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KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICAL LITERACY

COMMON TEST

MARCH 2022

MARKING GUIDELINE

MARKS: 100

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy (Answer)
C	Conversion
S	Simplification
RT/RG/RD	Reading from a table/ graph/ diagram
NPR	No penalty for units/rounding
SF	Correct substitution in a formula
O	Opinion/ reason/deduction/example
J	Justification
R	Rounding off/
F	deriving a formula
E	Explanation
U	Units
AO	Answer only full marks

This marking guideline consists of 6 pages.

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QUESTION 1 [20 MARKS]			
	SOLUTION	**EXPLANATION**	**T/L**
1.1.1	6hours +0,5×60 ✓MA 6hrs and 30minutes✓A	1MA, Multiplying by 60 1A, Time in hours and minutes (2)	M L1
1.1.2	It means that the 30 minutes will be charged at R110. ✓✓**E**	2E, Explanation (2)	M L1
1.1.3	✓M Income = R110×6 +R110 ✓MA =R770✓CA	1M, Multiplying by 6 1MA, Adding R110 1CA, Answer (3)	F L1
1.1.4	No of hours = $\frac{R440}{R110}$ ✓MA =4 ✓A	1MA, Dividing by the rate 1A, Answer (2)	M L1
1.1.5	B ✓✓A	2A, Correct graph (2)	B L1
1.2.1	Radius =$\frac{16cm}{2}$ ✓MA =8cm✓A	1MA, Dividing by 2 1A. Answer **AO** (2)	M L1
1.2.2	Total length = 50,3cm ×30✓ M =1 509cm✓CA	1M, Multiplying by 30 1CA, Answer **AO** (2)	M L1
1.2.3	0,5 inches ✓✓RT **OR** $\frac{1}{2}$ inch✓✓RT	2RT, Correct reading (2)	M L1
1.2.4	✓RT ✓M Difference = 80,5 – 72,8 =7,7 ^{0}F ✓CA	1RT, Reading correct values 1M, Subtracting correct values 1CA, Difference (3)	M L1
		[20]	

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QUESTION 2 [25 MARKS]			
	SOLUTION	**EXPLANATION**	**T/L**
2.1.1	Opening balance is a balance brought forward from the previous account period. ✓✓E	2E, Explanation (2)	F L1
2.1.2	Balance = R5 719,47✓✓A	2A, Answer (2)	F L1
2.1.3	✓RT ✓M Total deposits =R272,45 +R250+R2100+R250 =R2 872,45✓CA	1RT, Reading correct values 1M, Adding correct values 1CA, Answer (3)	F L2
2.1.4	✓MA Days = (31 – 15) +1+18 = 17+18✓M =35 days✓CA	1MA, Days in March 1M, addition 1CA, Answer. (3)	M L2
2.1.5	✓RT ✓ MA ✓ MA Closing balance = R5 234,09-R2387,07 +R2872,45 = R5 717,47	**CA from question2.1.3** 1RT, Opening balance. 1MA, Subtracting withdrawals 1MA, Adding deposits (3)	F L2
2.2.1	✓M Income = R25 000+ R17500 =R42 500✓A	1M, Adding correct values 1A, Answer **AO** (2)	F L1
2.2.2	Water and electricity✓✓A	2A, Answer (2)	F L1
2.2.3	Markerting exp%= $\frac{R2000}{R17990}$ × 100%✓M ✓M =11,12%✓MA	1M, Dividing Correct values 1M, Percentage concept 1CA, Answer **NPR** (3)	F L2
2.2.4	a) ✓MA Total cost = R160 +R0,80×20✓M =R176✓CA	1MA, Multiplying by 20minutes 1M, Addition 1CA, Answer (3)	F L3
2.2.4	b) Combination relation ✓✓A	2A, Answer (2)	B L1
		[25]	

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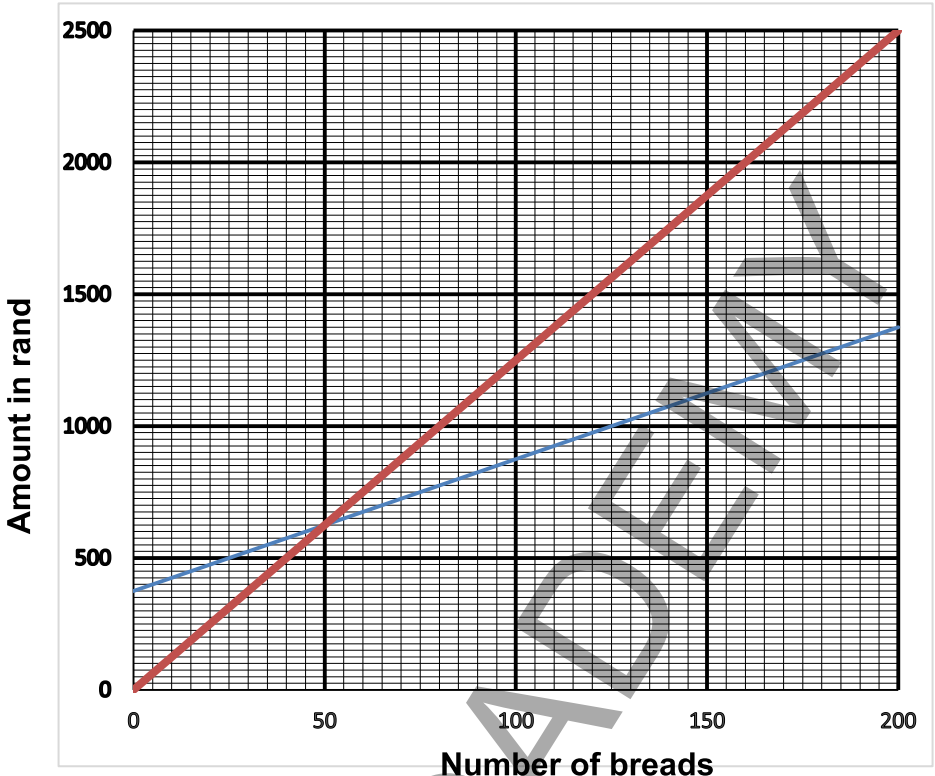
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QUESTION 3 [33 MARKS]			
	SOLUTION	**EXPLANATION**	**T/L**
3.1.1	Overweight. ✓✓RT	2RT, Correct answer (2)	M L2
3.1.2	BMI = $\frac{83,5kg}{(1,7m)^2}$ ✓✓SF =28,8927✓CA $=28,9kg/m^2$ ✓R	2SF, Substitution correct weight and height 1CA, Answer 1R, Rounding (4)	M L3
3.1.3	Exercise regularly ✓✓O **OR** Eat healthy food ✓✓O **OR** Follow the diet programme✓✓O	2O, Opinion 2O, Opinion (4)	M L4
3.1.4	Weight in pounds = 2,2 ×83,5 ✓MA =183,7 pounds✓A	1MA, Multiplication by 2,2 1A, Answer **AO** (2)	M L2
3.2.1	✓M ✓M Width of the baseline = 8,23m+1,37m+1,37m = 10,97m	1M, Addition 1M, Adding 1,37m both sides (2)	M L2
3.2.2	✓SF ✓A P = 2×23,77m +2×10,97m = 69,48m✓CA	1SF, Substitution 1A, Correct values 1CA, Answer (3)	M L2
3.2.3	✓M 23,77m – 6,4m-6,4m 10,97m✓MCA 2 ✓MA 5,485m✓CA	1M, Subtracting both sides 6,4m 1MCA, 10,97m 1MA, Dividing by 2 1CA, Answer (4)	M L4
3.2.4	✓SF Area =23,77m×1,37m ✓M $=32,5649m^2$ ✓CA	1SF, Substitution 1Multiplying 1CA, Answer. (3)	M L2
3.3.1	No of calories = $\frac{83,5kg}{70kg}$ × 583✓M ✓S = 695,44calories ✓A	1M, Multiplying by 583 1S, Dividing by 70 kg 1A, Answer. (3)	M L3
3.3.2	Mass = $\frac{695,44 \text{ calories}}{9}$ ✓MA = $\frac{77,27711g}{1000}$ ✓C = 0,077kg ✓A The statement is invalid. ✓J	**CA from Question 3.3.1** 1MA, Dividing by 9 1C, Dividing by 1000 1A, Answer 1J, Justification (4)	M L4
3.3.3	No of hours = $\frac{1600}{583}$ ✓M =2,744✓A	1M, Dividing by 583 1A, Answer **NPR** (2)	M L3
		[33]	

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QUESTION 4 [22]			
	SOLUTION	**EXPLANATION**	**T/L**
4.1.1	Amount in rands✓✓RT	2RT, Answer (2)	F L1
4.1.2	a) 	1A, Starting point 1CA, Joining straight line point 1CA, Label (3)	F L3
4.1.2	b) 50 breads✓✓RT	2RT, Answer (2)	F L2
4.1.2	c) R975✓✓RT	2RT, Answer (2)	F L2
4.1.3	Income for one bread = $\frac{R125}{10}$ =R12,50✓M Total income = R12,50 ×No of bread sold✓CA	1M, Rate of R12,50 1CA, Equation (2)	F L3
4.2.1	Volume = 40cm ×10cm×10cm ×4 ✓✓SF $=16\,000 cm^3$ ✓A	2SF, Correct Substitution 1A, Answer (3)	M L3

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4.2.2	Rect. =16 000g✓C Cylindrical = 3501,19×4✓MA =14004,76g A rectangular compartment will have more mass✓CA	**CA from question 4.2.1** 1C, Conversion of cm^3 to grams 1MA, Multiplying by 4 1CA, Opinion (3)	M L4
4.2.3	5,08cm :40cm✓MA 5,08cm 5,08cm 1:7,874…✓CA	1MA, Correct ratio order and dividing 1CA, Answer **AO** (2)	M L2
4.2.4	= (450-32) ÷1,8✓SF =418÷1,8✓S =232✓CA	1SF, Substitution 1S, Simplification 1CA, Answer (3)	M L2
		[22]	
		TOTAL MARKS: 100	

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