



Access fun Grade 8–12 quizzes, matric past papers, K53 learner mock tests, and NBT prep!

*All in one easy-to-use app.*

**DOWNLOAD GO STUDY NOW**



Tap on the buttons above to download the app

 [www.gostudy.club](http://www.gostudy.club)



Province of the  
**EASTERN CAPE**  
EDUCATION

**NATIONAL  
SENIOR CERTIFICATE**

**GRADE 11**

**NOVEMBER 2019**

**MATHEMATICAL LITERACY P2  
MARKING GUIDELINE**

**MARKS: 100**

<b>Symbol</b>	<b>Explanation</b>
M	Method
M/A	Method with Accuracy
MCA	Method with Consistent Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RM	Reading from a table OR Reading from a graph OR Read from map
F	Choosing the correct formula
SF	Substitution in a formula
J	Justification
P	Penalty, e.g. for no units, incorrect rounding off etc.
R	Rounding off OR Reason
AO	Answer only
NPR	No penalty for rounding

---

This marking guideline consists of 6 pages.

---

QUESTION 1 [30]				
Ques.		1.1.1 Solution	Explanation	Topic & Level
1.1	1.1.1	$\text{Net monthly salary} = \frac{195\,000}{12} \quad \checkmark M$ $= R16\,250 \quad \checkmark A$	1M Dividing correct values 1A Net monthly income (2)	F L2
	1.1.2	$\text{Balance after expenses} = 16\,250 - 12\,000$ $= R4\,250 \quad \checkmark MCA$ $\text{Saving for deposit} = 4\,250 \times 0,75 \quad \checkmark M$ $= R3\,187,50 \quad \checkmark CA$ $\text{Number of months} = \frac{15\,000}{3\,187,50} \quad \checkmark M$ $= 4,705 \dots$ $= 5 \text{ months} \quad \checkmark CA$	<b>CA from 1.1.1</b> 1MCA Balance 1M Multiply 75% 1CA Saving  1M Dividing  1CA Number of months (5)	F L3
	1.1.3	$\% \text{ Life insurance} = \frac{550}{16\,250} \times 100\% \quad \checkmark MCA$ $= 3,4\% \quad \checkmark CA$ $\% \text{ Household insurance} = \frac{430}{16\,250} \times 100\%$ $= 2,6\% \quad \checkmark CA$ $\text{Difference} = 3,4\% - 2,6\% \quad \checkmark M$ $= 0,8\% \quad \checkmark CA$ $\text{Statement not valid} \quad \checkmark O$	<b>CA from 1.1.1</b> 1MCA Correct value $\times 100\%$ 1CA % (LI) 1CA % (HHI) 1M Subtraction 1CA Difference 1O Invalid <b>NPR</b> (6)	F L4
	1.1.4	$\text{Probability} = \frac{5}{9} \quad \checkmark A$ $= 0,5555 \dots$ $= 0,556 \quad \checkmark R$	1A Numerator 1A Denominator 1R 3 dec. places (3)	P L2
	1.1.5	He now has to pay for fuel. $\checkmark \checkmark R$ <b>OR</b> The R960 must be spend on fuel. $\checkmark \checkmark R$ <b>Accept any other relevant reason</b>	2R Explanation <b>Answer must refer to expense for fuel</b> (2)	F L4
1.2	1.2.1	$\text{Actual length of car} = 4,5 \text{ inches} \times 36$ $= 162 \text{ inches} \quad \checkmark MA \times 2,54 \quad \checkmark C$ $= 411,48 \text{ cm} \quad \checkmark CA$ $= \frac{411,48}{100}$ $= 4,1148 \text{ m} \quad \checkmark CA$	1MA Total inches 1C Conversion (cm) 1CA Total in cm 1CA Conversion (m) (4)	M L3

1.3	1.3.1	<p>Blue cars = <math>100 - (17 + 32 + 2 + 7 + 6 + 13 + 12)</math>  <math>= 11\%</math> ✓MA</p> <p>Number of blue cars = <math>2\,500 \times 0,11</math>  <math>= 275</math> ✓MCA</p> <p>Gold cars = <math>2\,500 \times 0,02</math> OR <math>0,13 \times 2\,500</math>  <math>= 50</math> ✓MA <math>= 325</math> cars</p> <p>Total = <math>275 + 50</math>  <math>= 325</math> cars ✓MA</p>	<p>1MA Find %</p> <p>1MCA Blue cars</p> <p>1MA Gold cars</p> <p>1CA Total (4)</p>	<p>D L3</p>
	1.3.2	White, Black and Green ✓✓A	<p>2A Colours (2)</p>	<p>D L2</p>
	1.3.3	<p>It is cheaper to respray ✓✓A</p> <p style="text-align: center;">OR</p> <p>Do not have to mix paint to get the required colour ✓✓A</p> <p><b>Accept any other relevant reason.</b></p>	<p>2A Explanation (2)</p>	<p>D L4</p>
			<b>[30]</b>	

## QUESTION 2 [27]

Ques.	Solution	Explanation	Topic & Level
2.1	<p>Cost for Adams family  <math>= 4 \text{ adults} + 1 \text{ kid}</math> ✓A  <math>= (4 \times 570) + 360</math> ✓MCA  <math>= 2\,280 + 360</math>  <math>= R2\,640</math> ✓CA</p> <p>Cost for Naidoo family  <math>= 5 \text{ adults} + 3 \text{ kids}</math> ✓A  <math>= (5 \times 570) + (2 \times 360) + (1 \times 0)</math>  <math>= 2\,850 + 720 + 0</math>  <math>= R3\,520</math> ✓CA</p> <p>50% of Adams family = <math>R2\,640 \times 1,5</math> ✓M  <math>= R3\,960</math> ✓CA  <math>R3\,960 \neq R3\,570</math></p> <p>Statement invalid ✓O</p>	<p>1A Correct no of people</p> <p>1MCA Multiply and add correct values</p> <p>1CA Total cost</p> <p>1A Correct number of people</p> <p>1CA Total cost</p> <p>1MCA Multiply with 50%</p> <p>1CA Cost</p> <p>1O Invalid (8)</p>	<p>F L4</p>
2.2	<p>Amount after 1 year = <math>20\,750 + (20\,750 \times 0,075)</math> ✓MA  <math>= 20\,750 + 1\,556,25</math>  <math>= 22\,306,25</math> ✓CA ✓A</p> <p>Next 6 months = <math>22\,306,25 + (22\,306,25 \times 0,0375)</math>  <math>= 22\,306,25 + 836,48</math>  <math>= 23\,142,73</math> ✓CA</p> <p>Interest = <math>R23\,142,73 - R20\,750</math> ✓M  <math>= R2\,392,73</math> ✓CA</p>	<p>1MA % and add</p> <p>1CA Amount</p> <p>1A Interest rate for 6 months</p> <p>1CA Amount</p> <p>1M Subtract</p> <p>1CA Interest (6)</p>	<p>F L3</p>

2.3	2.3.1	North East ✓✓A	2A Correct direction (2)	M&P L2
	2.3.2	<p>Cape Town to OR Tambo = 08:20 + 2:00 + 2:00 = 12:20 ✓A ✓MA</p> <p>OR Tambo to Nelspruit = 12:55 + 0:50 = 13:45 ✓A</p> <p>He will be not be on time. ✓O</p>	<p>1MA Adding correct times</p> <p>1A Arrival time (OR Tambo)</p> <p>1A Arrival Time (Nelspruit)</p> <p>1O Opinion (4)</p>	M L3
	2.3.3	<p>Distance = Speed × Time</p> <p>1 842 = Speed × 2h25 ✓SF</p> <p>✓M Speed = <math>\frac{1\,842}{2,416666667}</math> ✓C</p> <p>= 762,2068966 km/h ✓S</p> <p>= 762 km/h ✓R</p>	<p>1SF Substitution</p> <p>1M Change subject of formula</p> <p>1C Convert min to h</p> <p>1CA Simplification</p> <p>1R Nearest km/h (5)</p>	M&P L3
	2.3.4	<p>Probability = <math>\frac{3}{5}</math> ✓A</p> <p>✓A</p>	<p>1A Numerator</p> <p>1A Denominator (2)</p>	P L2
			[27]	

QUESTION 3 [22]				
Ques.		Solution	Explanation	Topic & Level
3.1	3.1.1	<p>Person is retrenched ✓A</p> <p>Person is fired ✓A</p> <p>Person resigned ✓A</p> <p><b>Accept any other relevant reponse.</b></p>	<p>1A First reason</p> <p>1A Second reason</p> <p>(ANY 2 x 1) (2)</p>	F L4
	3.1.2	<p>✓A ✓M</p> <p>Max UIF per month = <math>12\,478 \times 0,02</math> = R249,56</p> <p>Annual UIF = <math>R249,56 \times 12</math> ✓A</p> <p>= R2 994,72 ✓A</p>	<p>1A Use 12 478</p> <p>1M Multiply by 2%</p> <p>1M Multiply by 12</p> <p>1CA Annual UIF (4)</p>	F L2
	3.1.3	<p>Person is working ✓✓A</p> <p><b>OR</b></p> <p>Person refuse to take a job offered by the Department of Labour ✓✓A</p> <p><b>OR</b></p> <p>Person is being trained for a possible job. ✓✓A</p> <p><b>Accept any other relevant reponse</b></p>	<p>2A Reason</p> <p>(2)</p>	F L4

3.2	3.2.1	<p>Across the length = <math>\frac{485 \text{ mm}}{70 \text{ mm}} \checkmark \text{C} \checkmark \text{A}</math>  <math>= 6,9 \approx 6 \text{ tins } \checkmark \text{CA}</math></p> <p>Across the width = <math>\frac{305 \text{ mm}}{70 \text{ mm}}</math>  <math>= 4,3 \approx 4 \text{ tins } \checkmark \text{CA}</math></p> <p>Up the height = <math>\frac{745 \text{ mm}}{108 \text{ mm}}</math>  <math>= 6,9 \approx 6 \text{ tins } \checkmark \text{CA}</math></p> <p>Number of tins = <math>6 \times 4 \times 6</math>  <math>= 144 \text{ tins } \checkmark \text{CA}</math></p> <p>Statement not valid <math>\checkmark \text{O}</math></p>	<p>1C Convert cm to mm  1A Correct diameter  1M Divide  1CA Tins over length  1CA Tins over width  1CA Tins upwards  1CA Total tins  1O Not valid</p> <p>(8)</p>	M L4
	3.2.2	<p>Surface area wrapping = <math>\pi \times \text{diameter} \times \text{height of can}</math>  <math>= 3,142 \times 7,4 \text{ cm} \times 10,8 \text{ cm } \checkmark \text{SF}</math>  <math>= 251,10864 \text{ cm}^2 \checkmark \text{CA}</math></p>	<p>CA from 3.2.1  1A Correct diameter  1A Convert 4 mm to cm  1SF Substitution  1CA Surface area  <b>NPR</b> (4)</p>	M L3
	3.2.3	To paste the paper $\checkmark \checkmark \text{A}$	<p>2A Explanation (2)</p>	M L4
[22]				
<b>QUESTION 4 [21]</b>				
<b>Ques.</b>		<b>Solution</b>	<b>Explanation</b>	<b>Topic &amp; Level</b>
4.1	4.1.1	<p>Mean <math>\checkmark \text{M}</math>  <math>= \frac{239,2+272,5+290,8+308,3+350,9+365,4+351,1+316,5+313,7+288,7}{10} \checkmark \text{M}</math>  <math>= \frac{3\,097,1}{10}</math>  <math>= 309,71 \text{ million OR } 309\,710\,000 \checkmark \text{CA}</math></p>	<p>1M Add correct values  1M Divide by 10  1CA Mean (3)</p>	D L3
	4.1.2	<p>Percentage change = <math>\frac{351,1 - 365,4}{365,4} \times 100\% \checkmark \text{MA}</math>  <math>= \frac{-14,3}{365,4} \times 100\% \checkmark \text{A}</math>  <math>= -3,913\ldots \checkmark \text{A}</math>  <math>= -4\%</math></p>	<p>1MA Subtract values in correct order  1A Correct denominator  1A Simplification (3)</p>	D L2
	4.1.3	<p>From 2006 to 2011 the net profit increased and then it decreased from 2011 to 2015. <math>\checkmark \text{A}</math> <math>\checkmark \text{A}</math></p>	<p>1A 2006–2011  1A Increased  1A 2011–2015  1A Decreased (4)</p>	D L4

	4.1.4	The net profit decreased by a lesser value. ✓✓A	2A Explanation (2)	D L4
4.2	4.2.1	Number of pieces to assemble 75 office chairs ✓M $= (1 + 4 + 2 + 4 + 1) \times 75$ ✓M $= 12 \times 75$ $= 900$ pieces ✓CA	1M Add correct pieces 1M Multiply by 75 1CA Number of pieces (3)	M&P L2
	4.2.2	<ul style="list-style-type: none"> <li>Screw the 2 bars together with the big screw. ✓✓A</li> <li>Insert the 4 rubber stoppers to the end of the 4 legs of the chair. ✓✓A</li> <li>Use the 4 small screws to attach the seat to the bars. ✓✓A</li> </ul>	2A Attach 2 bars 2A Insert 4 rubbers 2A Use 4 small screws (6)	M&P L4
			[21]	
			<b>TOTAL: 100</b>	

