**NATIONAL
SENIOR CERTIFICATE**

GRADE 11

NOVEMBER 2015

**MATHEMATICAL LITERACY P1
MEMORANDUM**

MARKS: 100

Symbol	Explanation
M	Method
A	Accuracy
CA	Consistent accuracy
RT/RG/RM	Reading from a table/Reading from a graph/Read from map
RP	Reading from the plan
SF	Substitution in a formula
S	Simplications
P	Penalty (no units, incorrect rounding off etc.)
O	Opinion
J	Justification
RO	Rounding Off

This memorandum consists of 7 pages.

QUESTION 1

Question		Solution	Explanation	Mark
1.1	1.1.1	R169 x 24 ✓ + R55 x 24 ✓ R4 056 + R1 320 ✓ = R5 376 ✓	2M 1S 1A	(4)
	1.1.2	R0,79 x 8 ✓ R6,32 ✓	1M 1S	(2)
	1.1.3	R1 999 + R1 999 x 4,4% ✓ **OR** R1 999 x 1,044 = R1 999 + R87,96 = R2 086,96 = R2 086,96 ✓ **OR** R1,999 x 0,144 R2 086,86	1M 1S	(2)
1.2	1.2.1	R0,35 x 25 ✓ = R8,75 ✓	1M 1A	(2)
	1.2.2	18:15 ✓ = 6:5 ✓	1M 1A	(2)
	1.2.3	$\dfrac{25}{35}$ ✓ = $\dfrac{5}{7}$ ✓ = 0,71 or 71% (Answer only – full marks)	1M 1A	(2)

1.3	1.3.1	Month 1: R1 525 x 20%
		        = R305,00 ✓
		Month 2: R1 830,00 x 20%
		        = R366,00
		Interest = R366 + R305 = R671,00 ✓
			1M
			
			1S
				(2)

	1.3.2	R400 x 11 x 8 ✓ + R2 000 x 8 + R671 ✓ = R35 200 + 16 000 + R671 = R51 871,00 ✓	2M 1CA Multiplication by different number not 11	(3)
	1.3.3	R400 x 11+ R2000 + R671 ✓= 400 000 R4 400 + R2 000 + R671 ✓ = R7 071,00 ✓ **OR** $\dfrac{R51\ 200}{8}$ + R671 = R7 071,00	1M 1S 1S	(3)

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Question		Solution	Explanation	Mark
1.4	1.4.1	R4 760 x 11,82 ✓ **OR** 4,760 x 11,82 = R56 263,20 ✓ = 56,26	1M 1A	(2)
	1.4.2	R1 571,05 x 114% ✓ **OF** R1 571,05 x 14% R1 790,997 R219,95 ✓ R1 790,997 x 2 ✓ R1 571,05 + R219,95 ✓ = R3 581,99 ✓ R1 571,05 + R219,95 ✓ **OR** R1 571,05 x 14% = R 219,95✓ = R1 571,05 + R219,947 ✓ = R1 790,997 x 2 = R3 581,99 ✓ **OR** R1 571,05 x 2 ✓ = R3 142,10 x 114% ✓ = R3 581,99 ✓	1M 1S 1A	(3)
				[28]

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QUESTION 2

Question		Solution	Explanation	Marks
2.1	2.1.1	227 ✓✓	RD	(2)
	2.1.2	7 ÷ 60✓ = 0,1166666667 h 5 ÷ (60 x 60) = 0,00138888888 h ✓ 4 h + 0,1166666667 h + 0,00138888888 h = 4,118055556 hours = 4 hours ✓	2M 1S	(3)
	2.1.3	Average speed = $\dfrac{68 \text{ km}}{4,118 \text{ hours}}$✓ = 16,5 ✓ km/hour✓	1S 2S Penalise for unit	(3)
2.2	2.2.1	Arrival time – 18:56 ✓ Departure time – 19:00 ✓	2RT	(2)
	2.2.2	Bloemfontein ✓✓	2RT	(2)
	2.2.3	Area of a bigger circle – Area of a smaller circle ✓ 3,142 x (5 m)^2 – 3,142 x (2,5 m)^2 ✓ = 78,55 m^2 – 19,6375 m^2 ✓ = 58,91 m^2 ✓ **(Accept 58,91 m^2)** ✓	1F 2SF 1S 1A	(5)
				[17]

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QUESTION 3				
Question		**Solution**	**Explanation**	
3.1	3.1.1	113 341 x 26% ✓ = 113 341 x 0,26 = 29 468,66 = 29 469 ✓		(2)
	3.1.2	(i) Cancer ✓ (ii) Heart disease ✓		(2)
	3.1.3	<table><tr><td>Types of death</td><td>Accidents</td><td>Cancer</td><td>Heart disease</td><td>Suicide</td><td>Homicide</td><td>All other causes</td></tr><tr><td>% death</td><td>26</td><td>13</td><td>12</td><td>11</td><td>6</td><td>32 232</td></tr></table> 1 mark for completing the table = 1 mark 1mark for joining points with a straight line = 1 mark 1 mark per three correctly plotted points = 2 marks 2 marks for correctly labelling x-axis and y-axis = 2 marks		(6)
	3.1.4	113 341 – 39 213 ✓ = 74 128 ✓	1M 1A	(2)
	3.1.5	25–44 years ✓✓	2RG	(2)
	3.1.6	They drive recklessly trying to impress those people of their age about their driving skills. They do not concentrate on the road trying to greet their friends walking on the street. 25–44 are mature enough and they are careful when driving. ✓✓ **(Accept any acceptable reasons.)**	 2A	(2)

3.2	3.2.1	$\dfrac{15+14 \times 2 + 13 +12 + 9 \times 5 + 10 \times 3+7 + 5 \times 2}{16}$ ✓ $= \dfrac{160}{16}$ ✓ $= 10$ ✓	1M 1S 1S	 (3)
	3.2.2	Mode = 36 ✓✓	2A	(2)
	3.2.3	Maluti FET College ✓✓	2A	(2)
				[23]

QUESTION 4

Question		Solution	Explanation	Marks
4.1	4.1.1	35 passengers ✓✓	2A	(2)
	4.1.2	Get in and turn right. ✓ Walk straight or southwards and at the third row from the back ✓ next to the window will be your seat. **Accept any relevant explanation.**	3	(3)
	4.1.3	A7 ✓✓	2A	(2)
4.2	4.2.1	Strip Map ✓✓	2A	(2)
	4.2.2	430 – 220 ✓ OR 22 + 19 x 2 + 14 x 2 +17 x 2 + 10 + 35 + 43 = 210 km ✓ = 210 km	1M 1S	(2)
	4.2.3	N1 or Road 1✓ and 4 toll gates ✓	2RM	(2)
	4.2.4	North west ✓✓	2RM	(2)
				[15]

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QUESTION 5				
Question		**Solution**	**Explanation**	**Marks**
5.1	5.1.1	323 litres ✓ 323 x 1 000 ✓ = 323 000 mℓ ✓	1RD 1C	(3)
	5.1.2	Interest rate is the rate ✓ at which interest is paid or charged for the use of money. ✓ **OR** It is percentage of the total amount paid over a period of time.	2A	(2)
	5.1.3	R4 799,00 – R479,90 ✓ = R4 319,10 ✓	1M 1S	(2)
	5.1.4	R4 319,10 x (21,75 ÷ 100 ÷ 12) ✓ = R4 319,10 x 0,018125 ✓ = R78,2836875 x 24 = R1 878,81 ✓ **OR** R4 319,10 x (21,75 ÷ 100) = R939,40425 x 2 = R1 878,81 **OR** R4 319,10 x (21,71 ÷ 100) x 2 = R1 878,81	1M 1S 1S	(3)
	5.2.1	32;35,36;37;38;42;46;46;46;49;58;62;64;66;67 Median = 46 ✓✓	2A	(2)
	5.2.2	IQR = 62✓ – 37 ✓ = 25 ✓	2CV 1A	(3)
	5.2.3	$\dfrac{10✓}{15✓}$ $= \dfrac{2}{3}$ ✓	2M 1A	(3)
				[18]
			TOTAAL:	**100**