GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

Johannesburg North District

(D10)

March 2023

End of Term 1
Control Test

Grade 12

Mathematical Literacy

MARKING GUIDELINE

Marks: 100

Time : 2 hours

This marking guideline consists of 10 pages including this cover page and taxonomy grid

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QUESTION 1 [32 MARKS]			L
1.1.1	**R2 195 959** A P	1 A 2 195 959 1 P unit R **(2)**	F L1
1.1.2	A = 356 014 352 – 163 255 233 M = **192 759 119** A	1 M Method 1 A Answer **NB: AO** full marks **(2)**	F L1
1.1.3	811 958 – **eight hundred and eleven thousand, nine hundred and fifty eight** A	2 A Answer **(2)**	F L1
1.1.4	4 484 263 ≈ **4 500 000** R = **4,5 million** CA	1 R correct rounding 1 CA from above **(2)**	F L1
1.1.5	Expenses –**amounts of money spent by the municipality.** D	2 D Definition **(2)**	F L1
1.1.6	**Bulk purchases electricity** RT	2 RT correct answer **(2)**	F L1
1.1.7	B = 356 014 352 – 347 225 997 MA = **8 788 355** CA	1 MA subtracting correct values 1 CA from above **(2)**	F L1
1.1.8	**Surplus** CA	2 CA from 1.1.6 **(2)**	F L1
1.1.9	% spent on operations = $\frac{6\,718\,683}{347\,225\,997} \times 100\%$ SF = 1, 9349… CA = **1, 9%** R/CA	1 SF Substitution 1 CA from above 1 R/CA rounding / CA from above **(3)**	F L1
1.2.1	**Multiple bar graph** A	1 A Multiple 1 A Bar graph **(2)**	DH L1
1.2.2	**0 – 9** RG age group	2 RG Answer **(2)**	DH L1
1.2.3	Difference = 26, 2% – 21, 9% MA = **4, 3%** CA	1 MA Subtraction 1 CA from above **(2)**	DH L1
1.2.4	**23,5 ; 21,9 ; 19,9 ; 14,4 ; 7,8 ; 5,9 ; 3,9; 2,2 ; 0,5** A	2 A – If all values correct 1 A – If one value misplaced **NB:** No marks if 2 or more values misplaced No marks if order reversed **(2)**	DH L1

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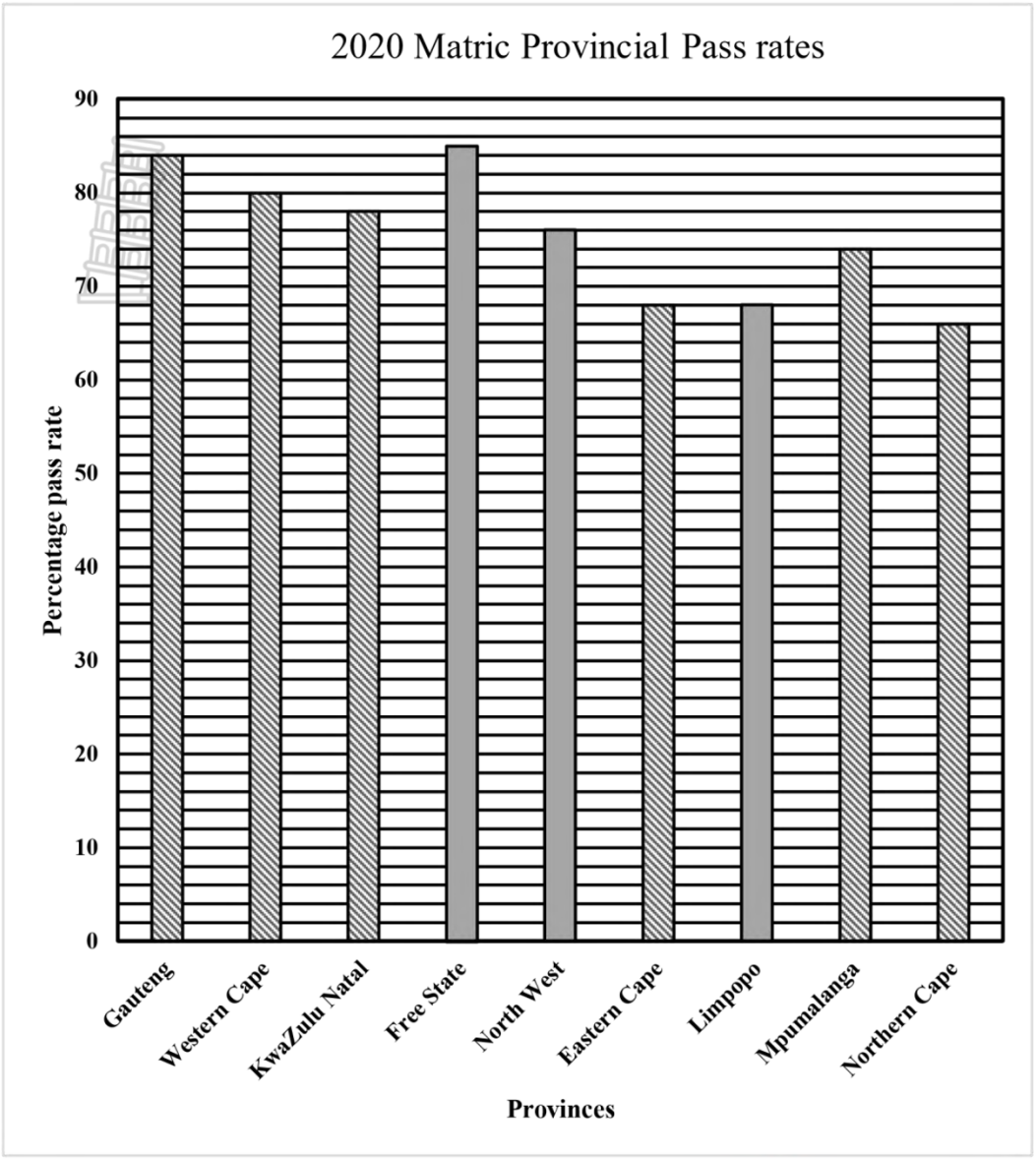
1.2.5	RG IM No. of people = 19,1 % × 11 065 240 = 2 113 460, 84 = **2 113 461** A	1 M 19,1% 1 M Multiplying by 11 065 240 1 A Answer **NPR** **(3)**	DH L1
1.2.6	**Numerical** A	2 A Answer **(2)**	DH L1
			TOTAL: 32 MARKS

QUESTION 2: [24 MARKS]

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2.1	Tariff is the **charge or fee per kilolitre** per band. D	2 D Definition **(2)**	F L1
2.2	VAT – Value Added Tax A	2 A Answer **(2)**	F L1
2.3	A = 1,0974 × R60,65 M = **R66, 56** A **OR** Increase = 9,74% × R60,65 = R5, 91 M A = R60, 65 + R5,91 = **R66, 56** A	1 M Multyiplying by % 1 A Answer **(2)**	F L2
2.4	M % Increase = $\frac{23 - 21,17}{21,17} \times 100\%$ M = **9,7307 …%** CA	1 M Correct values in fraction 1 M multiplication by 100% 1 CA from above **NP** **(3)**	F L2
2.5.1	M M Water consumption per month = 111,79 × 5 × 30 = 16 768,5 litres A = 16, 7685 kl C ∴ The Molefe household consumes less than the average C **OR** 18,3 kl = 18 300 l C M M Average per person = 18 300 ÷ 5 ÷ 30 = 122 l A ∴ The Molefe household consumes **less than** the average C	1 M Multiply by 5 1 M Multiply by 30 1 A Answer in litres 1 C Converting to kl 1 C Conclusion 1 C Converting to l 1 M Divide by 5 1 M Divide by 30 1 A Answer 1 C Conclusion **(5)**	F L4
2.5.2	18,3 kl 6 kl @ R0,00 = **R0,00** 4 kl × R22,26 = **R89,04** A 5 kl × R23,23 = **R116,15** A 3,3 kl × R32,57 = **R107,48** A Cost excluding VAT = **R312,62** CA Cost incl. VAT = R312,62 × 1,15 MA = **R359,57** CA	1 A R81,12 1 A R116,12 1 A R107,48 1 CA Adding above Values 1 MA Adding VAT 1 CA from above **(6)**	F L3
2.6	- Use the shower instead of the bath O - Use bucket instead of hose to wash the car etc O	4 O Any 2 valid suggestions **(4)**	F L4
		TOTAL: 24 MARKS	

QUESTION 3:

3.1	 ✓A Bar of Free State ✓ A Bar of North West A Bar of Limpopo **(3)**		DH L2
3.2	**Northern Cape** RG	2 RG Reading from graph **(2)**	DH L2
3.3	Range = Max. – Min M 13, 4 = 85,5 – A A = 85,5 – 13,4 M **A = 72,1** A	1 M Concept of range 1 M Subtracting 1 A Answer **(3)**	DH L2

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3.4	Mean = Sum of values / No. of values ✓M $81,3 = 652 + B/9$ $652 + B = 81,3 \times 9$ $B = 731,7 - 652$ ✓M ✓M **B = 79,7** ✓A	1 M Concept of mean 1 M 731,7 1 M Subtracting correct values 1 A Answer **(4)**	DH L3
3.5	No. of learners = 92 285 ÷ 0,84 ✓✓M = 109 863,095… = **109 863** ✓A	2 M Dividing by 0,84 1 A Answer **(3)**	DH L2
3.6	Prolonged school closure due to lockdown because of covid-19. ✓✓O	2 O Reason **(2) NB: Accept other valid reasons**	DH L4
		TOTAL: 17 MARKS	

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QUESTION 4: [27 MARKS]

4.1.1	Minimum = 4 M Lower Quartile (Q_1) = 39 RT Median (Q_2) = 68 RT Upper Quartile (Q_3) = 105 RT Maximum = 171	1 M Names of 5 number summary 1 RT Median value 1 RT Min. & Max 1 RT Q_1, Q_2 & Q_3 **(4)**	DH L2
4.1.2	Percentage = **25%** A	2 A Answer **(2)**	DH L2
4.1.3	I.Q.R. = $Q_3 - Q_1$ M = 105 – 39 CA = **66** CA	1 M Concept of IQR 1 CA from 4.1.1 1 CA from above **(3)**	DH L2
4.1.4	No. of schools = 50% × 70 M M = **35** CA	1 M for 50% 1 M Multiplying by 70 1 CA from above **(3)**	DH L3
4.2.1	Annual taxable income = R23 500 × 12 MA = **R282 000** A	1 MA Multiplying by 12 1 A Answer **(2)**	F L2
4.2.2	M M Medical tax credits = (R332 + R332 + R224) × 12 = R888 × 12 = **R10 656** CA	1 M Adding 3 correct Values 1 M Multiplying by 12 1 CA from above **(3)**	F L2
4.2.3	Tax = 38 916 + 26% of T.I. above 216 200 CA/RT = 38 916 + 26% × (282 000 – 216 200) SF/CA = 38 916 + 26% × 65 800 = 38 916 + 15 134 S = R56 924 CA Less primary rebate and medical scheme credits = R56 924 – R15 714 – R10 656 M = **R29 654** CA	1 CA/RT correct bracket CA from 4.2.1 1 SF Substitution CA from above 1 S for R15 134 1 CA for R54 050 1 M subtracting rebate & medical credit 1 CA Answer **(6)**	F L3
4.2.4	- Value Added Tax (VAT) A - Import duty - Capital gains tax - Transfer duty etc Reasons: O - Helps build the nation, it is a source of income for government	2 A Any one type of tax 2 O Any one reason	F L4

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	- Improve healthcare and education	**(4)**	
		TOTAL: 27 MARKS	
		GRAND TOTAL:	**[100]**

TAXONOMY GRID
GRADE 12

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MATHEMATICAL LITERACY
TERM 1 CONTROL TEST
MARCH 2023

QUESTION	ITEM	APPLICATION TOPICS					TAXONOMY LEVE S				TOPICS/LEVELS/TOTALS
		FINANCE	MEASUREMENT	MAPS,PLANS...	DATA HANDLING	PROBABILITY	1	2	3	4	
1	1.1.1	2					2				2
	1.1.2	2					2				2
	1.1.3	2					2				2
	1.1.4	2					2				2
	1.1.5	2					2				2
	1.1.6	2					2				2
	1.1.7	2					2				2
	1.1.8	3					3				3
	1.1.9	2					2				2
	1.2.1				2		2				2
	1.2.2				2		2				2
	1.2.3				2		2				2
	1.2.4				2		2				2
	1.2.5				3		3				3
	1.2,6				2		2				2
TOTAL		**19**	**-**	**-**	**13**	**-**	**32**	**-**	**-**	**-**	**32**
2	2.1	2					2				2
	2.2	2					2				2
	2.3	2						2			2
	2.4	3						3			3
	2.5.1	5								5	5
	2.5.2	6							6		6

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	2.6	4								4	4
TOTAL		**24**	**-**	**-**	**-**	**-**	**4**	**5**	**6**	**9**	**24**
3	3.1				3			3			3
	3.2				2			2			2
	3.3				3			3			3
	3.4				4				4		4
	3.5				3			3			3
	3.6				2					2	2
TOTAL		**-**	**-**	**-**	**17**	**-**	**-**	**11**	**4**	**2**	**17**
4	4.1.1				4			4			4
	4.1.2				2			2			2
	4.1.3				3			3			3
	4.1.4				3				3		3
	4.2.1	2						2			2
	4.2.2	3						3			3
	4.2.3	6							6		6
	4.2.4	4								4	4
TOTAL		**15**	**-**	**-**	**12**	**-**		**14**	**9**	**4**	**27**

TOTALS										
	F	M	M,P.	D.H.	P	L1	L2	L3	L4	**TOTAL**
TOTAL	58	-	-	42	-	36	30	19	15	**100**
QP %	58%	-	-	42%	-	36%	30%	19%	15%	**100%**