



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sport Ontwikkeling
Lefapha la Thuto le Tihabololo ya Metshameko

NORTH WEST PROVINCE

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY PAPER 1

JUNE EXAM 2019

MARKING GUIDELINE

MARKS: 100

SYMBOL	EXPLANATION
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
D	Definition
S	Simplification
RT/RG /RD	Reading from a table/Reading from a graph /diagram
F	Choosing the correct formula
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off
J	Justification/Reason
NPR	No penalty for rounding OR omitting units
AO	Answer only

This marking guideline consists of 5 pages



QUESTION 1 [24] ANSWER ONLY FULL MARKS			
Ques	Solution	Explanation	Level
1.1.1	Vooma`s Petal ✓✓	2A answer (2)	1
1.1.2	October ✓✓	2A answer (2)	1
1.1.3	Total income = R34 350 + R3 500 ✓ = R37 850 ✓	1M adding 1A answer (2)	1
1.1.4	Total amount deducted = R4 200 + R500 + R2 750 + R6 500 ✓ = R13 950 ✓	1M adding 1A answer (2)	1
1.1.5	Peter`s Net pay = R37 850 – R13 950 ✓ = R23 900 ✓	1M subtraction 1A answer (2)	1
1.1.6	Reduction of provident fund = R13 950 – R860 ✓ = R13 090 Peter`s new Net pay = R37 850 – R13 090 = R24 760 ✓ OR Peter`s new Net pay = R23 900 + R860 = R24 760	1M subtraction 1A answer 1M adding 1A answer (2)	1
1.2.1	Lower quartile = 78 ✓✓ Accept 77 or 79	2A answer (2)	1
1.2.2	25 % ✓✓	2A answer (2)	1
1.2.3	Range = 98 – 68 ✓ = 30 ✓	1M Method 1A answer (2) Allow max number 97 – 99 and min number 67 – 69	1
1.3.1	George and Nelspruit ✓✓	2A answer (2)	1
1.3.2	565 km ✓✓	2A answer (2)	1
1.3.3	Arrival time = 11:00 + 3hours 20 minutes ✓ = 14:20 ✓	1M Method 1A answer (2)	1
			[24]
QUESTION 2 [22]			
2.1.1	Stop order is an instruction to an employer or bank to pay / divert monthly or transfer regularly a certain amount to a person or an account. ✓✓ OR Stop order is a future dated regular monthly deduction. ✓✓ OR Stop order is an instruction that an employee (individual) issue to the employer (bank) to make a series of future dated regular deductions. ✓✓	2O explanation (2)	1
2.1.2	Total cost = main member fee + spouse fee + 3(children) fee = R65,00 ✓ + R48,00 ✓ + 3 × R45,00 ✓ = R248,00 ✓	3RT Adding correct values 1A answer (4)	2

2.1.3	50 : 110 ✓ 5 ✓ : 11 ✓	1RT correct values 2A answer (3)	1
2.1.4	Percentage = $\frac{45}{20\,000} \times 100$ ✓ = 0,225 % ✓	1RT correct value 1M multiplying by 100 1A answer (3)	1
2.2.1	Commission = 1,98% × £530,00 = £10,49	1MA calculating % 1A answer (2)	1
2.2.2	£530,00 = $\frac{£530,00}{0,055}$ = R9 636,3636..... = R9 636,36	1MA conversion 1A simplification 1R rounding (3)	2
2.2.3	Amount after 1 year = R8 500 × 7,5% ✓ + R8 500 ✓ = R9 137,50 ✓ Amount after 2 years = R9 137 × 7,5% + R9 137,50 ✓ = R9 822,81 ✓	1M calculating interest 1M adding the initial amount. 1A amount after 1 year. 1M adding 1A answer (5)	2
QUESTION 3 [20]			
3.1.1	2 years to 20 years ✓✓	2A answer (2)	1
3.1.2	It means that 15% of the girls weigh more than this girl and 85% weigh less. ✓✓	2 O explanation (2)	1
3.1.3 (a)	This girl's BMI-for-age relationship is positioned between 85 th and 95 th percentage. She is at risk for overweight. ✓✓	1A percentiles 1A answer (2)	2
3.1.3 (b)	BMI = $\frac{\text{Weight (in kilograms)}}{(\text{Height in metres})^2}$ 24,5 kg/m ² ✓ = $\frac{36\text{kg}}{(\text{Height in metres})^2}$ ✓ Height = $\sqrt{\frac{36}{24,5}}$ ✓ = 1,21 m ✓	1SF correct values 1M new subject 1M finding sq. root 1CA simplification (4)	2
3.1.4	⁰ F = (1,8 × ⁰ C) + 32 = (1,8 × 5,99) + 32 ✓ = 42,782 ⁰ F ✓ ≈ 43 ⁰ F ✓	1S substitution 1A answer 1R rounding (3)	2
3.2.1	Total perimeter = 2 × 3 000 + 2 × 9754 ✓ = 6 000 + 19 508 = 25 508 mm ✓	1M Method 1A answer	2

	Perimeter of the waiting room = $\frac{2}{3} \times 25\,508 \text{ mm} \checkmark$ = 17 005,33 mm \checkmark	1M Method 1A answer (4) NPR	
3.2.2	3 000 mm = 300 cm 9 754 mm = 975,4 cm Area = 975,4 cm \times 300 cm = 292 620 cm ²	1C conversion 1SF substitution 1A answer (3)	2
			[20]
QUESTION 4 [13]			
4.1	N1 and N3 $\checkmark\checkmark$	2A answer (2)	1
4.2	South	2A answer (2)	1
4.3	Woodmead, \checkmark Sunninghill, \checkmark Wynberg \checkmark Any two	2A answer (3)	1
4.4	Time = $\frac{\text{Distance}}{\text{speed}}$ = $\frac{22 \text{ km}}{125 \text{ km/h}} \checkmark$ = 0,176 hours \checkmark \approx 0 hour 10,6 minutes \checkmark	1SF substitution 1 CA answer 1C conversion NPR (3)	2
4.5	6,5 cm : 22 km \checkmark OR 6,5 cm : 22 km \checkmark 6,5 : 2 200 000 \checkmark 0,000065 : 22 \checkmark 1 : 338 468,5 \checkmark 1 : 966 666,7 \checkmark	1 MA method 1C conversion 1S simplification (3)	1
			[13]
QUESTION 5 [21]			
5.1.1	A = 37 – 13 \checkmark = 24 \checkmark	2A answer (2)	1
5.1.2	Mean = $\frac{36+35+25+25+16+19+37+29+18+10}{10}$ = $\frac{250}{10} \checkmark$ = 25 \checkmark	1MA adding correct values 1M dividing by 10 1A answer (3)	2
5.1.3	10 $\checkmark\checkmark$	2A answer (2)	1
5.1.4	0 2 5 6 10 15 20 24 33 35 \checkmark Median = $\frac{10+15}{2} \checkmark$ = 12,5 \checkmark	1CA arranging in ascending order 1M method 1A answer (3)	2

5.2.1	$\mathbf{A} = 8 + 34 + 58$ $= 100$ $\mathbf{B} = 96 - 8$ $= 88$ OR $\mathbf{A} = 250 - 150$ $= 100$ OR $\mathbf{B} = 150 - (26 + 36)$ $= 88$	1M Method 1A answer 1M Method 1A answer (4)	1												
5.2.2	$P(\text{without stick}) = \frac{36 \checkmark}{150 \checkmark}$ $= 0,24 \checkmark$	1A numerator 1A denominator 1CA decimal (3)	2												
5.2.3	<p style="text-align: center;">Old people walking with sticks as compared to those who are not</p> <p style="text-align: center;">■ With Stick ■ Without Stick</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Bar Chart</caption> <thead> <tr> <th>Age Group</th> <th>With Stick (%)</th> <th>Without Stick (%)</th> </tr> </thead> <tbody> <tr> <td>60 - 70</td> <td>10</td> <td>90</td> </tr> <tr> <td>71 - 80</td> <td>35</td> <td>25</td> </tr> <tr> <td>81 - 90</td> <td>60</td> <td>35</td> </tr> </tbody> </table>	Age Group	With Stick (%)	Without Stick (%)	60 - 70	10	90	71 - 80	35	25	81 - 90	60	35	Key = 1 mark ✓ 1 mark for two bars: 60 – 70 ✓ 1 mark for two bars: 71 – 80 ✓ 1 mark for two bars: 81 - 90 ✓ (4)	2
Age Group	With Stick (%)	Without Stick (%)													
60 - 70	10	90													
71 - 80	35	25													
81 - 90	60	35													
TOTAL = 100			[21]												