



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

NOVEMBER 2015

MEMORANDUM

MARKS: 150

Codes	Explanation
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
D	Define
J	Justification/Reason/Explain
S	Simplification
RD	Reading from a table OR a graph OR a diagram OR a map OR a plan
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding Off
NP	No penalty for rounding OR omitting units

This memorandum consists of 17 pages.

KEY TO TOPIC SYMBOL:

**F = Finance; M = Measurement; MP = Maps, Plans and other representations
DH = Data Handling; P = Probability**

QUESTION 1 [38]			
Ques	Solution	Explanation	Level
1.1.1	$67 \times 2 + 16 \checkmark MA$ $= 150 \checkmark CA$	1MA multiply by 2 and adding 16 1CA simplifying Answer only full marks (2)	L1
1.1.2	$Cost = R225,00 \times 152 \checkmark M \checkmark A = R34\ 200$ <p style="text-align: center;">OR</p> $Number\ of\ persons = R34\ 200 \div R225 = 152 \checkmark M \checkmark A$ (150 guests + bridal couple) <p style="text-align: center;">OR</p> $Cost\ per\ person = R34\ 200 \div 152 = R225 \checkmark M \checkmark A$	1M multiply by R225 1A for 152 <p style="text-align: center;">OR</p> 1M divide by R225 1A number of persons <p style="text-align: center;">OR</p> 1M divide by 152 1A cost per person (2)	L1
1.1.3	$\% \text{ Reception costs} = \frac{R66\ 450}{R125\ 000} \times 100\% \checkmark M$ $= 53,16\% \checkmark CA$	1M correct fraction 1CA percentage Answer only full marks NP – rounding (2)	L1
1.1.4	$Flowers\ and\ decor = 1,8\% \times R125\ 000 \checkmark M$ $= R2\ 250 \checkmark A$	1M percentage 1A amount Answer only full marks (2)	L1

Ques	Solution	Explanation	Level
1.1.5	<p>Rand value = GHS 30 000 ÷ 0,32253 ✓M \approx R93 014,60 ✓A</p> <p>Shortfall = R125 000 – R93 014,60 ✓M $=$ R31 985,40 ✓CA</p> <p style="text-align: center;">OR</p> <p>Cedi value = R125 000 × 0,32253 ✓MA $=$ GHS 40316,25</p> <p>Shortfall = GHS 40 316,25 – GHS 30 000 ✓M $=$ GHS 10 316,25 ✓A</p> <p>Rand value = GHS 10 316,25 ÷ 0,32253 $=$ R31 985,40 ✓CA</p>	<p>1M divide 1A correct rounding</p> <p>1M subtraction 1CA amount</p> <p style="text-align: center;">OR</p> <p>1MA multiply</p> <p>1M subtraction 1A shortfall amount</p> <p>1CA amount</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">NP – rounding</div> <p style="text-align: right;">(4)</p>	L2
1.1.6	<p>$\frac{14}{100} \times R1\ 349 = R188,86$ ✓A ✓M</p> <p>Cost including VAT = R1 349 + R188,86 $=$ R1 537,86 ✓A</p> <p>Selling price in cedi = R1 537,86 × 0,32253 ✓M \approx 496 ✓CA</p> <p style="text-align: center;">OR</p> <p>VAT inclusive cost = R1 349 × 1,14 ✓A ✓M $=$ R1 537,86 ✓A</p> <p>Selling price in cedi = 1 537,86 × 0,32253 ✓M \approx 496 ✓CA</p> <p style="text-align: center;">OR</p> <p>Price in cedi = 1 349 × 0,32253 ✓M $=$ 435,09 ✓A</p> <p>Selling price including VAT in cedi $=$ 435,09329 × 1,14 ✓A ✓M \approx 496 ✓CA</p>	<p>1A multiply by 14% 1M adding amount 1A amount with VAT</p> <p>1M multiply by 0,32253 1CA value to nearest cedi</p> <p style="text-align: center;">OR</p> <p>1A working with 14% 1M multiply by 1,14 1A amount with VAT 1M multiply by 0,32253 1CA value to nearest cedi</p> <p style="text-align: center;">OR</p> <p>1M multiply by 0,32253 1A cedi price</p> <p>1A working with 14% 1M multiply by 1,14 1CA value to nearest cedi</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> <p style="text-align: right;">(5)</p>	L1

Ques	Solution	Explanation	Level		
1.1.7	<p style="text-align: center;">✓A ✓J</p> <ul style="list-style-type: none"> • Photographer (video) to create memories of the wedding day • Wedding attire – usually special wedding attire are required • Wedding contract to pay for the lawyer’s fees for drawing up the contract • Gifts as a token for members who serve • DJ to provide for the music at the reception (accept any valid wedding expense with an explanation) 	<p>1A wedding expense 1J explanation</p> <p style="text-align: right;">(2)</p>	L1 L2		
1.2.1	<p>Employee works and receives money for the work done ✓D</p> <p>Employer is a person or institution that hires workers and pays wages/salary for work done ✓D</p>	<p>1D employee</p> <p>1D employer</p> <p style="text-align: right;">(2)</p>	L1		
1.2.2	Unemployment Insurance Fund ✓✓D	<p>2D expanding</p> <p style="text-align: right;">(2)</p>	L1		
1.2.3	R15 521 ✓✓A	<p>2A amount</p> <p style="text-align: right;">(2)</p>	L1		
1.2.4	<p>✓A No No amount allocated ✓E</p>	<p>1A correct statement 1E reason</p> <p style="text-align: right;">(2)</p>	L1		
1.2.5	<p>Monthly tax credit = $R2\ 760 \div 12$ ✓MA = R230 ✓CA</p>	<p>1MA divide correct value by 12 1CA monthly tax credit</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr> <td style="text-align: center;">Answer only full marks</td> </tr> <tr> <td style="text-align: right;">(2)</td> </tr> </table>	Answer only full marks	(2)	L1
Answer only full marks					
(2)					
1.2.6	<p>$A = R13\ 909 + R20\ 013 + R8\ 640$ ✓M = R42 562 ✓CA</p>	<p>1M correct values 1CA total deductions</p> <table border="1" style="width: 100%; margin-top: 10px;"> <tr> <td style="text-align: center;">Answer only full marks</td> </tr> <tr> <td style="text-align: right;">(2)</td> </tr> </table>	Answer only full marks	(2)	L1
Answer only full marks					
(2)					

Ques	Solution	Explanation	Level
1.2.7	<p>Gross non-retirement funding income = R15 521 + R26 188 + R8 640 ✓M✓A = R50 349</p> <p style="text-align: center;">OR</p> <p>Adding the amounts with source codes 3605, 3713 and 3810</p> <p style="text-align: center;">OR</p> <p>Adding the annual payment other allowances and medical aid contributions</p>	<p>1M using the correct values/codes/words 1A addition</p> <p style="text-align: right;">(2)</p>	L1
1.2.8	<p>Remaining monthly contributions ✓A = R13 909 – R4 975,25 = R8 933,75 ✓CA</p> <p style="text-align: right;">✓M</p> <p>Average monthly contribution = R8 933,75 ÷ 7 ✓A = R1 276,25 ✓CA</p>	<p>1A R13 909 1CA subtracting R4 975,25 1M dividing the remaining amount 1A by 7 1CA pension per month (only if division by 4,5,6,7)</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p>Answer only full marks</p> </div> <p style="text-align: right;">(5)</p>	L2
			[38]

QUESTION 2 [31]			
Ques	Solution	Explanation	Level
2.1.1	<p>Total area of a rectangular piece = $30 \text{ cm} \times 12 \text{ cm}$ \checkmarkSF = 360 cm^2 \checkmark A</p> <p>Off-cut piece = $360 \text{ cm}^2 - 355,25 \text{ cm}^2$ \checkmarkM = $4,75 \text{ cm}^2$ \checkmarkCA</p> <p>Total off-cut piece for both sides = $4,75 \text{ cm}^2 \times 2$ \checkmarkM = $9,5 \text{ cm}^2$ \checkmarkCA</p> <p style="text-align: center;">OR</p> <p>Total area of 2 rectangular pieces = $2 \times 30 \text{ cm} \times 12 \text{ cm}$ \checkmarkM \checkmarkSF = 720 cm^2 \checkmark A</p> <p>Area of both sides of stocking = $355,25 \text{ cm}^2 \times 2$ \checkmarkM = $710,5 \text{ cm}^2$</p> <p>Total off-cut piece = $720 \text{ cm}^2 - 710,5 \text{ cm}^2$ \checkmarkM = $9,5 \text{ cm}^2$ \checkmarkCA</p> <p style="text-align: center;">OR</p> <p>Total off-cut area = $(2 \times 30 \text{ cm} \times 12 \text{ cm}) - (355,25 \text{ cm}^2 \times 2)$ \checkmarkM \checkmarkSF \checkmarkM = $720 \text{ cm}^2 - 710,5 \text{ cm}^2$ \checkmarkA \checkmarkM = $9,5 \text{ cm}^2$ \checkmarkCA</p>	<p>1SF substitution 1A simplifying</p> <p>1M subtraction 1CA area of off-cut</p> <p>1M multiply by 2 1CA area of off-cut</p> <p style="text-align: center;">OR</p> <p>1SF substitution 1M multiply by 2 1A simplifying</p> <p>1M multiply by 2</p> <p>1M subtraction 1CA area of off-cut</p> <p style="text-align: center;">OR</p> <p>1SF substitution 1M multiply by 2 1M multiply by 2 1A simplifying 1M subtraction 1CA area of off-cut</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;"> Answer only full marks </div> <p style="text-align: right;">(6)</p>	L3

Ques	Solution	Explanation	Level
2.1.2	<p>Area of a triangle = $\left(\frac{1}{2} \times 3 \text{ cm} \times 5 \text{ cm}\right)$ ✓SF = 7,5 cm² ✓A</p> <p>Area of 6 triangles = 7,5 cm² × 6 ✓M = 45 cm² ✓CA</p> <p style="text-align: center;">OR</p> <p>Area of triangles = $\left(\frac{1}{2} \times 3 \text{ cm} \times 5 \text{ cm}\right) \times 6$ ✓M = 7,5 cm² × 6 ✓A = 45 cm² ✓CA</p>	<p>1 SF substitution 1A simplifying 1M multiply by 6 1CA total area</p> <p style="text-align: center;">OR</p> <p>1 SF substitution 1M multiply by 6 1A simplifying 1CA total area</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">NP -units</div> <p style="text-align: right;">(4)</p>	L2
2.1.3	<p>Time taken = 9 × 18 minutes = 162 minutes ✓MA = 2 h 42 min OR 2,7 h ✓C</p> <p>Finishing time = 08:25 + 2h42 ✓M = 11:07 ✓CA</p>	<p>1MA time in minutes 1C converting time</p> <p>1M adding 1CA finishing time correct notation</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Two marks for 11: xx</div> <p style="text-align: right;">(4)</p>	L2

Ques	Solution	Explanation	Level
2.2	$\begin{aligned} \text{Number of reels along length} &= 195 \text{ mm} \div 23\text{mm} && \checkmark M \checkmark A \\ &= 8,4782\dots \\ &\approx 8 \checkmark R \\ \\ \text{Number of reels along breadth} &= 120 \text{ mm} \div 23\text{mm} \\ &= 5,2173\dots \\ &\approx 5 \checkmark R \\ \\ \text{Total} &= 5 \times 8 = 40 \checkmark CA \end{aligned}$	<p>1M dividing length by diameter 1A diameter 1R number rounded down 1R number rounded down 1CA total number</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>Full marks for Total = 5 × 8 = 40</p> </div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-top: 10px;"> <p>Max of 2 marks if divided by circle's area Max of 3 marks if divided by square area 1 mark for area of rectangle only</p> </div> <p style="text-align: right;">(5)</p>	L2
2.3.1	<p>Painted surface area of the lid</p> $\begin{aligned} &= 3,142 \times 3,6 \text{ cm} (3,6 + 2 \times 0,9) \text{ cm} \checkmark C \\ &\approx 61 \text{ cm}^2 \checkmark CA \end{aligned}$ <p style="text-align: center;">OR</p> <p>Painted surface area of the lid</p> $\begin{aligned} &= 3,142 \times 36 \text{ mm} (36 + 2 \times 9) \text{ mm} \\ &= 6108,05 \text{ mm}^2 \checkmark CA \\ &\approx 61 \text{ cm}^2 \checkmark C \end{aligned}$	<p>1A radius 1SF substitution 1C conversion 1CA surface area to nearest cm²</p> <p style="text-align: center;">OR</p> <p>1A radius 1SF substitution 1CA surface area to nearest cm² 1C conversion</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-top: 10px;"> <p>Max of 3 marks if inner radius used Max of 2 marks if units are mixed</p> </div> <p style="text-align: right;">(4)</p>	L2

Ques	Solution	Explanation	Level
2.3.2	<p>Capacity = 75% × 250 ml ✓M = 187,5 ml ✓CA</p> <p>Volume = 187,5 cm³</p> <p>Height of the water in the jar = $\frac{\text{Volume of the water (in cm}^3\text{)}}{\pi \times \text{radius}^2}$</p> <p>= $\frac{187,5 \text{ cm}^3}{3,142 \times (3,25 \text{ cm})^2}$ ✓✓SF</p> <p>= $\frac{187,5 \text{ cm}^3}{33,187375 \text{ cm}^2}$</p> <p>= 5,6497... cm ✓CA</p> <p>≈ 6 cm ✓R</p> <p style="text-align: center;">OR</p> <p>= $\frac{\text{Volume of the water (in cm}^3\text{)}}{\pi \times \text{radius}^2}$</p> <p>= $\frac{250 \text{ cm}^3}{3,142 \times (3,25 \text{ cm})^2}$ ✓✓SF</p> <p>= $\frac{250 \text{ cm}^3}{33,187375 \text{ cm}^2}$</p> <p>= 7,532... cm ✓CA</p> <p>Height of the water in the jar = 75% × 7,532...cm ✓M</p> <p>= 5,6497... cm ✓CA</p> <p>≈ 6 cm ✓R</p>	<p>1M multiply by 75% 1CA capacity in ml</p> <p>2SF substitution</p> <p>1CA simplification 1R nearest cm</p> <p style="text-align: center;">OR</p> <p>2SF substitution</p> <p>1CA simplification</p> <p>1M multiply by 75% 1CA height of water 1R nearest cm</p> <p style="border: 1px solid black; padding: 2px; text-align: center;">Answer only full marks</p> <p style="text-align: right;">(6)</p>	L2
2.3.3	$2 \times \frac{1}{16} = \frac{2}{16} = \frac{1}{8} \quad \checkmark A$	<p>1M multiply by 2 1A fraction Accept $\frac{2}{16}$</p> <p style="border: 1px solid black; padding: 2px; text-align: center;">Answer only full marks</p> <p style="text-align: right;">(2)</p>	L1
			[31]

QUESTION 3 [24]			
Ques	Solution	Explanation	Level
3.1.1	Exit 3 ✓✓RD	2RD reading from plan (2)	L1
3.1.2	✓A ✓J No, there is no power outlet available in that seat	1A answer 1J reason (2)	L1
3.1.3	✓RD C 109 ✓RD	1RD correct row 1RD correct seat number (2)	L2
3.1.4	Total seats = seats one side + seats in middle + seats other side = (3+2×6+ 3×7 + 6×8 +5)+(8 +13 + 11×14 + 6) + (3 + 5 + 6 + 3×7 + 5×8) ✓MA ✓MA ✓MA = 89 + 181 + 75 = 345 ✓CA	3MA adding correct number of seats in each section 1CA total seats Answer only full marks Max 2 marks if answer only 344 or 346 (4)	L1
3.1.5	104 and 110 ✓✓RD	2RD seat numbers (2)	L1
3.1.6	Number of seats with access to a power supply = 52 ✓A Probability = $\frac{52}{345}$ ✓CA ✓CA	1A counting seat 1CA numerator 1CA writing as a denominator from 3.1.4 $\frac{27}{345}$ OR $\frac{9}{115}$ OR $\frac{54}{345}$ OR $\frac{18}{115}$ Max 2 Answer only full marks (3)	L2
3.2.1	14 times ✓✓RD [Free State 15 times]	2RD reading from map If 13 one mark (2)	L1

Ques	Solution	Explanation	Level
3.2.2	Distance = 94,7 km – 76 km ✓MA = 18,7 km ✓A	1MA subtracting from 94,7 1A distance <div style="border: 1px solid black; padding: 2px; display: inline-block;">Answer only full marks</div> (2)	L1
3.2.3	Blue Hills ✓✓RD	2RD reading from map (2)	L1
3.2.4	✓RD ✓RD WP 4, WP 5, WP 6 ✓RD OR WP3 to WP4 , WP 4 to WP5 , WP5 to WP6 ✓✓✓RD	3RD reading from map OR 3RD reading from map <div style="border: 1px solid black; padding: 2px; display: inline-block;">2 marks for W4 to W6</div> (3)	L1
			[24]

QUESTION 4 [30]			
Ques	Solution	Explanation	Level
4.1.1	<p style="text-align: center;">✓✓J</p> <p>The data for the global regions is qualitative.</p> <p style="text-align: center;">OR</p> <p>The global regions cannot be expressed as numerical data ✓✓J</p>	<p>2J explanation</p> <p style="text-align: center;">OR</p> <p>2J explanation</p> <p style="text-align: right;">(2)</p>	L1
4.1.2	5% ✓✓RT and 8% ✓RT	<p>3RT Correct modal %</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;"> <p>Two marks for first correct answer, one mark for second correct answer</p> </div> <p style="text-align: right;">(3)</p>	L1
4.1.3	$\text{Median} = \frac{7+8}{2}\% \checkmark\checkmark M$ $= 7,5\% \checkmark CA$	<p>2M for adding correct values and dividing by 2</p> <p>1CA answer</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p>Answer only full marks</p> </div> <p style="text-align: right;">(3)</p>	L2
4.1.4	<p style="text-align: center;">✓RT</p> <p>Total usage = 3% + 8% + 11% = 22% ✓CA</p>	<p>1RT correct values 1CA total</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p>Answer only full marks</p> </div> <p style="text-align: right;">(2)</p>	L1
4.1.5	<p style="text-align: center;">✓✓M</p> <p>$2\% + 9\% + 23\% + 22\% = 56\%$ ✓CA</p> <p>Note: Candidates that add the 4% of the Middle East is also correct.</p>	<p>2M Adding all correct values. 1CA total</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p>Answer only full marks</p> </div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;"> <p>Answer only 60% full marks</p> </div> <p style="text-align: right;">(3)</p>	L1
4.1.6 (a)	16% ✓✓RG	<p>2RG correct value</p> <p style="text-align: right;">(2)</p>	L1

Ques	Solution	Explanation	Level																																																				
4.1.6 (b)	<p style="text-align: center;">WORLD POPULATION AND MEANS OF COMMUNICATION PERCENTAGES PER GLOBAL REGION</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data extracted from the graph</caption> <thead> <tr> <th>Global Region</th> <th>Percentage world population</th> <th>Percentage Internet communication</th> <th>Percentage cell phone communication</th> </tr> </thead> <tbody> <tr><td>A</td><td>2</td><td>1</td><td>2</td></tr> <tr><td>B</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>C</td><td>3</td><td>3</td><td>3</td></tr> <tr><td>D</td><td>5</td><td>4</td><td>5</td></tr> <tr><td>E</td><td>9</td><td>6</td><td>10</td></tr> <tr><td>F</td><td>5</td><td>7</td><td>7</td></tr> <tr><td>G</td><td>6</td><td>8</td><td>8</td></tr> <tr><td>H</td><td>16</td><td>8</td><td>11</td></tr> <tr><td>I</td><td>23</td><td>8</td><td>18</td></tr> <tr><td>J</td><td>5</td><td>11</td><td>5</td></tr> <tr><td>K</td><td>6</td><td>13</td><td>8</td></tr> <tr><td>L</td><td>23</td><td>30</td><td>22</td></tr> </tbody> </table>	Global Region	Percentage world population	Percentage Internet communication	Percentage cell phone communication	A	2	1	2	B	1	1	1	C	3	3	3	D	5	4	5	E	9	6	10	F	5	7	7	G	6	8	8	H	16	8	11	I	23	8	18	J	5	11	5	K	6	13	8	L	23	30	22		
Global Region	Percentage world population	Percentage Internet communication	Percentage cell phone communication																																																				
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D	5	4	5																																																				
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F	5	7	7																																																				
G	6	8	8																																																				
H	16	8	11																																																				
I	23	8	18																																																				
J	5	11	5																																																				
K	6	13	8																																																				
L	23	30	22																																																				
<p>1A mark for every TWO points plotted correctly (Penalty of one mark if points are not joined)</p>		<p>(1 × 6) (6)</p>	<p>L2</p>																																																				

Ques	Solution	Explanation	Level
4.1.7	South Asia OR I ✓✓RD	2RD reading from graph or table (2)	L1
4.2.1	$\text{Rural Number} = 7\,095\,476\,818 \times 48\% \checkmark \text{MA}$ $= 3\,405\,828\,873 \checkmark \text{A}$ <p style="text-align: center;">OR</p> $\text{Urban number} = 7\,095\,476\,818 \times 52\% \checkmark \text{MA}$ $= 3\,689\,647\,945 \checkmark \text{A}$ $\text{Rural} = 7\,095\,476\,818 - 3\,689\,647\,945$ $= 3\,405\,828\,873 \checkmark \text{A}$	1MA multiplying with % 1A 48 % 1A persons <p style="text-align: center;">OR</p> 1MA multiplying with % 1A urban number 1A persons <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> (3)	L1
4.2.2	Social networking users $= \frac{1\,856\,680\,860}{7\,095\,476\,818} \times 100\% \checkmark \text{SF}$ $= 26,167...% \checkmark \text{CA}$	1SF dividing the correct value by 7 095 476 818 1CA answer in % <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">NP - rounding</div> (2)	L1
4.2.3	6 572 950 124 ✓✓A	2A for correct digits (2)	L1
			[30]

QUESTION 5[27]			
Ques	Solution	Explanation	Level
5.1.1	$M = 2\,925 + 1\,970 + 1\,963 + 1\,568 + 1\,700$ $+ 1\,817 + 1\,342 + 2\,118 = 15\,403$ <p style="text-align: right;">✓MA ✓CA</p>	1MA adding all values 1CA value of M <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Full marks for 15 404</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Penalty of one if given as 1 000's</div> <p style="text-align: right;">(2)</p>	F L1
5.1.2	Value for both N ✓M $= 12\,898 - (2\,394 + 1\,302 + 1\,405 + 1\,490 + 1\,311 + R1\,756)$ $= 3\,240$ ✓CA Each received = $\frac{R\,3\,240}{2}$ ✓M = R1 620 ✓CA <p style="text-align: center;">OR</p> Sibiya: ✓A ✓M ✓M $N = R1\,970 - R349 - R1 = R1\,620$ ✓CA <p style="text-align: center;">OR</p> Magome ✓A ✓M ✓M $N = R1\,963 - R342 - R1 = R1\,620$ ✓CA	1M subtracting from total 1CA cost for both 1M dividing by 2 1CA amount <p style="text-align: center;">OR</p> 1A for R1 970 1M for subtracting R349 1M for subtracting R1 1CA total Sibiya <p style="text-align: center;">OR</p> 1A for R1 963 1M for subtracting R342 1M for subtracting R1 1CA total Magome <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Penalty of one if given as 1 000's</div> <p style="text-align: right;">(4)</p>	F L2
5.1.3	$\text{Range} = R2\,925\,000 - R1\,342\,000 = R1\,583\,000$ <p style="text-align: right;">✓M ✓CA</p>	1M concept of range 1CA range <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Answer only full marks</div> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">Penalty of one if not given as 1 000's</div> <p style="text-align: right;">(2)</p>	D L2
5.1.4	Songelwa : Magome = 30 : 342 $= 5 : 57$ ✓A $= 1 : 11,4$ ✓CA	1A correct values 1CA form <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px 0;">NP - rounding</div> <p style="text-align: right;">(2)</p>	F L1

Ques	Solution	Explanation	Level
5.1.5	<p>Sibiya: Increase = R1 970 000 – R1 872 000 ✓M = R98 000</p> <p>Phillips: Increase = R1 700 000 – R1 625 000 = R75 000 ✓M</p> <p>Mabilane: Increase = R2 118 000 – R2 032 000 = R86 000 ✓M</p> <p>Magome: Increase = R1 963 000 – R1 861 000 = R102 000 ✓A Magome received the greatest increase ✓✓CA</p>	<p>2M subtracting any two of Sibiya, Phillips, Mabilane</p> <p>1A amount for Magome 2CA correct person</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Full marks if only Magome was calculated correctly with conclusion</p> </div> <p style="text-align: right;">(5)</p>	<p>F L2</p>
5.1.6	<p>Mabunda MD ✓✓A</p>	<p>2A the correct person</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Penalty one mark if an extra name is added</p> </div> <p style="text-align: right;">(2)</p>	<p>D L1</p>
5.2.1	<p>100% ✓✓A</p>	<p>2A correct % Accept 100</p> <p style="text-align: right;">(2)</p>	<p>P L1</p>
5.2.2	<p>$P = \frac{14}{18}$ ✓A $= \frac{7}{9}$ ✓A ✓CA</p> <p style="text-align: center;">OR</p> <p>$P = 1 - \frac{4}{18}$ ✓M ✓A = $\frac{7}{9}$ ✓CA</p>	<p>1A numerator</p> <p>1A denominator 1CA simplification</p> <p style="text-align: center;">OR</p> <p>1M subtracting from 1 1A denominator 1CA simplification</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>Answer only full marks</p> </div> <p style="text-align: right;">(3)</p>	<p>P L2</p>

Ques	Solution	Explanation	Level
5.3	<p style="text-align: right;">✓A</p> <p>Growth 1st year = $4\,705\,306 \times 5\%$ $\approx 235\,265$</p> <p style="text-align: right;">✓M</p> <p>Total after the 1st year = $4\,705\,306 + 235\,265$ $= 4\,940\,571$ ✓CA</p> <p>Growth 2nd year = $4\,940\,571 \times 5,9\%$ $= 291\,493$ OR $291\,494$ ✓CA</p> <p>Total after 2nd year = $4\,940\,571 + 291\,493$ $= 5\,232\,064$ OR $5\,232\,065$ ✓CA</p> <p style="text-align: center;">OR</p> <p>$100\% + 5\% = 105\%$ ✓A Total after 1st year = $4\,705\,306 \times 105\%$ ✓M $= 4\,940\,571,3$ ✓CA</p> <p>$100\% + 5,9\% = 105,9\%$ Total after 2nd year = $4\,940\,571,3 \times 105,9\%$ ✓CA $= 5\,232\,065,007$ $\approx 5\,232\,065$ ✓CA</p> <p style="text-align: center;">OR</p> <p>Total after 2nd year $= 4\,705\,306 \times 105\% \times 105,9\%$ ✓M ✓A ✓M ✓A $= 5\,232\,065,007$ $\approx 5\,232\,065$ ✓CA</p>	<p>1A calculating 5% 1M adding 1CA first year total</p> <p>1CA calculating 5,9% of total</p> <p>1CA 2nd year total</p> <p style="text-align: center;">OR</p> <p>1A increasing with 5% 1M percentage calculation 1CA first year total</p> <p>1CA increasing with 5,9% 1CA 2nd year total, rounded</p> <p style="text-align: center;">OR</p> <p>1M percentage calculation 1A increasing by 105% 1M percentage calculation 1A increasing by 105,9% 1CA 2nd year total, rounded</p> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;"> Answer only full marks </div> <p style="text-align: right;">(5)</p>	<p>D L3</p>
			[27]

TOTAL: 150