + 27 179 + 28 795 + 29 961 + 29 906 + 30 030 + 28 597 + 28 825 + 29 441 + 29 271 + 29 725 ✓ M = $\frac{349\,066}{12}$ ✓M = 29 088,93 ✓CA	1M Adding 1M Dividing by 12 1CA Mean **NPR** (3)	D L2
5.3	No modal value ✓✓A	2A Modal value (2)	D L1
5.4	Range = highest value – lowest value = 25 719 – 22 782 ✓MA = 2 937 ✓CA	1MA Subtracting correct values 1CA Range (2)	D L2
5.5	25 719, 25 422, 25 332, 25 075, 24 786, 24 616, 24 067, 23 645, 23 598, 23 572, 23 179, 22 782 ✓A Median = $\frac{24\,616 + 24\,067}{2}$ ✓MA = 24 341 ✓ CA	1M Arranged 1MA Median concept with correct values 1CA Median (3)	D L2
5.6	Total hatched during 2016-2107= 291 7893 ✓M Hatched in March= 25 719 ✓ RT Ratio. 25 719 : 29 1793 ✓ CA	1M Addition 1RT 1CA Express a ratio. (3)	D L2
5.7	$P_{(July\ eggs)} = \frac{29\,271}{349\,066} \times 100$ ✓M ✓M = 8,39 % ✓CA	**CA from 5.1.2** 1M Fraction 1M Multiplying by 100 1CA % **NPR** (3)	P L2
5.8	Compound bar graph ✓✓A **OR** Bar graph ✓✓A **OR** Line graph ✓✓A	2A Type of graph (2)	D L1
			[20]
		TOTAL:	**100**

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