education

Department of Education
FREE STATE PROVINCE

JUNE EXAMINATION

GRADE 12

MATHEMATICAL LITERACY P1

MARKING GUIDELINE

JUNE 2023

MARKS: 100

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Symbol/Simbool	Explanation/Verduideliking
M	Method/Metode
M/A	Method with accuracy/Metode van akkuraatheid
CA	Consistent accuracy/Volgehoue akkuraatheid
A	Accuracy/Akkuraatheid
C	Conversion/Herleiding
S	Simplification/Vereenvoudiging
RT	Reading from a table/graph/diagram/Lees vanaf tabel/grafiek/diagram
SF	Correct substitution in a formula/Korrekte vervanging in formule
O	Opinion/Example/Definition/Explanation/Opinie/Voorbeeld/Definisie/Verduideliking
P	Penalty, e.g., for no units, incorrect rounding off, etc./Penalisasie, bv. vir geen eenhede/verkeerde afronding ens.
R	Rounding off/afronding
NPR	No penalty for rounding/Geen penalisering vir afronding nie
NPU	No penalty for the units/Geen penalisering vir eenhede nie
AO	Answer only, if correct, full marks/Slegs antwoord, indien korrek, volpunte
MCA	Method with consistent accuracy/Metode met volgehoue akkuraatheid

This marking guideline consists of 05 page

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QUESTION 1 [20MARKS]			
	Solution	**Explanation**	**T/L**
1.1.1	Bonaqua pump water ✓✓A	2A correct item (2)	F L1 E
1.1.2	One bag = $\frac{R55}{3}$ ✓MA = R18,33 ✓A	1MA dividing by 3 1A correct answer (2)	F L1 E
1.1.3	✓RT 47:60 ✓A	1 RT correct values 1 A correct order (2)	F L1 E
1.1.4	R100 – R25 ✓MA = R75 ✓A	1MA subtracting correct values 1A correct answer (2)	F L1 E
1.1.5	R300 ÷ R69,50 ✓MA = 4,3165 = 4 Bottles ✓A	1MA dividing correct values 1A correct answer (2)	F L1 E
1.1.6	✓RT R69,50 + R55 + R47 + R100 + R60 + R25 ✓MA = R356,50	1RT all correct values 1MA adding all values. (2)	F L1 E
1.2.1	Box and whisker plot ✓✓A	2A correct name of diagram (2)	D L1 E
1.2.2	Median = 26,5 ✓✓A	2A correct median. (2)	D L1 E
1.2.3	Interquartile Range ✓✓A	2A writing in full. (2)	D L1 E
1.2.4	36 - 2 ✓MA = 34 ✓A	1MA subtracting correct values. 1A correct answer (2)	D L1 E

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QUESTION 2 [33MARKS]			
	Solution	**Explanation**	**T/L**
2.1.1	Value Added Tax ✓✓A	2A writing in full (2)	F L1 E
2.1.2	600 – 350 ✓✓MA = 250 ✓A	1MA Subtracting correct values. 1A correct answer **AO** (2)	F L1 M
2.1.3	✓MA ✓RT 50 kWh × 1,5188 = R75,94 300 kWh × 2,0251 = R607,53 110 kWh × 2,6386 = R290,246 = R973,72 ✓CA VAT = $R973,72 \times \frac{15}{100}$ ✓A = R146,058 ✓CA Total = R973,72 + R146,058 ✓MCA = R1 119,78 ✓CA	1MA all (3) correct kWh 1RT 3 tariffs 1CA total electricity amount 1A multiplying by $\frac{15}{100}$ 1CA correct price in rands 1MCA adding values. CA simplification. **NPR** (7)	F L3 D
2.2.1	✓✓A A system by which one pays for an item in instalments while making use of it and cannot own the item until is fully paid. **OR** ✓✓A Is an agreement whereby a customer agrees to a contract to acquire an asset by paying deposit and repaying the remaining amount in instalments over agreed period.	2A Correct definition (2)	F L1 M
2.2.2	R1200 + R12 999 ✓MA = R14 999 ✓A	1MA adding correct values. 1A correct answer (2)	F L1 E
2.2.3	✓RT $\frac{R1\,299,90}{R12\,999} \times 100$ ✓M = 10% ✓CA	1RT correct values 1M multiplying by 100 1CA simplification (3)	F L2 M

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	Solution	Explanation	T/L
2.2.4	✓RT (R625,25 × 24) + R1 299,90 ✓MA = R15 006 + R1 299,90 ✓M = R16 305,90 ✓CA	1RT correct values (R625,25 and R1 299.90) 1MA multiplying by 24. 1M adding values. 1CA correct answer (4)	F L3 M
2.2.5	Total amount paid could be much higher than the cost of the asset due to substantially high interest rates. ✓✓A **OR** Takes long to pay for the item.✓✓A **OR** May results in penalty if asset not needed and agreement terminated. ✓✓A	2O correct disadvantage (2)	F L4 M
2.3	**End of the 1st year** Compound Interest = R13 000 × $\frac{10,5}{100}$ ✓MA = R1 365 ✓A Total Amount = R13 000 + R1 365 ✓MA = R14 365 ✓A **End of the 2nd year** Compound Interest = R14 365× $\frac{10,5}{100}$ = R1 508, 33 Total Amount = R14 365 + R1 508, 33 = R15 873,33 ✓CA **6 months** Compound Interest = R15 873,33 × $\frac{10,5}{100}$ × $\frac{6}{12}$ ✓MA = R833,35 Total Amount = R15 873,33 + R833,35 ✓M = R16 706,68 ✓MCA His statement is not valid ✓O	1MA percentage calculation 1A interest year 1 1MA adding values 1A amount end of year 1 1CA amount end of year 2 1MA calculating 6 months. 1M adding values. 1MCA final amount 1O conclusion **NPR** (9)	F L4 D

QUESTION3 [22 MARKS]			
	Solution	**Explanation**	**T/L**
3.1	255 222 188 142 112 106 78 75 31 ✓✓A	2A correct order values (2)	D L1 E
3.2	KZN ✓✓A	2A correct province (2)	D L1 E
3.3	✓MA **F** = 1 395 – (184 + 261 + 255 + 152 + 139 + 49 + 99 + 172) = 1 395 – 1 311 ✓M = 84 ✓CA **OR** ✓A **F** = 75 + 9 ✓M =84✓CA **OR** ✓A F = 75 × 1,12 ✓M =84 ✓CA	1MA adding correct values 1M subtracting from total 1CA simplification 1A correct values 1M adding values 1CA simplification 1A correct values 1M multiplying by 1,12 1CA simplification **AO** (3)	D L2 M
3.4	Mean = $\frac{188+75+222+255+142+112+31+78+106}{9}$ ✓RT ✓MA = $\frac{1209}{9}$ = 134,33 ✓CA	1MA adding all correct values 1M concept of mean (dividing by 9) 1CA simplification (3)	D L2 M
3.5	% change = $\frac{18}{31}$ × 100 ✓RT ✓RT ✓M = 58%	1RT numerator 1RT denominator 1M multiplying by 100 (3)	D L2 M

	Solution	Explanation	T/L
3.6	31 75 78 106 112 142 188 222 255 $Q1 = \frac{75+78}{2}$ ✓MA = 76,5 ✓CA $Q1 = \frac{188+222}{2}$ = 205 ✓CA IQR= Q1 – Q3 ✓A = 205- 76,5 = 128,5 ✓CA	1MA adding and dividing values 1CA value of Q1 1CA correct answer Q3 1A correct formula CA correct answer (5)	D L3 D
3.7	Probability = $\frac{261}{1395}$ ✓A = 0,19 ✓CA	1A correct numerator and denominator 1CA simplification (2)	P L2 E
3.8	Speeding ✓✓A **OR** Drinking and driving ✓✓A **OR** Not following rules of the road ✓✓A **OR** Overloading ✓✓A	2A correct reason (2)	D L4 E

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QUESTION4 [25 MARKS]			
	Solution	**Explanation**	**T/L**
4.1.1	Samsung ✓✓A	2A correct brand (2)	D L1 E
4.1.2	33 200 000 ✓✓A	2A correct amount (2)	D L1 M
4.1.3	Samsung = $\frac{58,3-76,6}{76,6}$ ✓RT × 100 ✓MA = -23,89% ✓CA OPPO = $\frac{29,6-38}{38}$ ✓RT × 100 = -22,11% ✓CA The statement is correct.✓O	1RT correct amounts 1MA correct % calculation. 1CA simplification 1RT correct amounts 1CA simplification 1O conclusion **NPR** (6)	F L4 D
4.1.4	Probability = $\frac{2}{3}$ ✓RT × 100 ✓RT = 66,7%✓CA	1A numerator 1A denominator 1CA correct percentage **AO** (3)	P L2 M
4.2.1	Primary rebate/ R16 425 ✓✓A	2A correct rebate (2)	F L2 E
4.2.2	R347 ✓A + R347 + R234 ✓MA = R928 × 12 ✓M = R11 136✓CA	1A correct values 1MA adding correct values 1M multiplying by 12 1CA simplification (4)	F L3 M
4.2.3	= R73 726 + 31% (of the taxable amount ✓RT R353 100) = R73 726 + 0,31 (R388 450 – R353 100)✓SF = R73 726 + 0,31 × R35 350 = R73 726 + R10 958,50 ✓MA = R84 684,50✓CA = R84 984,50 – R16 425 – R11 136 ✓M = R57 123,50 ✓MCA	1RT identifying the correct bracket. 1SF correct substitution 1MA adding values 1CA simplification 1M subtracting the correct rebate and MTC 1MCA correct tax amount (6)	F L3 M

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