education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 12

MATHEMATICAL LITERACY P1
JUNE 2024
MARKING GUIDELINES

MARKS: 100

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

These marking guidelines consist of 9 pages.

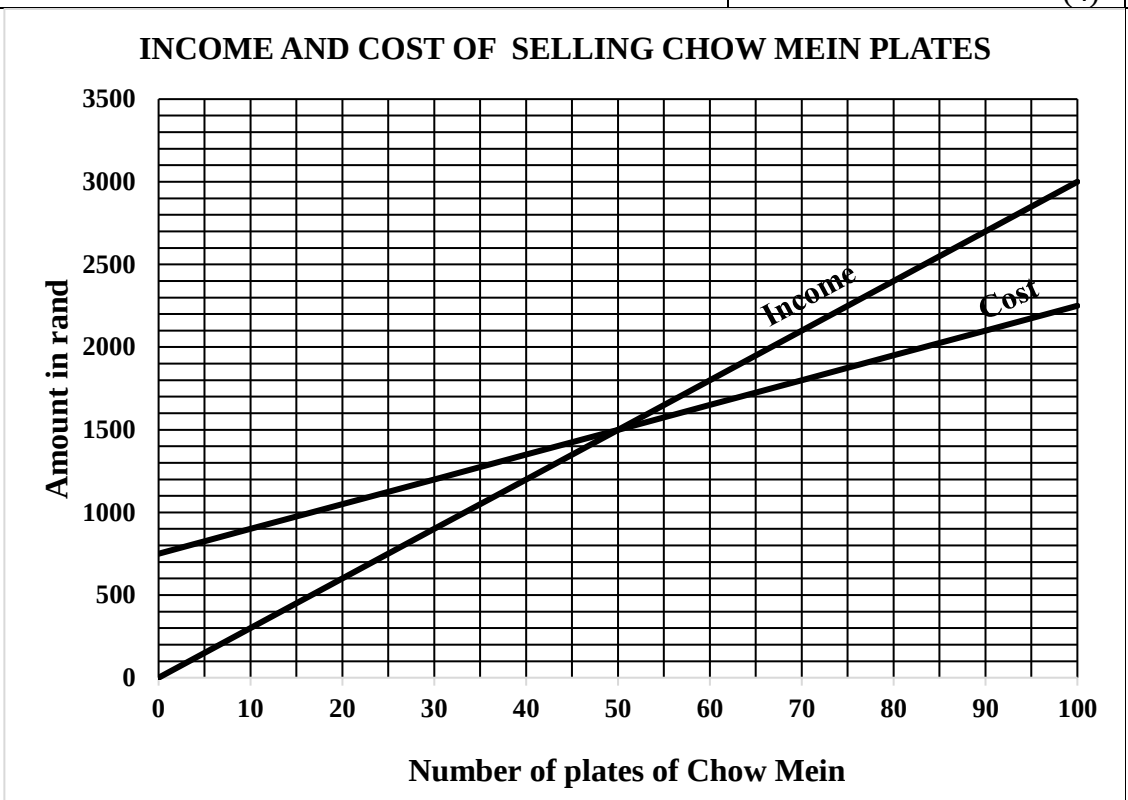
NOTE:

- 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.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however, it stops at the second calculation error.
- NOTE: consistent accuracy (CA) does not apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalize for every extra item presented.
- As a general marking principle, if a candidate has incurred one mistake and there is evidence of sound mathematics thereafter, then that candidate should lose one mark only.
- Rounding is an independent mark.
- In opinion type questions marks will only be awarded if relevant calculations are shown.

QUESTION [19 MARKS] Answer only AO – full marks			
Q	**Solution**	**Explanation**	**T/L**
1.1.1	Numerical data✓✓A	2A correct classification (2)	D L1
1.1.2	✓RT R10; R15; R18; R20; R30; R35; R79 ✓ A	1RT all correct values 1A ascending order (2)	D L1
1.1.3	Store B ✓✓RT	2RT correct store (2)	D L1
1.1.4	✓RT 20 : 18 ✓A = 1 : 0,9 ✓A	1RT correct values 1A values in correct order 1A simplification (3)	D L1
1.1.5	Price per one 410 g baked beans $= \frac{R64,00}{5}$ ✓MA = R12,80 ✓ A	1MA dividing by 5 1A price per tin/baked beans (2)	F L1
1.2.1	GEPF✓✓A	2A correct acronym (2)	F L1
1.2.2	**Stop Order:** An arrangement between the client and a bank to pay a fixed amount of money from the client account into another account on a specific date every month.✓✓O **OR** **Stop Order:** An instruction that an employer or bank to pay/divert monthly or regularly transfer a certain amount to a person or an account. ✓✓O	2O explanation	F L1

	OR **Stop Order:** An instruction that an employee (individual) issue to the employer (bank) to make a series of future dated regular deductions.✓✓O **OR** **Stop Order:** Future dated regular monthly deductions. ✓✓O	(2)	
1.2.3	R2 660 582 Two million six hundred and sixty thousand five hundred and eight two rand. ✓✓A	2A correct wording (2)	F L1
1.2.4	Current annual salary R490 312✓ RT = R490 000✓R	1RT correct value 1R rounding (2)	F L1
		[19]	
QUESTION 2 [36 MARKS]			
2.1.1	The value of A ✓RT = 9273 – 24 kl ✓M = 9 249 k*l* ✓	1RT identifying values 1M subtracting 1A answer (3)	F L1
2.1.2	Total water charge ✓MA ✓RT ✓M B = (6 × R18,12) + (9 × R29,86) + (9 × R36,58) = R108,72 + R268,74 + R329,22 = R706, 68✓A Adding fixed cost to water charge = R706, 68 + R727,85✓RT = R1 434,53 The statement is **VALID** ✓O	1MA identifying 6, 9, 9 1RT identifying R18,12; R29,86; R36,58 1M multiplying 1A simplification 1RT fixed cost 1O opinion (6)	F L4
2.2.1	25/02/2016 ✓✓A	2A correct date (2)	F L1
2.2.2	Amount without VAT = $\frac{R69}{1,15}$ ✓MA = R60,00 ∴ VAT amount = R69,00 – R60,00✓M = R 9,00✓A	1MA dividing by 1,15 1M subtracting 1A VAT amount	F L2

	OR Amount without VAT = R69 × $\frac{100\%}{115\%}$ ✓MA = R60,00 ∴ VAT amount = R69,00 – R60,00✓M = R 9,00✓A **OR** ✓MA VAT amount = R69 ,00 × $\frac{15\%}{115\%}$ ✓M = R9,00✓A	**OR** 1MA multiplied by $\frac{100\%}{115\%}$ 1M subtracting 1A VAT amount **OR** 1MA multiplying by 15% 1M dividing by 115% 1A VAT amount (3)	
2.2.3	Total amount of administration fee ✓RT = R69,00 × 240 ✓MA = R16 560,00✓A	 1RT 240 months 1MA multiplying 1A answer (3)	F L1
2.2.4	Total amount ✓RT = R1 862,06 × 240 ✓ SF = R446 894,40 ✓A	**CA from 2.2.3** 1RT monthly instalment 1SF correct substitution 1A answer (3)	F L2
2.2.5	Extra amount paid ✓RT = R2 300,00 – R1 862,06 ✓MA = R437,94 ✓CA Extra amount paid for 3 months = R437,94 × 3 months✓MCA = R1 313,82 ✓CA **OR** Amount paid for 3 months ✓RT = R2 300 ,00 × 3 ✓MA = R6 900,00✓ CA Amount to be paid for 3 months = R1 862,06 × 3 = R5 586,18 ✓CA Extra amount paid = R6 900,00 – R5 586,18 = 1 313,82 ✓CA	**CA from 2.2.4** 1RT R2 300,00 1MA subtracting 1CA simplification 1MCA multiplying by 3 1CA answer **OR** 1RT R2 300,00 1MA multiplying by 3 1CA simplification 1CA simplification 1CA answer (5)	F L3

2.2.6	To prevent money laundering ✓✓O **OR** To prevent fraud✓✓O **OR** To view privately / Confidential✓✓O	2O reason (2)	F L4
2.3.1	Total cost = R750 + 15p, where p = number of plates ✓SF R1 950 = R750 + 15p R1 950 –R 750 = 15p ✓MA R1 200 = 15p ✓S p = 80 ✓CA	1SF correct substitution 1MA subtracting R750 1S simplification 1CA answer (4)	F L2
2.3.2	 1A Start point (0, 750)✓ 1A End point (100, R2 250)✓ 1A correct straight line✓ (3)		F L2
2.3.3	50 plates ✓✓RT **OR** 30p = R750 + 15p ✓MA R750 = 15p p = 50 ✓A	2RT number of plates **OR** 1MA breakeven concept 1A answer (2)	F L2
		[36]	

QUESTION 3 [22 MARKS]

3.1	The value that appear the most in a data set.✓✓O	2O explanation (2)	D L1
3.2	Arranging 294 204; 298 607; 313 030; 341 363; 361 948; 421 835; 441 067; 450 005 ✓A ✓RT Median = $\frac{341\,363 + 361\,948}{2}$ ✓MA = 351 655,5 ✓CA	 1A arranging values 1RT two middle values 1MA concept of median 1CA simplification (4)	D L2
3.3	Range = Maximum value – Minimum value ✓RT = 85,7% – 71,3% ✓MA = 14,4% ✓A	 1RT correct values 1MA concept of range 1A simplification (3)	D L2
3.4	Percentage decrease ✓RT = $\frac{421\,835 - 450\,005}{450\,005} \times 100\%$ ✓A = – 6,3 % ✓ A **OR** ✓RT = $\frac{421\,835}{450\,005} \times 100\%$ ✓MA = 93, 7400695548% = 93,7400695548% – 100% = – 6,3% ✓A	 1RT correct values 1A correct denominator 1A simplification **NPR** **OR** 1RT correct values 1MA calculating % 1A simplification **NPR** (3)	D L2
3.5	Value A ✓MA $51{,}9 = \frac{46{,}4 + 45{,}0 + 45{,}4 + A + 57{,}7 + 49{,}1 + 60{,}4 + 56{,}7}{8}$ ✓MA $51{,}9 = \frac{360{,}7 + A}{8}$ A = 51,9 × 8 – 360,7 ✓M A = 415,2 – 360,7 A = 54,5% ✓CA	1MA concept of mean 1MA adding values 1M changing the subject of the formula 1CA simplification (4)	D L3

3.6	✓O The performance decreased from 2020 to 2021, ✓O increased in 2022 and decreased again in 2023✓O.	1O decrease 2020 to 2021 1O increase in 2022 1O decrease in 2023 (3)	D L4
3.7	Probability ✓A $= \frac{62\,979}{294\,204}$ ✓A = 0,2✓CA	 1A numerator 1A denominator 1CA simplification **NPR** (3)	P L3
		[22]	

QUESTION 4 [23 MARKS]			
Q	**Solution**	**Explanation**	**T/L**
4.1.1	Tax bracket 1✓✓RT	2RT tax bracket (2)	F L1
4.1.2	Income tax $= 120\ 278 \times \frac{18}{100}$ ✓MCA = R 21 650,04 ✓ CA ✓MA = R21 650,04 – (R9 444 + R17 235)✓MA = R21 650,04 – R26 679 = – R5 028,96 ✓CA His statement is **VALID** ✓O **OR** Annual Taxable Income = R120 278 Rebates = R9 444 + R17 235 ✓MA = R26 679✓ CA Tax Threshold = R26 679 ÷18% ✓ MCA = R148 216,67✓CA R148 216,67 is greater than R120 278 ✓O His statement is **VALID** ✓O	**CA from Q 4.1.1** 1MCA calculating 18% 1CA simplification 1MA subtracting R9 444 1MA subtracting R17 235 1CA simplification 1O conclusion **OR** 1MA adding rebates 1CA simplification 1MCA dividing by 18% 1CA simplification 1O reason 1O conclusion (6)	F L4
4.2.1	Amount in Chinese Yuan $= \frac{R2\ 600}{R1} \times 0{,}39$ CN¥ ✓MA = 1 014 CN¥ ✓A **OR** $= \frac{R2\ 600}{R2{,}564102564} \times 1$ CN¥ ✓MA = 1 014 CN¥ ✓A	1MA multiplying by 0,39 CN¥ 1A simplification **OR** 1MA dividing 1A simplification (2)	F L2

4.2.2	Interest after 1 year = R550,00 × 9,5%✓MA = R52,25 ✓A Amount after 1 year = R550,00 + R52,25 = R602,25✓CA Interest after 2 years = R602,25 × 9,5% = R57, 21 ✓CA Amount after 2 years = R602,25 + R57,21 = R659,46✓CA **OR** 100% + 9,5% = 109,5% ✓A Amount after 1 year = R 550,00 × 109,5%✓MA = R602, 25 ✓A Amount after 2 years = R602,25 × 109,5%✓M = R659,46✓ CA	1MA multiplying by 9,5% 1A interest 1st year 1CA 1st year amount 1CA interest 2nd year 1CA answer **OR** 1A 109,5% 1MA multiplying 109,5% 1A 1st year amount 1M multiplying by 109,5% 1CA answer (5)	F L3
4.3.1	75% ✓✓ A	2A correct percentage (2)	D L2
4.3.2	IQR = Q3 – Q1 ✓MA ✓RT ✓RT = 56,7 – 34 = 22,7 ✓CA	1MA concept of IQR 1RT correct value (Q3) 1RT correct value (Q1) 1CA simplification (4)	D L3
4.3.3	The median of the data is the highest in 2023.✓✓O **OR** Q3 is higher in 2023 than in 2022.✓✓ O **OR** Extra classes.✓✓ O Improved learner and teacher attendance.✓✓ O Self-disciplined learners.✓✓ O Parental involvement.✓✓ O Curriculum coverage.✓✓ O Effective school management .✓✓ O	2O explanation (2)	D L4
		[23]	
		TOTAL: 100	