



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE

GRADE 12

MATHEMATICAL LITERACY P1

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MEMORANDUM

MARKS: 150

Symbol	Explanation
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/Reading from a graph
SF	Correct substitution in a formula
O	Opinion/Example
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off

This memorandum consists of 19 pages.

QUESTION 1 [33 MARKS]		Answer only – full marks	
Ques	Solution	Explanation	AS/L
1.1.1	$\sqrt{\frac{1225,51}{4}} - 27\% \times 1,514$ $= 17,50364... - 0,40878 \quad \checkmark A$ $= 17,0948... \quad \checkmark CA$ $\approx 17,09$	<p>1A simplification</p> <p>1CA final value No penalty for rounding</p> <p>Answer only: Accept 17,0948..., 17,09; 17,1; 17</p> <p>(2)</p>	12.1.1 L1
1.1.2	$1\,020\,000 - 950\,000 = 70\,000 \quad \checkmark A$ <p style="text-align: center;">OR</p> $1,02 \text{ million} - 0,95 \text{ million} = 0,07 \text{ million} \quad \checkmark A$	<p>1A simplification</p> <p style="text-align: center;">OR</p> <p>1A simplification (No mark if million omitted)</p> <p>(1)</p>	12.1.1 L1
1.1.3	<p>1 ml of sugar weighs 0,8 g \therefore 245 ml of sugar weighs $(0,8 \times 245)$ g $\checkmark M/A$ $= 196$ g $\checkmark CA$</p> <p style="text-align: center;">OR</p> $\checkmark M/A$ $\therefore 245 \times \frac{8}{10} = 196 \text{ g} \quad \checkmark CA$ <p style="text-align: center;">OR</p> $10 : 8 = 245 : x$ $x = \frac{8 \times 245}{10} \text{ g} \quad \checkmark M/A$ $= 196 \text{ g} \quad \checkmark CA$	<p>1M/A multiplication with correct values 1CA mass of sugar</p> <p style="text-align: center;">OR</p> <p>1M/A multiplying by $\frac{8}{10}$ 1CA mass of sugar</p> <p style="text-align: center;">OR</p> <p>1M/A proportion 1CA mass of sugar</p> <p>(2)</p>	12.3.2 L2
1.1.4	$\text{Time (in seconds)} = \frac{\checkmark SF}{8} = \frac{\checkmark A}{4} \quad \text{OR} \quad 6\frac{1}{4} \quad \text{OR} \quad 6,25$	<p>1SF substitution 1A solution</p> <p>(2)</p>	12.2.1 L1

Ques	Solution	Explanation	AS/L
1.1.5 (a)	<p>170 minutes = 2 hours and 50 minutes ^{✓C} OR 2,83 h</p> <p>Time finished = 07H50 + 2H50 ^{✓M} = 10H40 ^{✓CA}</p> <p>OR 10:40 OR Twenty to Eleven AM</p> <p style="text-align: center;">OR</p> <p>170 minutes = 3hrs – 10 min ^{✓C} 7H50min + 3 hrs = 10H50 min 10H50min – 10 min = 10H40min ^{✓M}</p> <p>OR 10:40 OR Twenty to Eleven AM ^{✓CA}</p> <p style="text-align: center;">OR</p> <p>170 min = 60 + 60 + 50 ^{✓C}</p> <p>From 07:50 to 08:50 is 60 min From 08:50 to 09:50 is 60 min From 09:50 to 10:40 is 50 min } ^{✓M}</p> <p>OR 10:40 OR Twenty to Eleven AM ^{✓CA}</p>	<p>1C conversion 1M adding</p> <p>1CA time</p> <p style="text-align: center;">OR</p> <p>1C conversion 1M adding</p> <p>1CA time</p> <p style="text-align: center;">OR</p> <p>1C conversion 1M adding</p> <p>1CA time</p> <p style="text-align: right;">(3)</p>	12.3.2 L2
1.1.5 (b)	<p>In 170 minutes she packs 9 450 apples</p> <p>∴ in 1 minute she packs $\frac{9450}{170}$ apples ^{✓M/A} = 55,588.. apples ≈ 55 apples ^{✓R}</p> <p style="text-align: center;">OR</p> <p>170 : 9 450 = 1 : x</p> <p>$x = \frac{1 \times 9450}{170}$ apples ^{✓M} ≈ 55 apples ^{✓R}</p>	<p>1M/A dividing by 170</p> <p>1R correct rounding</p> <p style="text-align: center;">OR</p> <p>1M proportion 1R correct rounding</p> <p style="text-align: right;">(2)</p>	12.1.1 L1
1.1.6	<p>$P(\text{white ball}) = \frac{1}{10}$ ^{✓A} OR 0,1 ^{✓✓A} OR 10% ^{✓✓A}</p>	<p>1A correct numerator 1A correct denominator</p> <p style="text-align: right;">(2)</p>	12.4.5 L2

Ques	Solution	Explanation	AS/L
1.3.2	$\text{Discount} = \frac{304,99 - 269,99}{304,99} \times 100\% \quad \checkmark M$ $= \frac{35}{304,99} \times 100\% \quad \checkmark S$ $= 11,48\% \quad \checkmark CA$ <p style="text-align: center;">OR</p> $\text{Percentage} = \frac{269,99}{304,99} \times 100\% = 88,52\% \quad \checkmark S$ $\text{Percentage discount} = 100\% - 88,52\% \quad \checkmark M$ $= 11,48\% \quad \checkmark CA$	<p>1M difference in price</p> <p>1S simplification</p> <p>1CA simplification</p> <p style="text-align: center;">OR</p> <p>1S Percentage change</p> <p>1M difference in percentages</p> <p>1CA simplification</p> <p>(no penalty for rounding)</p> <p style="text-align: right;">(3)</p>	12.1.3 L1
1.3.3	$\text{New price excluding VAT} = \frac{R12,49}{114\%} \times 100\% \quad \checkmark M$ $= R10,96 \quad \checkmark A$ <p style="text-align: center;">OR</p> $\text{New price excluding VAT} = \frac{R12,49}{1,14} \quad \checkmark M$ $= R10,96 \quad \checkmark A$ <p style="text-align: center;">OR</p> $\text{VAT} = R12,49 \times \frac{14\%}{114\%} \quad \checkmark M$ $= R1,53$ $\text{Price excluding VAT} = R12,49 - R1,53$ $= R10,96 \quad \checkmark A$ <p style="text-align: center;">OR</p> <p>x = new price excluding VAT</p> $12,49 : x = 114\% : 100\% \quad \checkmark M$ $x = \frac{R12,49}{114\%} \times 100\%$ $= R10,96 \quad \checkmark A$	<p>1 M dividing by 114%</p> <p>1A simplification</p> <p style="text-align: center;">OR</p> <p>1 M dividing by 1,14</p> <p>1A simplification</p> <p style="text-align: center;">OR</p> <p>1 M multiplying by $\frac{14\%}{114\%}$</p> <p>1A simplification</p> <p style="text-align: center;">OR</p> <p>1 M concept of proportion</p> <p>1A simplification</p> <p style="text-align: right;">(2)</p>	12.1.1 L2

Ques	Solution	Explanation	AS/L
1.3.4	$\begin{aligned} \text{Total cost} &= \text{R}269,99 + 4 \times \text{R}12,49 + 3 \times \overset{\check{\text{M/A}}}{\text{R}10,99} \\ &= \text{R}352,92 \quad \check{\text{CA}} \end{aligned}$	1M/A adding and multiplying correct values 1CA simplification (CA only if at least one of the values are multiplied by 3 or 4 or if 3 and 4 with incorrect costs) (2)	12.2.1 L1

QUESTION 2 [31 MARKS]			
Ques	Solution	Explanation	AS/L
2.1.1	<p>Maximum length = 125 cm + 250 cm + 125 cm ✓M/A = 500 cm ✓CA</p> <p style="text-align: center;">OR</p> <p>Maximum length = 250 cm × 2 ✓M/A = 500 cm ✓CA</p>	<p>1M/A adding correct lengths 1CA simplification</p> <p style="text-align: center;">OR</p> <p>1M/A adding correct lengths 1CA simplification</p> <p style="text-align: center;">Answer only: full marks (2)</p>	12.3.3 L2
2.1.2	<p>Total area = $2 \times \pi \times \left(\frac{d}{2}\right)^2$ ✓M/A</p> <p>= $2 \times 3,14 \times \left(\frac{250}{2}\right)^2$ cm² ✓SF</p> <p>= 6,28 × 15 625 cm²</p> <p>= 98 125 cm² ✓CA ✓A</p> <p style="text-align: center;">OR</p> <p>Area of a circle = $\pi \times \left(\frac{d}{2}\right)^2$</p> <p>= $3,14 \times \left(\frac{250}{2}\right)^2$ ✓SF</p> <p>= 49 062,5 cm² ✓A ✓A</p> <p>Total Area = 49 062,5 cm² × 2 = 98 125 cm² ✓CA</p> <p style="text-align: center;">OR</p> <p>Area of a semi-circle = $\pi \times \left(\frac{d}{2}\right)^2 \div 2$</p> <p>= $3,14 \times \left(\frac{250}{2}\right)^2 \div 2$ ✓SF</p> <p>= 24 531,24 cm² ✓A ✓A</p> <p>Total Area = 24 531,24 cm² × 4 = 98 124,96 cm² ✓CA</p>	<p>1M/A area of 2 circles</p> <p>1SF substitution</p> <p>1CA simplification 1A unit Accept 98 174,77 using π</p> <p style="text-align: center;">OR</p> <p>1SF substitution</p> <p>1A simplification 1A unit</p> <p>1CA multiplying by 2</p> <p style="text-align: center;">OR</p> <p>1SF substitution</p> <p>1A simplification 1A unit</p> <p>1 CA multiplying by 4</p> <p style="text-align: center;">Answer only: full marks (4)</p>	12.3.1 L2

Ques	Solution	Explanation	AS/L
2.1.3	$\begin{aligned} \text{Perimeter of the herb garden} &= 2 \times \pi \times d && \checkmark\text{SF} \\ &= 2 \times 3,14 \times 250 \text{ cm} \\ &= 1\,570 \text{ cm} && \checkmark\text{CA} \end{aligned}$	1SF substitution 1CA simplification Accept 1 570,80 using π Answer only: full marks (2)	12.3.1 L1
2.1.4	$\begin{aligned} \text{Number of thyme plants} &= 2 \times 5 - 1 && \checkmark\text{SF} \\ &= 9 && \checkmark\text{A} \end{aligned}$	1SF substitution 1A number of plants Answer only: full marks (2)	12.2.1 L1
2.2.1	$\begin{array}{cccccccc} 5 & 6 & 7 & 9 & 15 & 15 & 15 & \checkmark\text{A} \\ 17 & 20 & 21 & 25 & 36 & 65 & 70 & \checkmark\text{A} \end{array}$	1A ascending order 1A all values Answer only: full marks (2)	12.4.3 L1
2.2.2	$\begin{aligned} \text{Range} &= 70 - 5 && \checkmark\text{M} \# \\ &= 65 && \checkmark\text{A} \end{aligned}$	1M identifying range concept 1A simplification Answer only: full marks # CA from Question 2.2.1 (2)	12.4.3 L1 L2
2.2.3	54 $\checkmark\checkmark\text{A}$	2A correct mode (for the incorrect data set, if answer 15 max 1 mark) Including 60 and/or 46, max 1 mark (2)	12.4.3 L1
2.2.4	$\begin{aligned} \text{Mean} &= \frac{35+60+46+57+54+34+60+54+56+46+47}{15} + \\ &\quad \frac{67+65+54+45}{15} \checkmark\text{A} \\ &= \frac{780}{15} \\ &= 52 \checkmark\text{CA} \end{aligned}$	1A sum of data 1A dividing by number of data entries 1CA solution Answer only: full marks (3)	12.4.3 L1 L2

Ques	Solution	Explanation	AS/L
2.2.5	36; 65; 70 ✓✓A	2A correct values (one or two values correct, 1 mark) Including an incorrect value max 1 mark (2)	12.4.3 L2
2.2.6	$A = P(1 - i \times n)$ $= R15\,000(1 - 0,175 \times 4)$ $= R4\,500$ ✓SF ✓SF ✓CA OR $R15\,000 \left(1 - \frac{17,5}{100} \times 4\right)$ $= R4\,500$ ✓SF ✓SF ✓CA	1SF substituting any 2 values correctly 1SF substituting the 3 rd value correctly 1CA value Answer only: full marks (3)	12.1.3 L2
2.3.1	Inverse OR Indirect ✓A	1A answer Accept Not direct (1)	12.2.1 L1
2.3.2	R300 ✓✓RG OR $\frac{R2\,400}{7+1} = R\,300$ ✓A ✓M	2RG correct reading OR 1M dividing by 8 1A simplification If divided by 7 max 1 mark Accept a range of values from 340 to 350 max 1 mark (2)	12.2.1 L1
2.3.3	3 ✓✓RG OR $\frac{R2\,400}{R800} = 3$ ✓A ✓M	2RG correct reading OR 1M dividing by 800 1A simplification (2)	12.2.1 L1

Ques	Solution	Explanation	AS/L
2.3.4	<p>Monthly petrol costs per person = $\frac{R2\,400 \checkmark A}{\text{number of persons} \checkmark A}$</p> <p style="text-align: center;">OR</p> <p>Monthly petrol costs per person = $\frac{R2\,400 \checkmark A}{n \checkmark A}$, where n is the number of persons</p> <p style="text-align: center;">OR</p> <p>Monthly petrol costs per person $\checkmark A$ = $R2\,400 \div \text{number of persons} \checkmark A$</p> <p style="text-align: center;">OR</p> <p>Monthly petrol costs per person $\checkmark A$ = Total petrol cost $\checkmark A \div$ number of persons</p>	<p>NOTE: if there is no variable, symbol or words used, then 0 marks</p> <p>1A using R2 400 in an equation 1A dividing by number of persons</p> <p style="text-align: center;">OR</p> <p>1A using R2 400 1A dividing by number of persons</p> <p style="text-align: center;">OR</p> <p>1A using R2 400 1A dividing by number of persons</p> <p style="text-align: center;">OR</p> <p>1A total petrol cost 1A dividing by number of persons (2)</p>	12.2.1 L2

QUESTION 3 [22 MARKS]			
Ques	Solution	Explanation	AS/L
3.1.1	$\begin{aligned} \text{Area to be repainted} &= \ell \times b + 2h(\ell + b) \quad \checkmark\text{SF} \checkmark\text{SF} \\ &= [50 \times 25 + 2 \times 1,5(50 + 25)] \text{ m}^2 \\ &= [1\,250 + 3(75)] \text{ m}^2 \\ &= 1\,475 \text{ m}^2 \quad \checkmark\text{CA} \end{aligned}$	1SF substitution ℓ and b 1SF substitution h 1CA area Incorrect use of BODMAS, no CA Answer only: full marks	12.3.1 L1
		(3)	
3.1.2	$\begin{aligned} \text{Height of a rectangular prism} &= \frac{1500 \text{ m}^3}{50 \text{ cm} \times 25 \text{ cm}} \quad \checkmark\text{SF} \\ &= 1,2 \text{ m} \quad \checkmark\text{A} \end{aligned}$	1SF substitution 1A height Answer only: full marks	12.3.1 L1
		(2)	
3.2	$\begin{aligned} \text{Temperature in } ^\circ\text{F} &= 32 + 1,8 \times (\text{Temperature in } ^\circ\text{C}) \\ &= 32 + 1,8 \times (22) \quad \checkmark\text{SF} \\ &= 71,6 \quad \checkmark\text{CA} \\ &\approx 72 \quad \checkmark\text{R} \end{aligned}$	1SF substitution 1CA simplification 1R rounding	12.3.2 12.1.1 L1 L2
		(3)	
3.3.1	$\begin{aligned} \text{Number of children 3 years and under} & \quad \checkmark\text{M/A} \\ &= 177 - (50 + 45 + 50 + 15) \\ &= 17 \quad \checkmark\text{CA} \end{aligned}$	1M/A subtracting from 177 1CA simplification If the answer is 0 max 1 mark Subtracting at least 2 values from 177 max 1 mark	12.1.1 L1
		(2)	
3.3.2	$\begin{aligned} \text{Total Income} &= a \times \text{R}7,50 + b \times \text{R}10,50 \\ &= (50 + 15) \times \text{R}7,50 + (45 + 50) \times \text{R}10,50 \quad \checkmark\text{A} \quad \checkmark\text{SF} \\ &= \text{R}487,50 + \text{R}997,50 \quad \checkmark\text{S} \\ &= \text{R}1\,485,00 \quad \checkmark\text{CA} \end{aligned}$	1SF substitution 1A correct values 1S simplification 1CA solution (only if number of people multiplied by fee) If only single values are used for a and b, max 3 marks	12.2.1 L2
		(4)	
3.4	$\begin{aligned} \text{Profit per bag} &= \text{R}22,00 \quad \checkmark\text{A} \\ \text{Number of bags sold} &= \frac{\text{R}594,00}{\text{R}22,00} \quad \checkmark\text{M/A} \\ &= 27 \quad \checkmark\text{CA} \end{aligned}$	1A profit per bag 1M/A dividing by correct values 1CA number of bags Answer only: full marks	12.1.1 L1
		(3)	

Ques	Solution	Explanation	AS/L
3.5	$\text{Discounted price of pump} = \frac{88}{100} \times R4\,999,00 \quad \checkmark M/A$ $= R4\,399,12 \quad \checkmark CA$ <p style="text-align: center;">OR</p> $\text{Discounted price of pump} = 0,88 \times R4\,999,00 \quad \checkmark M/A$ $= R4\,399,12 \quad \checkmark CA$ <p style="text-align: center;">OR</p> $\text{Discount} = \frac{12}{100} \times R4\,999,00 \quad \checkmark M/A \quad \text{OR} \quad 0,12 \times R4\,999,00$ $= R599,88$ $\text{Discounted price of pump} = R4\,999 - 599,88 \quad \checkmark M$ $= R4\,399,12 \quad \checkmark CA$	<p>1M/A subtracting 12% 1M calculating 88% 1CA simplification</p> <p style="text-align: center;">OR</p> <p>1M/A subtracting 0,12 1M calculating 0,88 1CA simplification</p> <p style="text-align: center;">OR</p> <p>1M/A concept of %</p> <p>1M concept of % decrease 1CA simplification</p> <p style="text-align: right;">(3)</p>	12.1.1 L1 L2
3.6	$\text{Exchange rate} = \frac{R14\,595,00}{\text{AUD}\$1500,00} \quad \checkmark M$ $= R9,73/\text{AUD}\$ \quad \checkmark A \quad \text{OR} \quad R9,73 \text{ per AUD}\$$	<p>1M division with correct values 1A simplification If R1 = 0,102 AUD\$, max 1 mark</p> <p>Answer only: full marks</p> <p style="text-align: right;">(2)</p>	12.1.1 L1

QUESTION 4 [23 MARKS]			
Ques	Solution	Explanation	AS/L
4.1.1	A = 20,6 ✓A	1A correct value of A Accept a range of values from 20 to 21 (1)	12.1.1 L1
4.1.2	7,6 % ✓✓RT	2RT correct reading from table Accept 7,6 (2)	12.4.4 L1
4.1.3	2011 ✓✓RG	2RG correct reading from graph (2)	12.4.4 L1
4.1.4	After dark ✓✓A	2A conclusion Accept dark or evening or night (2)	12.4.4 L1
4.1.5	% Difference = $62,8 - 57$ ✓M/A = 5,8 ✓CA	1M/A identifying correct values 1CA simplification If negative max 2 marks Answer only: full marks (2)	12.1.1 L1
4.1.6	✓RT 57:14 ✓CA	1RT reading from the table 1CA writing as a ratio If incorrect reading max 1 for simplifying ratio If incorrect order max 1 mark Incorrect values, rounded to the nearest integer max 1 mark (2)	12.4.4 L1
4.2.1	✓✓RG Any of the province(s)	2RG province (2)	12.4.4 L1
4.2.2	Free State ✓RG	1RG province (1)	12.4.4 L1
4.2.3	✓✓A 1 – 50 OR 41 – 50 OR white category	2A category (must be an interval) (2)	12.4.4 L2
4.2.4	✓A Free State and Mpumalanga ✓A	1A Free State 1A Mpumalanga If additional province max 1 mark (If 4 or more provinces zero marks) (2)	12.4.1 L1

Ques	Solution	Explanation	AS/L
4.2.5	Western Cape ✓✓A	2A correct province (2)	12.3.4 L1
4.2.6	<p>0,8 cm : 125 km ✓M = 8 cm : 125 000 000 cm ✓C = 1 : 15 625 000 ✓CA</p> <p>OR</p> <p>0,7 cm : 125 km ✓M = 7 cm : 125 000 000 cm ✓C = 1 : 17 857 142,86 ✓CA</p> <p>OR</p> <p>0,9 cm : 125 km ✓M = 9 cm : 125 000 000 cm ✓C = 1 : 13 888 888,89 ✓CA</p> <p>OR</p> <p>1,6 cm : 250 km ✓M ✓C 1,6 cm = 25 000 000 cm =1: 15 625 000 ✓CA</p> <p>OR</p> <p>1,5 cm : 250 km ✓M ✓C 1,5 cm = 25 000 000 cm =1: 16 666 666,67 ✓CA</p> <p>OR</p> <p>1,7 cm : 250 km ✓M ✓C 1,7 cm = 25 000 000 cm =1: 14 705 882,35 ✓CA</p> <p>OR</p> <p>3,2 cm : 500 km ✓M ✓C 3,2 cm = 50 000 000 cm = 1: 15 625 000 ✓CA</p> <p>OR</p> <p>3,1 cm : 500 km ✓M ✓C 3,1 cm = 50 000 000 cm = 1: 16 129 032,26 ✓CA</p> <p>OR</p> <p>3,3 cm : 500 km ✓M ✓C 3,3 cm = 50 000 000 cm = 1: 15 151 515,15 ✓CA</p>	<p>1M concept of scale 1C conversion 1CA simplification</p> <p>Answer only: full marks</p> <p>(3)</p>	12.3.3 L2

QUESTION 5 [21 MARKS]			
Ques	Solution	Explanation	AS/L
5.1.1	3 200 ✓✓A	2A value of K (2)	12.2.3 L1
5.1.2	Number of bacteria = $50 \times 8 = 400$ ✓A Time taken = 6 hours ✓CA	1A finding 400 1CA reading from table Answer only: full marks (2)	12.2.3 L1
5.1.3	<p style="text-align: center;">Growth of bacteria over time</p> <p style="text-align: right;">✓A ✓A ✓A ✓CA ✓CA</p> <p>3A one mark per two points plotted accurately (CA from Question 5.1.1) 1CA joining points 1CA curve (the curve must start on the y-axis and pass through at least two points) (5)</p>		12.2.2 L2
5.1.4	<p>Average growth rate = $\frac{s - t}{r}$</p> <p>= $\frac{800 - 200}{8 - 4}$ ✓SF ✓A</p> <p>= $\frac{600}{4}$</p> <p>= 150 bacteria per hour ✓CA</p>	<p>1SF substituting s and t</p> <p>1A value of r</p> <p>1CA simplification If $r = 8$, max 2 marks If $r = 12$, max 2 marks (3)</p>	12.2.1 L1 L2

Ques	Solution	Explanation	AS/L
5.2.1	Fume hood OR Non-radioactive waste ✓A	1A correct item (1)	12.3.4 L2
5.2.2	<ul style="list-style-type: none"> • Exit the radioactive waste room then turn left. ✓A • Walk straight down until you get to the end of the table. ✓A • Then turn right and continue walking straight ahead till you reach the refrigerator. ✓A <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • Exit the radioactive waste room then walk straight past the sink to the fume hood. ✓A • Then turn left. ✓A • Walk past the microscope and the next object is the refrigerator. ✓A 	1A turn left 1A walk straight down, end of table 1A Turn right, straight ahead <p style="text-align: center;">OR</p> 1A walk past sink to fume hood 1A turn left 1A walk past microscope (3)	12.3.4 L2
5.2.3	$\text{Width} = \frac{\text{Total floor area}}{\text{length}}$ $= \frac{18,9\text{m}^2}{4,5\text{m}} \quad \checkmark\text{SF}$ $= 4,2\text{ m} \quad \checkmark\text{CA} \quad \checkmark\text{A}$	1 SF substitution 1 CA simplification 1A unit (3)	12.3.1 L1
5.2.4	$\text{Actual length} = 2,26\text{ cm} \times 58 \quad \checkmark\text{M}$ $= 131,08\text{ cm} \quad \text{OR} \quad 1,31\text{ m} \quad \text{OR} \quad 1310,8\text{ mm} \quad \checkmark\text{A}$	1M multiplying correct values 1A actual length If 1,31 or 1310,8 (without unit) max 1 mark (2)	12.3.3 L1

QUESTION 6 [20 MARKS]			
Ques	Solution	Explanation	AS/L
6.1.1	$C = 100\% - (33 + 10 + 9 + 19)\% \quad \checkmark M/A$ $= 29\% \quad \checkmark A$	1M/A subtracting from 100% 1A solution (2)	12.4.4 L1
6.1.2	$\begin{aligned} \text{Total days (no rain)} &= (33 + 10) \% \times 210 && \checkmark A \\ &= 43\% \times 210 \quad \checkmark M && \text{OR } 0,43 \quad \text{OR } \frac{43}{100} \times 210 \\ &= 90,3 \quad \checkmark CA && \\ &\approx 90 && \\ & && \text{OR} \\ \text{Total days (no rain)} &= 33\% \times 210 + 10\% \times 210 && \checkmark M \quad \checkmark A \\ &= 69,3 + 21 && \\ &= 90,3 \quad \checkmark CA && \\ &\approx 90 && \end{aligned}$	1A adding correct values 1M multiplying 1CA solution OR 1M multiplying 1A adding correct values 1CA solution If 91 max 2 marks (3)	12.4.4 12.1.1 L2
6.2.1	23 $\checkmark A$	1A number (1)	12.4.4 L1
6.2.2	Total number of learners $= 24 + 32 + 26 + 25 + 20 + 18 + 10 + 4 + 0$ $= 159 \quad \checkmark CA$	1M/A finding the sum 1CA solution If wrong set is used max 1 Answer only: full marks (2)	12.1.2 12.4.4 L1
6.2.3	22 $\checkmark \checkmark A$	2A correct size If 32 give 1 mark (2)	12.4.4 L2

Ques	Solution	Explanation	AS/L
6.3.1	$A = \frac{R9\ 500}{R95} \quad \checkmark M$ $= 100 \quad \checkmark A$ <p style="text-align: center;">OR</p> $A = \frac{R11600 - R5600}{R60} \quad \checkmark M$ $= 100 \quad \checkmark A$ $B = 180 \times 95 \quad \checkmark M$ $= R17\ 100 \quad \checkmark A$	<p>1M dividing by R95</p> <p>1A simplification</p> <p style="text-align: center;">OR</p> <p>1M finding difference and dividing</p> <p>1A simplification</p> <p>1M multiplying</p> <p>1A simplification</p> <p style="text-align: right;">(4)</p>	12.2.1 L1

Ques	Solution	Explanation	AS/L
6.3.2	<p style="text-align: center;">COST AND INCOME FOR THE MAKING OF 200 LONG-SLEEVED JERSEYS</p> <p style="text-align: right;"> ✓A ✓A ✓A ✓CA </p> <p>3A one mark per two points plotted accurately (CA on Question 6.3.1) 1CA joining plotted points</p> <p>Full marks if first and last points are correct and joined with a straight line and no other values plotted OR if any two points correctly plotted to draw a complete straight line.</p> <p style="text-align: right;">(4)</p>		12.2.2 L2
6.3.3	161 ✓CA ✓CA	2CA minimum value 1 mark for 160 (break-even point) If 'more than 160' stated in words, max 1 mark	12.4.4 L2
TOTAL			150