Education and Sport Development
Department of Education and Sport Development
Departement van Onderwys en Sportontwikkeling
Lefapha la Thuto le Tlhabololo ya Metshameko
NORTH WEST PROVINCE

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICAL LITERACY P2

JUNE 2017

MARKING GUIDELINES

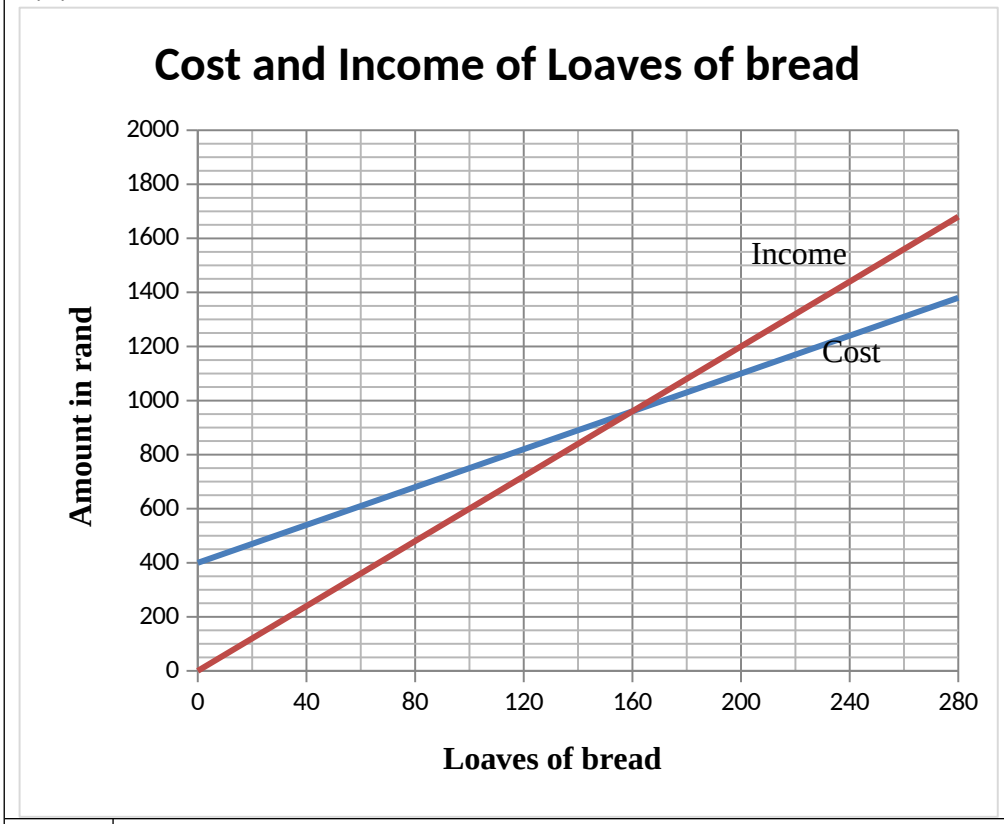
MARKS: 75

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
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
NP	No penalty for rounding OR omitting units

This marking guideline consists of 6 pages

MARKING GUIDELINES

QUE.	SOLUTIONS	EXPLANATIONS	TL
	QUESTION 1 [32 MARKS]		
1.1.1	150 g × 50✓ = 7 500 g✓ = 7,5 kg✓	1M Multiplying by 50 1S simplification 1C answer in kg **(3)**	2
1.1.2	0,25 kg = 250g✓ number of loaves to be baked $= \frac{250\text{ g}}{7{,}5\text{ g}}$ ✓ = 33,333 = 33✓ Yes, comment is valid✓ **OR** 7,5g × 50 ✓= 375 g✓ = 0,375 kg✓ Yes, comment is valid✓	1C conversion 1M method 1No.of loaves 1O opinion **OR** 1M method 1S simplification 1C conversion 1O opinion **(4)**	4
1.2.1	A = R400 + R3,50 × 120✓ = R400 + R420 = R820✓ **OR** A = R680 + R140✓ = R820✓ B = $\frac{R960}{R6}$ ✓= 160 loaves✓	1M method 1A answer for A 1M method 1A answer for B **(4)**	2
1.2.2	Cost = R400 + R3,50 × number of loaves✓✓	1A R400 + 1A product **(2)**	2
1.2.3	Cost = R400 + R3,50 × 50✓ = R575✓	1SF substitution 1A answer **(2)**	2

1.2.4		1A (0,400) 1A (280,1 380) 1A joining the points 1A labelling the graph 1A any other correct point **(5)**	3
1.2.5	(160✓, R960✓)	1A number of loaves 1A amount **(2)**	2
1.2.6	Cost of 200 loaves = R1 100✓ Income from 200 loaves = R1 200✓ Profit = R1 200 – R1 100 = R100✓	1RT cost 1RT income 1A profit **(3)**	3
1.2.7	Percentage = $\frac{100}{1100} \times 100\%$✓ = 9,09%✓ Thus, claim is not valid✓ **OR** $\frac{10}{100} \times R1100$ ✓ = R110✓ Thus, claim is not valid✓	1M percentage 1A answer 1Conclusion **(3)**	4
1.3	Total time = 30 hours ✓ Then $\frac{15}{100} \times 30$ hours✓ = 4,5 hours✓ Time given to languages = 4 hours which is less than expected Thus, the time allocated is not according the staff agreement✓ **OR** Total time = 30 hours ✓	1A total time 1M method 1CA expected time for languages 1O opinion **(4)**	4

	Then $\frac{4}{30} \times$ ¿¿ 100%✓ = 13,3%✓ Thus, claim is not valid✓		
	QUESTION 2[21 MARKS]		
2.1.1	Total monthly cost of electricity = 324kWh × 117,86cents✓ =38 186,64 cents✓ = R381,87✓	1M method 1A in cents 1A in rand **(3)**	3
2.1.2	Total monthly cost of electricity = 350kWh × 117,86 cents✓+ 244,8× 163,19 cents✓ =41 251 cents + 39 948,912 cents✓ = 81 199,912 cents✓ =R812,00✓	1M block 1 1M block 2 1S simplification 1A in cents 1A in rand **(5)**	3
2.1.3	Too many appliances used that consumes a lot of electricity✓✓ **OR** Heaters used for warming up the house✓✓ **OR** High consumption of water from the geyser✓✓ **Accept any relevant reason**	2A answer **(2)**	4
2.2.1	$\text{BMI} = \frac{\text{mass}}{(\text{height})^2}$ $\text{BMI} = \frac{67\text{kg}}{(1{,}54\text{ m})^2}$ ✓ = 28,25096981 kg/m²✓ = 28,3 kg/m² ✓	1SF substitution 1A answer 1R rounding **(3)**	2
2.2.2	Overweight✓✓	2CA answer **(2)**	2
2.2.3	Diet✓✓ **OR** Ill-health✓✓ **OR** Use of weight-loss products✓✓ **Accept any other relevant reason**	2A reason **(2)**	4
2.2..4	˚C= (˚F – 32˚)÷1,8 43˚✓=(˚F – 32˚) ÷1,8 ˚F = 43˚×1,8 +32˚✓ ˚F = 109,4˚✓	1SF temp. in ˚C 1S simplification 1A answer 1R rounding	3

	$^{\circ}F = 110^{\circ}$✓	**(4)** **Penalise for rounding**	
	QUESTION 3[22 MARKS]		
3.1.1	Percentage = $\frac{308160}{443520}$ ✓× 100✓ = 69,48051948✓ No, the claim is not valid✓ **OR** $\frac{70}{100}$ × ✓443 520✓ = R310 464✓ No, the claim is not valid✓	1RT using correct values 1M method 1A answer 1O opinion **(4)**	4
3.1.2	Average cost = $\frac{R10\ 047}{27}$✓ = R372,1111✓ = R370	1M method 1A answer **(2)**	4
3.1.3	Overseas donations = $\frac{57\ 120}{0,08}$✓ = ¥ 714 000✓ Thus, the claim is correct✓	1M method 1A answer 1O opinion **(3)**	4
3.1.4	Deliver food parcels✓✓ **OR** Fuel✓✓ **OR** Maintenance✓✓ **OR** Going to buy garden material✓✓ **OR** Asking for donations✓✓ **OR** Attending board meetings✓✓ **Accept any relevant reason**	2O opinion **(2)**	4
3.2.1	Volume = 100×60×30✓ = 180 000 cm^3 ✓ = 180 litres✓	1SF substitution 1S simplification 1C conversion **(3)**	3
3.2.2	Number of fish= $\frac{180\ litres}{7\ litres}$✓ = 25,7142857 = 25✓ No✓, 26 fish cannot fit in the tank **OR** Volume for 26 fish= 26 × 7 litres✓ = 182 litres✓ No✓, the volume needed is less than the volume of the tank.	1M method 1A no. of fish 1O opinion **OR** 1M method 1A volume needed 1O opinion **(3)** **[2 out of 3 if no. of fish is 26]**	4
3.3	180 litres = 180 × 1,7598 pint✓ = 316,764 pint✓ 316,764 pints = 316,764 ×0,125 gallons✓ = 39,5955 gallons✓ = 40 gallons✓	1M method 1A in pint 1M method 1A in gallons 1CA answer **(5)**	3

QUESTION PAPER ANALYSIS

QUESTION	**TL2**	**TL3**	**TL3**
QUESTION 1			
1.1.1	3		
1.1.2			4
1.2.1	4		
1.2.2	2		
1.2.3	2		
1.2.4		5	
1.2.5		2	
1.2.6		3	
1.2.7			3
1.3			4
QUESTION 2			
2.1.1		3	
2.1.2			5
2.1.3			2
2.2.1	3		
2.2.2	2		
2.2.3			2
2.2.4		4	
QUESTION 3			
3.1.1			4
3.1.2	2		
3.1.3			3
3.1.4			2
3.2.1		3	
3.2.2			3
3.3		5	
TOTAL MARKS	**18**	**25**	**32**
PERCENTAGES	**24**	**33**	**43**