education
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

BOHLABELA DISTRICT

MATHEMATICAL LITERACY

GRADE 12

FEBRUARY 2025 MARKING GUIDELINES

MARKS: 70

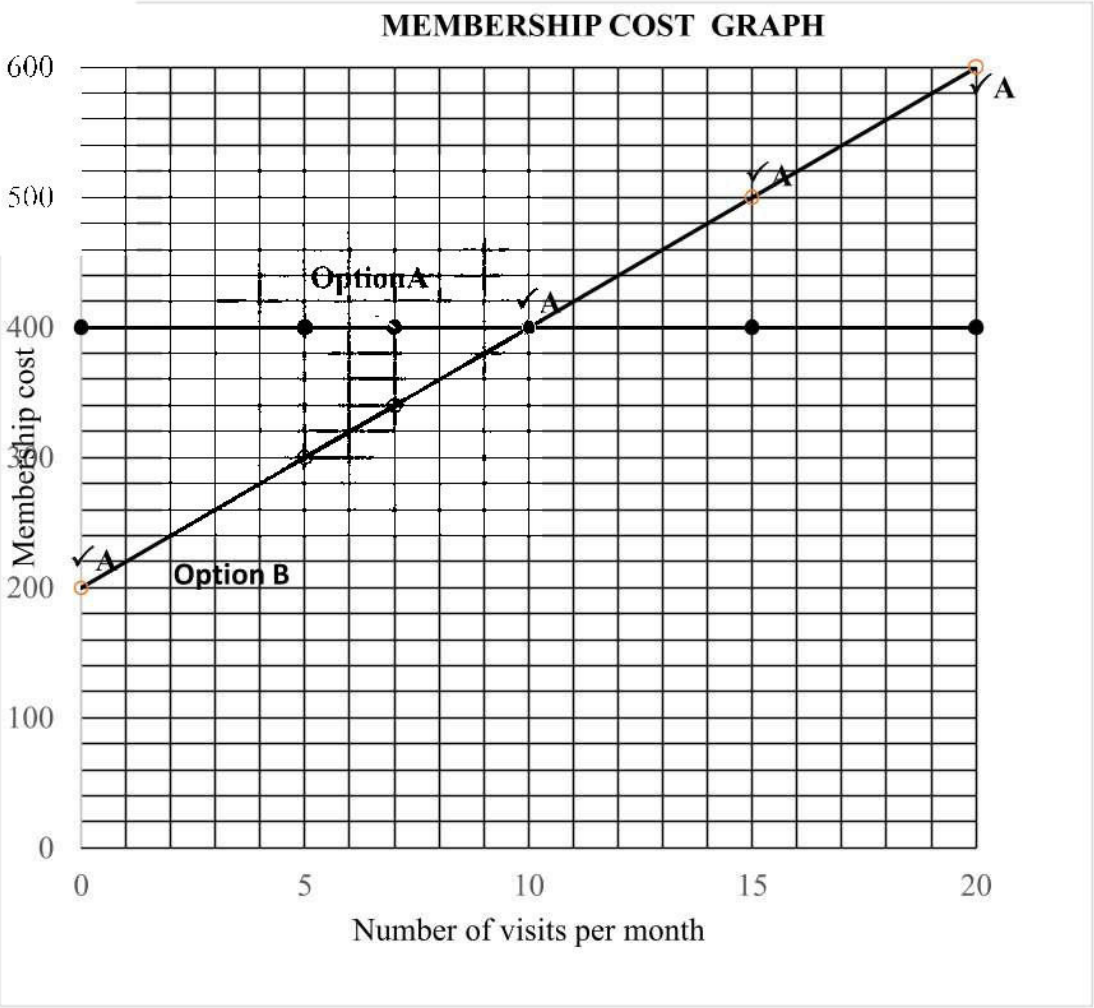
Symbol	Explanation
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RD	Reading from table/graph/diagram
SF	Correct substitution in formula
O	Opinion/Explanation
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
AO	Answer only
NPR	No penalty for rounding
MCA	Method with constant accuracy

These marking guidelines consist of 7 pages

:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- If the candidate presents any extra solution when reading from a graph, table, then penalize for every extra incorrect item presented.

QUESTION 1[37] ANSWER ONLY FULL MARKS			
Ques	**Solution**	**Explanation**	**Level**
1.1.1	C ✓✓A	2A correct letter (2)	F L1 E
1.1.2	✓✓A E	2A correct letter (2)	F L1 E
1.1.3	A ✓✓A	2A correct letter (2)	F L1 E
1.2.1 (a)	✓A ✓A ✓A Cost = R200 + R20 × (number of visits) ✓A ✓A **OR** Cost = R200 + R20n Where n = number of visits ✓A	1A fixed cost (R200) 1A multiplying with R20 1A number of visits n (3)	F L2 M
1.2.1 (b)	P = 400 ✓✓A Q = R340 ✓✓A	2A value of P 2A value of Q (4)	F L2 M
1.2.1 (C)	✓✓A Number of visits / n	2A correct variable (2)	F L1 E

1.2.2	 **CA from 1.2.1 (b)** 1A starting point (0; 200) 1A (10; 400) 1A end point (20;600) 1A joining ALL the plotted points 1A labelling the graph (5)	D L2 M

1.3.1	Sample size = 7 ✓✓A Population size = 45 ✓A **OR** ✓✓A 7 and 45 ✓A	2A counting correctly 1A correct population **OR** 2A sample in correct order 1A population in correct order (3)	L1 M
1.3.2	Bar graph ✓✓A	2A correct graph (2)	D L1 E
1.3.3	4 is much lower/ much smaller compared to the other values in the data ✓✓A	2A correct reason (2)	D L4 E
1.3.4	Continuous ✓✓A	2A correct answer (2)	D L1 E
1.3.5	4 ; 19 ; 21 ; 24 ; 25 ; 30 ; 38 ✓✓A	2A correct order (2)	D L1 E
1.3.6	$\frac{5}{7}$ ✓A ✓A = 0,7142857143 = 0,7 ✓A	1A numerator 1A denominator 1A correct decimal **NPR** (3)	P L2 E
1.3.7	✓RT 7 : 45 ✓A 1: 6428571429 1: 64 ✓A	1RT both values 1A correct order 1A simplification **NPR** (3)	D L1 E
		[37]	

QUESTION 2[21]

Ques	Solution	Explanation	Level
2.1.1	Annual income ✓✓A	2A correct answer (2)	F L2 E
2.1.2	Annual salary = R32 750 × 12 ✓MA = R393 000 ✓A	1MA multiplying by 12 1A simplification (2)	F L1 M
2.1.3	Tax bracket C ✓✓A **OR** R77 362 + 31% of taxable income above R370 500 ✓✓A	2A correct bracket (2)	F L2 E
2.1.4	Tax before rebate R77 362 + 31% of taxable income above R370 500 R77 362 + 31% (R393 000 – R370 500) ✓SF R77 362 + 31% (R22 500) R77 362 + R6 975 ✓MCA R 84 337 ✓CA Annual tax = R84 337 – R17 235 ✓RT = R67 102 ✓CA **OR** Annual tax payable ✓✓MA ✓SF ✓RT = R77 362 + 31% (R393 000 – R370 500) – R17 235 = R67 102 ✓CA	**CA from 2.1.3** 1SF correct substitution 1MCA adding values 1CA simplification 1RT rebate: R17 235 1CA simplification **OR** 1SF correct substitution 2MCA adding values 1RT rebate : R17 235 1CA simplification (5)	F L3 M

Ques	Solution	Explanation	level
2.2.1	Cost before VAT: | | | | Cost | | Block 1 | 6kl | free ✓RT | free | | Block 2 | 6kl | 6 × 19,07 | R114,42 ✓MA | | Block 3 | 16kl | 16 × 24,65 | R394,40 ✓MCA | | TOTAL | 28kl | | R508,82 | Cost before VAT = R508,82 ✓CA VAT inclusive = R508,82 × $\frac{115}{100}$ ✓MCA = R 585,14 ✓CA **OR** Tariff with VAT : Block 2 = R19,07 x $\frac{115}{100}$ ✓MA = R21,9305 ✓CA Block 3 = R24,65 x $\frac{115}{100}$ = R28,3475 ✓MCA | Block 1 | 6kl | free ✓RT | | | Block 2 | 6kl | × 21,9305 | R131,58 | | Block 3 | 16kl | × 28,3475 | R453,56 ✓MCA | | Tot | 28kl | | R585,14 ✓CA |	1RT both tariffs 1MA multiplying correct values 1MCA multiplying correct values 1CA total cost 1MCA multiplying by $\frac{115}{100}$ 1CA simplification 1MA multiplying by $\frac{115}{100}$ 1CA simplification 1MCA multiplying by $\frac{115}{100}$ 1RT both tariffs 1MCA multiplying correct values 1CA multiplying correct values (6)	F L3 D
2.2.2	Use a Bucket Instead of a Hose when washing cars/ Use small basins to bath / Don't leave the tap running while brushing teeth or washing dishes. Install low-flow showerheads, faucets, and dual-flush toilets /Reduce Shower Time ✓✓A ✓✓A	2A opinion 2A opinion **[Any two]** (4)	F L4 E
		[21]	

QUESTION 3 [12]			
Ques	**Solution**	**Explanation**	**Level**
3.1	Pie chart ✓✓A	2A correct graph (2)	D L1 E
3.2	Three hundred and thirty nine million three hundred and three thousand and thirty seven rands. ✓✓A	2A correct answer (2)	D L1 E
3.3	Maintenance and materials = 100% - (50% + 15% + 7% + 2% + 12%) ✓RT = 14% ✓CA	1RT ALL values 1MA adding and subtracting 1CA simplification (3)	D L1 E
3.4	Capital projects + Salaries = 50% + 15% ✓RT = 65% ✓MA = R339 303 037 × $\frac{65}{100}$ ✓RT ✓MA = R220 546 974,1 Her statement is valid ✓O **OR** $\frac{50}{100}$ × R339 303 037 = R169 651 518,5 ✓RT ✓RT $\frac{15}{100}$ × R339 303 037 = R508 95455,55 ✓MA R169 651 518,5 + R508 95455,55 ✓MA = 220 546 974,1 Her statement is valid ✓O	1RT both percentages 1MA adding correct percentages 1RT total amount 1MA multiplying by $\frac{65}{100}$ 1O conclusion **OR** 1RT both percentages 1RT total amount 1MA multiplying by % 1MA adding correct percentages 1O conclusion (5)	D L4 E
		[12]	