



KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

PREPARATORY EXAMINATION

MARKING GUIDELINE

SEPTEMBER 2021

MARKS: 150

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RD/RM	Reading from a table/ graph/ diagram/map
SF	Correct substitution in a formula
O	Opinion/ reason/deduction/example/Explanation
J	Justification
R	Rounding off
F	deriving a formula
AO	Answer only full marks
P	Penalty e.g. for units, incorrect rounding off etc.
NPR	No penalty for rounding / units

This marking guideline consists of 10 pages.

QUESTION 1 [30 MARKS]			
Ques	Solution	Explanation	T & L
1.1.1	Compound bar graph✓✓A OR Multiple Bar graph✓✓A	2A correct answer (2)	DH L1
1.1.2	76,5%✓✓RT	2RT reading from table (2)	DH L1
1.1.3	North West and Northern Cape✓✓RT	1RT for NW 1RT for NC (2)	DH L1
1.1.4	11 189; 10 984; 9 400; 9 392; 3 039; 1 784; 1 213; 1 057; 650✓✓A	2A answer (2)	DH L1
1.1.5	There is no relationship✓✓A	2A amount (2)	DH L1
1.2.1	337674956✓✓A	2A answer (2)	F L1
1.2.2	01 April 2021 OR 01/04/2021✓✓A	2A answer (2)	F L1
1.2.3	Value Added Tax✓✓A	2A answer (2)	F L1
1.2.4	R101,70✓✓RG	2RG correct reading (2)	F L1
1.3.1	The amount buyers will pay for the goods Xolani is selling✓✓0	2E explanation (2)	F L1
1.3.2	R11,99✓✓A	2A correct answer (2)	F L1
1.3.3	Coke cans✓A Oil Sunola✓A Lucky Star Fish✓A	1A for Coke cans 1A for Oil Sunola 1A for Lucky Star Fish (3)	F L1
1.3.4	Number of cans = $\frac{R92,99}{R15,49}$ ✓M = 6 ✓A	1M dividing 1A simplification AO (2)	F L1

Marking Guideline

1.3.5	$\begin{aligned} \text{Total Cost Price} &= \text{R}524,99 + \text{R}204,99 + \text{R}204,99 + \text{R}204,99 \\ &+ \text{R}144,99 + \text{R}107,99 + \text{R}92,99 + \text{R}88,99 \\ &+ \text{R}66,99 \checkmark \text{A} \checkmark \text{M} \\ &= \text{R}1\,641,91 \checkmark \text{CA} \end{aligned}$	1A all correct values 1M adding 1CA answer 2 values left out 1 out of 3 (3)	F L1
			[30]

QUESTION 2 [45 MARKS]			
2.1.1	R100 ✓✓ RT	2RT correct reading (2)	F L1
2.1.2 (a)	R6 121,00 ✓✓ RT	2RT correct reading (2)	F L1
2.1.2 (b)	$\begin{aligned} \text{Percentage} &= \frac{\text{R}6\,121 - \text{R}8\,481 \checkmark \text{MA}}{\text{R}8\,481 \checkmark \text{M}} \times 100\% \\ &= -27,83\% \checkmark \text{A} \end{aligned}$ <p style="text-align: center;">OR</p> $\begin{aligned} \text{Percentage decrease} &= \frac{\text{R}8\,481 - \text{R}6\,121 \checkmark \text{MA}}{\text{R}8\,481 \checkmark \text{M}} \times 100\% \\ &= 27,83\% \checkmark \text{A} \end{aligned}$	1MA subtracting correct values 1M dividing by R8 481 1A answer OR 1SF for substitution 1M dividing by R8 481 1A answer (3)	F L2
2.1.3	$\begin{aligned} &\checkmark \text{RT} \quad \checkmark \text{MA} \quad \checkmark \text{MA} \\ \text{R}1\,462,72 - \text{R}165,00 + \text{R}23,35 &= \text{R}1\,321,07 \end{aligned}$	1RT for R1 462,72 1MA subtracting R165 1MA adding R23,35 (3)	F L2
2.1.4	R23,35 ✓✓ RT	2RT correct answer (2)	F L1
2.2.1	Primary Rebate (R14 958) ✓✓ A	1A for Primary Rebate 1A for R14 958 (2)	F L1
2.2.2	$\begin{aligned} \text{Monthly Pension Contribution} &= 7,5\% \times \text{R}32\,800 \checkmark \text{M} \\ &= \text{R}2\,460 \checkmark \text{A} \end{aligned}$	1M multiplying by 7,5% 1A answer (2)	F L2
2.2.3	$\begin{aligned} \text{January taxable income} &= 2(\text{R}32\,800) - \text{R}2\,460 + \text{R}7\,100 \checkmark \checkmark \text{M} \\ &= \text{R}70\,240 \checkmark \text{CA} \end{aligned}$	CA from 2.2.2 1M for R65 600 and adding R7 100 1M for subtracting 2 460 1CA answer (3)	F L2
2.2.4	$\begin{aligned} \text{Annual MTC} &= 12[2(\text{R}319) + 3(\text{R}215)] \checkmark \text{MA} \\ &= \text{R}15\,396 \checkmark \text{CA} \end{aligned}$	1MA multiplying by 12 1CA answer (2)	F L2

3.2.1	$\text{Loan Amount} = 1,10 \times R780\,000 \checkmark M$ $= R858\,000 \checkmark A$ $\text{Monthly Repayment} = \frac{R858\,000 \times 8,74}{1\,000} \checkmark SF$ $= R7\,498,92 \checkmark CA$	1M multiplying 1A simplifying 1SF substitution 1CA answer (4)	F L2
3.2.2	$\text{Loan Period} = 300 \text{ months} \checkmark C$ $\text{Real Cost of Loan} = R7\,498,92 \times (12 \times 25) \checkmark M$ $= R2\,249\,676 \checkmark CA$	CA from 3.2.1 1C conversion 1M multiplying by 300 1CA answer (3)	F L2
3.2.3	$\text{Total interest} = R2\,249\,676 - R858\,000 \checkmark M$ $= R1\,391\,676 \checkmark CA$	CA from 3.2.3 1M subtraction 1CA answer (2)	F L1
		[24]	

QUESTION 4 [25 MARKS]			
4.1.1	Discrete✓A Number of people is countable✓0	1A for discrete 1O for countable (2)	DH L4
4.1.2	1,8% ✓✓RG	2RG answer (2)	DH L1
4.1.3	$15,2\% \times 126\,058\,811$ ✓M $= 19\,160\,939$ ✓A	1M multiplying 1A simplification (2)	DH L2
4.1.4	Range = $65,4 - 1,8$ ✓M $= 63,6\%$ ✓A	1M concept of range 1A for answer AO (2)	DH L2
4.1.5	Mean $\frac{65,4 + 52,2 + 61,4 + 61,6 + 45 + 20,5 + 26,6 + 12,7 + 63,4 + 1,8 + 151 + 20,5 + 15,2 + 24,5}{14}$ ✓A✓M $= 34,71$ ✓CA $\approx 34,7\%$ ✓R	1A correct percentages 1M adding 1M dividing by 14 1CA answer 1R for rounding off (5)	DH L2
4.1.6	The median because the data entries are widely spread and there is an outlier (1,8%)✓✓A/J	2A/J answer with justification (2)	DH L3
4.1.7	Negatively affected by outlier(s)✓✓0	2O opinion Accept any reasonably answer according to the context (2)	DH L4

4.1.8	$\frac{8\checkmark CA}{14\checkmark A} \times 100\%$ $= 57,1\%\checkmark R$	CA from 4.1.5 1CA for 8 1A for 14 1R rounding off to 57,1% (3)	P L2
4.2.1		1A for CC 1A for sp (2)	P L3
4.2.2	$\frac{2\checkmark A}{12\checkmark A} = \frac{1}{6}\checkmark S$	1A for numerator 1A for denominator 1S simplifying (3)	P L2
		[25]	

Marking Guideline

QUESTION 5 [22 MARKS]			
5.1.1	Minimum = 12%✓RG Maximum = 96%✓RG	1RG for the minimum 1RG for the maximum (2)	DH L2
5.1.2	Lower Quartile Mark = 28%✓RG Number of learners = $\frac{120 \checkmark A}{4 \checkmark M}$ = 30✓CA OR Lower Quartile Mark = 28%✓RG Number of learners = 25% of 120✓A = $\frac{25}{100} \times 120 \checkmark M$ = 30✓CA OR Lower Quartile Mark = 28%✓RG Number of learners = $0,25 \times 120 \checkmark \checkmark M$ = 30✓CA	1RG for Lower Quartile 1A for 120 1M for dividing by 4 1CA for the answer OR 1RG for Lower Quartile 1A for 25% of 120 1M for method 1CA for the answer OR 1RG for Lower Quartile 1M for 0,25 1M for multiplying 1CA for the answer (4)	DH L3
5.1.3	Lower Quartile = 22%✓RG Upper Quartile = 58%✓RG IQR = 58% – 22%✓SF = 36%✓CA	1RG for Lower Quartile 1RG for Upper Quartile 1SF substitution 1CA for answer/accuracy (4)	DH L3
5.1.4	2019 Class ✓A Higher maximum mark ✓0 Higher Lower Quartile ✓0 Higher Upper Quartile ✓0	1A for the class 1O maximum mark 1O for Lower Quartile 1O for Upper Quartile (4)	DH L4
5.2.1	Broken line graph ✓✓A	2A answer (2)	DH L1
5.2.2	2019 ✓RG, 25% ✓RG	1RG year 1RG percentage level (2)	DH L2

5.2.3	<p style="text-align: center;">✓ 0 ✓ 0</p> <p>Fraud in the middle management decreased from 2016 to 2020</p> <p style="text-align: center;">✓ 0 ✓ 0</p> <p>while junior and senior management increased from 2016 to 2020.</p>	<p>2O describing the trend for middle managers</p> <p>2O describing the trend for senior managers</p> <p style="text-align: right;">(4)</p>	<p>DH</p> <p>L4</p>
5.2.4	<p>R1,45 billion : \$100 million</p> <p>R1 450 000 000 : \$100 000 000 ✓A</p> <p style="text-align: center;">$R1: \frac{100\ 000\ 000}{1\ 450\ 000\ 000} \checkmark M$</p> <p style="text-align: center;">R1: \$0,06896... ✓CA</p> <p style="text-align: center;">R1: \$0,069 ✓R</p> <p style="text-align: center;">OR</p> <p>R1,45 billion : \$100 million</p> <p>R1 450 million : \$100 million ✓A</p> <p style="text-align: center;">$R1 : \frac{100\ \text{million}}{1\ 450\ \text{million}} \checkmark M$</p> <p style="text-align: center;">R1: \$0,06896 ✓CA</p> <p style="text-align: center;">R 1: \$0,069 ✓R</p>	<p>1A converting both values</p> <p>1M dividing</p> <p>1CA simplification</p> <p>1R correct rounding</p> <p style="text-align: center;">OR</p> <p>1A converting value</p> <p>1M dividing</p> <p>1CA simplification</p> <p>1R correct rounding</p> <p style="text-align: right;">(4)</p>	<p>F</p> <p>L3</p>
		[26]	
TOTAL: 150 MARKS			