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**GRADE 11**

**NOVEMBER 2015**

**MATHEMATICAL LITERACY P1  
MEMORANDUM**

**MARKS: 100**

<b>Symbol</b>	<b>Explanation</b>
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	Simplifications
P	Penalty (no units, incorrect rounding off etc.)
O	Opinion
J	Justification
RO	Rounding Off

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This memorandum consists of 7 pages.

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QUESTION 1				
Question		Solution	Explanation	Mark
1.1	1.1.1	$R169 \times 24 \checkmark + R55 \times 24 \checkmark$ $R4\ 056 + R1\ 320 \checkmark$ $= R5\ 376 \checkmark$	2M 1S 1A	(4)
	1.1.2	$R0,79 \times 8 \checkmark$ $R6,32 \checkmark$	1M 1S	(2)
	1.1.3	$R1\ 999 + R1\ 999 \times 4,4\% \checkmark$ <b>OR</b> $R1\ 999 \times 1,044$ $= R1\ 999 + R87,96$ <span style="margin-left: 100px;"><math>= R2\ 086,96</math></span> $= R2\ 086,96 \checkmark$ <b>OR</b> $R1,999 \times 0,144$ $R2\ 086,86$	1M  1S	(2)
1.2	1.2.1	$R0,35 \times 25 \checkmark$ $= R8,75 \checkmark$	1M 1A	(2)
	1.2.2	$18:15 \checkmark$ $= 6:5 \checkmark$	1M 1A	(2)
	1.2.3	$\frac{25}{35} \checkmark = \frac{5}{7} \checkmark$ $= 0,71$ or 71% (Answer only – full marks)	1M 1A	(2)
1.3	1.3.1	Month 1: $R1\ 525 \times 20\%$ $= R305,00 \checkmark$ Month 2: $R1\ 830,00 \times 20\%$ $= R366,00$ Interest $= R366 + R305 = R671,00 \checkmark$	1M  1S	(2)
	1.3.2	$R400 \times 11 \times 8 \checkmark + R2\ 000 \times 8 + R671 \checkmark$ $= R35\ 200 + 16\ 000 + R671$ $= R51\ 871,00 \checkmark$	2M 1CA Multiplication by different number not 11	(3)
	1.3.3	$R400 \times 11 + R2000 + R671 \checkmark = 400\ 000$ $R4\ 400 + R2\ 000 + R671 \checkmark$ $= R7\ 071,00 \checkmark$ <b>OR</b> $\frac{R51\ 200}{8} + R671 = R7\ 071,00$	1M 1S 1S	(3)

Question		Solution	Explanation	Mark
1.4	1.4.1	$R4\ 760 \times 11,82 \checkmark$ <b>OR</b> $4,760 \times 11,82$ $= R56\ 263,20 \checkmark$ $= 56,26$	1M 1A	(2)
	1.4.2	$R1\ 571,05 \times 114\% \checkmark$ <b>OR</b> $R1\ 571,05 \times 14\%$ $R1\ 790,997$ $R219,95 \checkmark$ $R1\ 790,997 \times 2 \checkmark$ $R1\ 571,05 + R219,95 \checkmark$ $= R3\ 581,99 \checkmark$ $R1\ 571,05 + R219,95 \checkmark$ <b>OR</b> $R1\ 571,05 \times 14\%$ $= R\ 219,95 \checkmark$ $= R1\ 571,05 + R219,95 \checkmark$ $= R1\ 790,997 \times 2$ $= R3\ 581,99 \checkmark$ <b>OR</b> $R1\ 571,05 \times 2 \checkmark$ $= R3\ 142,10 \times 114\% \checkmark$ $= R3\ 581,99 \checkmark$	1M 1S 1A	(3)
				<b>[28]</b>



QUESTION 2				
Question		Solution	Explanation	Marks
2.1	2.1.1	227 ✓✓	RD	(2)
	2.1.2	$7 \div 60 \checkmark = 0,1166666667 \text{ h}$ $5 \div (60 \times 60) = 0,001388888888 \text{ h} \checkmark$ $4 \text{ h} + 0,1166666667 \text{ h} + 0,00138888888 \text{ h}$ $= 4,118055556 \text{ hours}$ $= 4 \text{ hours} \checkmark$	2M 1S	(3)
	2.1.3	Average speed = $\frac{68 \text{ km}}{4,118 \text{ hours}} \checkmark$  $= 16,5 \checkmark \text{ km/hour} \checkmark$	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 ✓ $3,142 \times (5 \text{ m})^2 - 3,142 \times (2,5 \text{ m})^2 \checkmark$ $= 78,55 \text{ m}^2 - 19,6375 \text{ m}^2 \checkmark$ $= 58,91 \text{ m}^2 \checkmark$ <b>(Accept 58,91 m²) ✓</b>	1F  2SF 1S 1A	(5)
				<b>[17]</b>

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><th>Types of death</th><th>Accidents</th><th>Cancer</th><th>Heart disease</th><th>Suicide</th><th>Homicide</th><th>All other causes</th></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> <div><p style="text-align: center;"><b>% death</b></p><p style="text-align: center;"><b>Causes of death</b> ✓</p><div><div>1 mark for completing the table = 1 mark</div><div>1mark for joining points with a straight line = 1 mark</div><div>1 mark per three correctly plotted points = 2 marks</div><div>2 marks for correctly labelling x-axis and y-axis = 2 marks</div></div></div>			Types of death	Accidents	Cancer	Heart disease	Suicide	Homicide	All other causes	% death	26	13	12	11	6	32 232	(6)
Types of death	Accidents	Cancer	Heart disease	Suicide	Homicide	All other causes													
% death	26	13	12	11	6	32 232													
	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. ✓✓ <b>(Accept any acceptable reasons.)</b>	2A	(2)															

3.2	3.2.1	$\frac{15+14 \times 2 + 13 + 12 + 9 \times 5 + 10 \times 3 + 7 + 5 \times 2}{16} \checkmark$ $= \frac{160}{16} \checkmark$ $= 10 \checkmark$	1M 1S 1S	(3)
	3.2.2	Mode = 36 $\checkmark\checkmark$	2A	(2)
	3.2.3	Maluti FET College $\checkmark\checkmark$	2A	(2)
				<b>[23]</b>
<b>QUESTION 4</b>				
Question		Solution	Explanation	Marks
4.1	4.1.1	35 passengers $\checkmark\checkmark$	2A	(2)
	4.1.2	Get in and turn right. $\checkmark$ Walk straight or southwards and at the third row from the back $\checkmark$ next to the window will be your seat. <b>Accept any relevant explanation.</b>	3	(3)
	4.1.3	A7 $\checkmark\checkmark$	2A	(2)
4.2	4.2.1	Strip Map $\checkmark\checkmark$	2A	(2)
	4.2.2	$430 - 220 \checkmark$ OR $22 + 19 \times 2 + 14 \times 2 + 17 \times 2 + 10 + 35 + 43$ $= 210 \text{ km } \checkmark$ $= 210 \text{ km}$	1M 1S	(2)
	4.2.3	N1 or Road 1 $\checkmark$ and 4 toll gates $\checkmark$	2RM	(2)
	4.2.4	North west $\checkmark\checkmark$	2RM	(2)
				<b>[15]</b>

QUESTION 5				
Question		Solution	Explanation	Marks
5.1	5.1.1	323 litres ✓ $323 \times 1\,000 \checkmark = 323\,000 \text{ ml} \checkmark$	1RD 1C	(3)
	5.1.2	Interest rate is the rate ✓ at which interest is paid or charged for the use of money. ✓ <b>OR</b> It is percentage of the total amount paid over a period of time.	2A	(2)
	5.1.3	$R4\,799,00 - R479,90 \checkmark$ $= R4\,319,10 \checkmark$	1M 1S	(2)
	5.1.4	$R4\,319,10 \times (21,75 \div 100 \div 12) \checkmark$ $= R4\,319,10 \times 0,018125 \checkmark$ $= R78,2836875 \times 24$ $= R1\,878,81 \checkmark$ <b>OR</b> $R4\,319,10 \times (21,75 \div 100)$ $= R939,40425 \times 2$ $= R1\,878,81$ <b>OR</b> $R4\,319,10 \times (21,71 \div 100) \times 2$ $= R1\,878,81$	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	$IQR = 62 \checkmark - 37 \checkmark$ $= 25 \checkmark$	2CV 1A	(3)
	5.2.3	$\frac{10 \checkmark}{15 \checkmark}$ $= \frac{2}{3} \checkmark$	2M  1A	(3)
				<b>[18]</b>
TOTAAL:				<b>100</b>