KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICAL LITERACY

COMMON TEST

MARCH 2023

MARKING GUIDELINE

MARKS: 100

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy (Answer)
C	Conversion
S	Simplification
RT/RG/RD	Reading from a table/graph/diagram
NPR	No penalty for units/correct rounding
SF	Correct substitution in a formula
O	Opinion/reason/deduction/example
J	Justification
R	Rounding off
F	deriving a formula
E	Explanation
U	Units
AO	Answer only full marks

This marking guideline consists of 5 pages.

QUESTION 1 [20 MARKS] ANSWER ONLY FULL MARKS			
QUE	**SOLUTION**	**EXPLANATION**	**T/L**
1.1.1	10:00am✓✓A	2A, Correct time format **Accept 10am** (2)	M L1
1.1.2	✓MA Duration = 15:00 – 10:00 = 5 hours✓A	1MA, Subtracting times 1A, Duration **AO** (2)	M L1
1.2.1	No. of litres required = $\frac{400}{100} \times 13.4$✓M =53.6 l✓CA	1M, Multiplying by 13.4 1CA, Number of litres **AO** (2)	B L1
1.2.2	Full tank cost = 80 litres × R26.34 ✓M =R2 107.20 ✓CA	1M, Multiplying by R26.34 1CA, Correct cost **AO** (2)	F L1
1.2.3	13.4L : 100km 13.4 13.4 ✓M 1litre: 7.462 ...km✓A	1M, Dividing both side by 13.4 1A, Answer **AO** (2)	B L1
1.3.1	8 ✓✓A	2A, Correct Number of items (2)	F L1
1.3.2	2 ✓✓A	2A, Answer (2)	F L1
1.3.3	Weight = $\frac{500g}{1000}$✓C = 0,5kg✓A	1C, Conversion 1A, Answer **AO** (2)	M L1
1.3.4	Gratuity = R540 – R486 ✓M = R54 ✓CA	1M, Subtracting correct values 1CA, Answer **AO** (2)	F L1
1.3.5	Cost of dessert cup = $\frac{R48}{2}$✓✓A = R24	2A, Dividing correct R48 by 2 (2)	F L1
		[20]	

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QUESTION 2 [34 MARKS]			
QUE	**SOLUTION**	**EXPLANATION**	**T/L**
2.1.1	Heading/Labels of the graph✓✓A **OR** Title of the graph✓✓A	2A, Answer (2)	F L1
2.1.2	✓A ✓✓O Graph A , the graph has a fixed cost of R150	1A, Answer 2O, Reason (3)	F L2
2.1.3	i) R150 + R1,60 ×number of minutes ✓✓A ii) R2,50 ×number of minutes✓✓A	2A, Answer 2A, Answer (4)	F L2
2.1.4	Graph B, ✓✓RG **OR** prepaid option ✓✓ RG	2RG, Answer (2)	F L1
2.1.5	It is when the contract option and prepaid have the same total cost for the same number of talk time minutes. ✓✓E	2E, Explanation (2)	F L1
2.2.1	Indirect proportion ✓✓A **OR** Inverse proportion ✓✓A	2A, Answer í(2)	M L1
2.2.2	Area = 10m × 6,4m ✓SF =64m^2✓S	1SF, Correct substitution 1S, Simplification (2)	M L2
2.2.3	**A** = $\frac{64m^2}{12,8m}$ ✓M = 5m✓A **B** = $\frac{64m^2}{16m}$ ✓M = 4m✓A	**CA from 2.2.2** 1M, Dividing by 12.8 1A, Answer 1M, Dividing by 16 1A, Answer (4)	M L3
2.2.4	Garden 4✓✓RT	2RT, Answer (2)	M L1
2.3.1	Radius = 150cm ÷100 ✓C = 0,15m÷2✓M = 0,75m✓A	1C, Conversion 1M, Dividing by 2 1A, Correct radius (3)	M L2
2.3.2	Volume = 3,142 × 0,75m ×0,75m ×2,5m ✓SF ✓CA =4,4184375m^3 ×1000 ✓C = 4 418,4375 litres ✓S ≈ 4000 ℓ ✓R	**CA from 2.3.1** 1SF, Substitution 1CA, Simplification 1C, Conversion 1S, Simplification 1R, Rounding (5)	M L4
2.3.3	✓SF ✓C SA = 3,142 × 0,15m ×2,5m =1,17825m^2✓CA	**CA from 2.3.1** 1SF, Substitution 1C, Simplification 1CA, Answer (3)	M L2
		[34]	

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QUESTION 3 [32 MARKS]			
QUE	**SOLUTION**	**EXPLANATION**	**T/L**
3.1.1	Total amount of money earned/received. ✓✓A	2A, Answer	F L1
3.1.2	Grass cuttings✓✓A **OR/AND** Machine repairs✓✓A **OR/AND** Refuse removal✓✓A **OR/AND** Electricity✓✓A **OR/AND** Water & sanitation✓✓A **OR/AND** Rates✓✓A	3A, Answer **(2 marks for the first option and 1 mark for the second option)** (3)	F L4
3.1.3	The principal is correct, ✓A Total expenses are greater than the total income.✓✓O	1A, Opinion 2O, Verification **Accept expenses greater than income** (3)	F L4
3.1.4	Salaries✓✓A	2A, Answer (2)	F L1
3.1.5	Telephone and internet✓✓A	2A, Answer (2)	F L2 Type e
3.1.6	✓SF ✓M % diff = $\frac{R1\,052\,600 - R942\,100}{R942\,100} \times 100\%$✓S = 11,73% Invalid statement✓J	1SF, Substitution 1M, Multiplying by 100% 1S, Simplification 1J, Justification. (4)	F L3
3.1.7	Number of learners registered = R10 000÷R50✓MA =200✓A ✓M Number of girls = $\frac{3}{5} \times 200$✓A = 120✓CA	1MA, Dividing correct values 1A, Number of learners 1A, Concept of sharing ratio 1A, Multiplying by 200 1CA, number of girls (5)	F L4
3.2.1	✓SF Area = 80m × 2,1m✓S =168m^2 ✓A	1SF, Correct Substitution 1S, Simplification 1A, Answer (3)	M L2
3.2.2	✓M ✓✓MA Number of litres = $\frac{168}{10} \times 2.5 \times 2$ = 84 ✓CA	**CA from 3.2.1** 1M, Dividing by 10 2MA, Multiplying by 2.5 x 2 1CA, Number of litres (4)	M L3

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QUE	SOLUTION	EXPLANATION	T/L
3.2.3	°C= (86,6 – 32) ÷1,8 ✓SF = 54,6÷1,8✓S =30,333✓A The claim is invalid✓O	1SF, Substitution 1S, Simplification 1A, Answer 1O, Verification **NPR** (4)	M L3
		[32]	

QUESTION 4 [14 MARKS]			
QUE	**SOLUTION**	**EXPLANATION**	**T/L**
4.1	5 426 : 6 000 ✓A 2 713 : 3 000 ✓A	1A, Correct ration and order 1A, Simplified ratio (2)	M L1
4.2	Speed = 21 min 5.89km✓MA = 3,56536min✓A = 3min + 0, 5653.×60✓C = 3min and 33 sec	1MA, Dividing by 5.89km 1A, Answer 1C, Conversion (3)	M L2
4.3	Cycling✓✓A **OR/AND** Walking✓✓A **OR/AND** Aerobics✓✓A **OR/AND** Gymanstics✓✓A **OR/AND** Weight Lifting✓✓A	4A, Answer (4)	M L4
4.4	Distance miles = $\frac{5,89km}{1,608km}$✓MA = 3,66miles✓A	1MA, Dividing by 1,608 1A, Answer **AO** (2)	M L2
4.5	Steps = 6000 × 2 = 12000 ✓MA Calories burnt = $\frac{12\,000}{5\,426} \times 1232\ cal.$ ✓M = 2 724,659… Invalid statement ✓CA	1MA, Multiplying by 2 1M, Dividing by 5 426 1CA, justification (3)	M L3
		[14]	
		TOTAL: 100	

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