GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

JUNE EXAMINATION
GRADE 12

2023

MARKING GUIDELINES

MATHEMATICAL LITERACY

(PAPER 1)

Codes	Explanation
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
D	Define
J	Justification/Reason/Explain
S	Simplification
RT/RD/RG	Reading from a table/graph/diagram/map/plan
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding-off, etc.
R	Rounding-off
NP	No penalty for rounding-off OR omitting units
AO	Answer only

KEY TO TOPIC SYMBOLS:

M = Measurement; MP = Maps, Plans and other representations; P = Probability

8 pages

NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- Question 1 sub-questions can be allocated full marks if learners write the answers only (AO).
- 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.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra incorrect item presented.

QUESTION 1

Q		Solution	Explanation	Marks	Level
1.1	1.1.1	Value Added Tax ✓✓**A** 15% ✓✓**A**	2A correct answer 2A correct percentage	(4)	F1
	1.1.2	VAT inclusive price means the price has the VAT value already added. ✓✓**J** **OR** The price already includes the VAT. ✓✓**J**	2A justification 2A justification	(2)	F1
	1.1.3	Profit for one apple = R2,00 – R1,40 ✓**M** = R0,60 ✓**A**	1M subtraction for profit 1A correct answer	(2)	F1
	1.1.4	% *Profit* = $\frac{0,6}{1,4} \times 100$ % ✓**M** = 42,857 % ✓**CA** **OR** % *Profit*= $\frac{60}{140} \times 100$ % ✓**M** = 42,857 % ✓**CA**	1M division and multiplication by 100 1CA answer 1M division and multiplication by 100 1CA answer	(2)	F1
	1.1.5	KHS's tuck shop's profit = 7 × 80 × 0,60 ✓**M** = R336,00 ✓**A**	1M multiplying all correct values. 1A correct answer	(2)	F1
1.2	1.2.1	A bar graph is used for comparison of discrete variables and categorical data, ✓✓ **J** while a histogram is used for distribution of non-discrete variables and quantitative data. ✓✓**J**	2J bar graph explanation 2J histogram explanation	(4)	DH1
	1.2.2	Total number of candidates = 50 727 + 21 839 + 89 391 + 101 153 + 61 111 + 39 489 + 31 286 + 10 465 + 44 544 ✓**MA** = 450 005 ✓**CA** Four hundred and fifty thousand and five ✓✓**A**	1MA adding all correct values 1CA answer 2A correct answer NPU	(4)	DH1

	1.2.3	Gauteng Province ✓✓**A** **OR** GP ✓✓**A**	2A correct answer	(2)	DH1
	1.2.4	Failed Percentage = 100% – 83,7% ✓**A** = 16,3% Then 16,3% × ✓**MA** 101 153 = 16 487,939 = 16 488 candidates ✓**R**	1A correct subtraction value 1MA multiplying correct values 1R correct rounding off	(3)	DH1
				[25]	

QUESTION 2

Q		Solution	Explanation	Marks	Level
2.1	2.1.1	**Account Number:** 84 848 1976 ✓✓**A** **Account Holder:** Mr. A. Dromedaries ✓✓**A**	2A correct account with all digits 2A correct name	(4)	F1
	2.1.2	17 transactions ✓✓**A**	2A correct answer **Accept: 15 transactions**	(2)	F1
	2.1.3	Probability = $\frac{10}{17}$ ✓**A** ✓**A**	**CA from 2.1.2** 1A correct numerator 1A correct denominator	(2)	P2
	2.1.4	Total amount = 20 + 2 400 + 1 000 + 600 ✓**MA** = R4 020 ✓**A**	1MA addition of correct values 1A answer	(2)	F2
	2.1.5	Amount owed = R29,67 ✓✓**RT**	2RT correct values	(2)	F2
	2.1.6	Total amount deposited = 382,14 + 22 695,98 + 191,07 ✓**MA** = R23 269,19 ✓**CA**	1MA adding correct values 1CA answer	(2)	F2
	2.1.7	Total credited amounts = 382,14 + 22 695,98 + 191,07 23 269,19 ✓**S** Percentage = $\frac{5\,569\,,75}{23\,269\,,19}$ × 100% ✓**MA** = 23,94 % ✓**CA**	1S adding all the values 1MA calculating percentage 1CA correct answer **NPR & NPU**	(3)	F3

	2.1.8 Pre-paid water fee = R6 205,48 – R6 204,38 ✓**M** = R1,10 ✓**A**	1M subtracting correct amounts 1A correct answer	(2)	F3
2.2	Labour day 1 = 3 hours × 64,99 = R194,97 ✓**M** Day 2 = 2 hours × 64,99 = R129,98 ✓**CA** Total = R194,97+ R129,98 = R324,95 ✓**CA** Cost of installing the tank = R6 479,00 + R971,85 + R324,95 = R7 775,80 ✓**CA** Amount above = R7 800 − R7 775,80 = R24, 20 ✓**CA** (Surplus) Mr. Dromedaries' budget is sufficient. ✓**O**	1M 1st day labour calculation 1CA 2nd day labour calculation 1CA adding 2 day values 1CA total costs 1CA simplification 1O verification	(6)	F4
			[25]	

QUESTION 3

Q		Solution	Explanation	Marks	Level
3.1	3.1.1	15 ✓✓**RT**	2RT correct number of districts	(2)	DH2
	3.1.2	Total number of calculators = 10 340 + 14 323 + 8 876 + 4 449 + 8 100 + 9 568 + 7 772 + 7 500 + 7 679 + 6 923 + 4 576 + 7 640 + 8 823 + 10 060 + 8 900 ✓**MA** = 125 619 ✓**CA**	1MA adding correct values 1CA correct answer	(2)	DH2
	3.1.3	Johannesburg West ✓✓**RT**	2RT correct district name	(2)	DH1
	3.1.4	Discreet ✓✓**A** The data is given in whole numbers only. ✓✓**J** **OR** The data can be counted per item. ✓✓**J**	2A correct choice 2J reason	(4)	DH4
	3.1.5	Mean= $\frac{8\,000 + 6\,000 + 6\,000 + 6\,000 + 5\,000}{5}$ ✓**RT** = $\frac{31\,000}{5}$ ✓**MA** = 6 200 ✓**CA**	1RT all correct values 1MA mean concept 1CA answer	(3)	DH2
	3.1.6	Ascending order ✓**MA** (a) 2 000; 2 700; 4 800; **5 000**; 5 800; 5 900; 5 900; **6 000**; 6 500; 6 500; 6 800; **7 000**; 8 000; 8 500; 11 200 Q2 = 6 000 ✓**RT** Q1 = 5 000 ✓**RT** Q3 = 7 000 ✓**RT** Q3 – Q1 ✓**F** 7 000 – 5 000 = 2 000 ✓**A**	1MA correct arrangement 1RT firstly identifying correct value of Q2 1RT correct value of Q1 1RT correct value of Q3 1F correct formula 1A correct answer	(6)	DH2
		(b) Interquartile Range ✓✓**A** **OR** IQR ✓✓**A**	2A correct term	(2)	DH1
				[21]	

QUESTION 4

Q		Solution	Explanation	Marks	Level
4.1	4.1.1	(a) Fish **OR** F ✓**A** (b) Orange juice **OR** O ✓**A** (c) WSG ✓**A**	1A correct answer 1A correct answer 1A correct answer	(3)	P2
	4.1.2	12 combinations ✓✓**A**	2A correct answer	(2)	P2
	4.1.3	Probability = $\frac{2}{12}$ ✓**A** ✓**A** **OR** $\frac{1}{6}$ **OR** 0,167 **OR** 16,7%	1A correct numerator 1A correct denominator	(2)	P3
4.2	4.2.1	Weight = 2 500 g ✓✓**RG**	2RG correct value from the graph	(2)	DH2
	4.2.2	75% of foals weigh approximately this weight or less. ✓✓**O** **OR** 25% of foals weigh approximately this weight or more. ✓✓**O**	2O opinion 2O opinion	(2)	DH4
	4.2.3	40 months ÷ 4 weeks per month ✓**M** = 10 months ✓**A**	1M dividing by 4 1A correct number of months	(2)	DH2
	4.2.4	(a) 4,5 kg = 4 500 g ✓**C** 92nd percentile ✓**RG**	1C converting kg to g 1RG 92nd percentile Accept: 90th – 91st percentile	(2)	DH3
		(b) He should be on a healthy diet plan or exercise more (running with a foal). ✓✓**O** **OR** Any other relevant answer.	2O opinion	(2)	DH4

4.3	4.3.1	Annual taxable income = R35 357,00 × 12 ✓**MA** = R424 284 ✓**A**	1MA multiplying by 12 1A simplification	(2)	F1
	4.3.2	Monthly medical tax credits = (R332 × 2) ✓**RT** + (R224 × 2) ✓**M** = R664 + R448 ✓**M** = R1 112 ∴ Yearly MTC = R1 112 × 12 ✓**MA** = R13 344	1RT correct values 1M multiplying by 2 1M adding 1MA multiplying by 12	(4)	F3
	4.3.3	Annual tax = ✓**A** R70 532 + 31% of taxable income above 337 800 ✓**SF** = R70 532 + 31% (R424 284 – R337 800) = R70 532 + (31% × R86 484) ✓**CA** = R70 532 + R26 810,04 = R97 342,04 ✓**CA** Tax payable ✓**MCA** = R97 342,04 – R15 714 – R13 344 = R68 284,04 ✓**CA**	1A correct tax bracket 1SF correct substitution 1CA simplification 1CA tax before rebates 1MCA subtracting both rebates 1CA simplification	(6)	F3
				[29]	
			TOTAL:	**100**	