



# education

Lefapha la Thuto la Bokone Bophirima  
 Noord-Wes Departement van Onderwys  
 North West Department of Education  
**NORTH WEST PROVINCE**

## PROVINCIAL ASSESSMENT

### GRADE 10

### MATHEMATICAL LITERACY P2

NOVEMBER 2019

### MARKING GUIDELINES

**MARKS: 75**

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

**These marking guidelines consist of 6 pages.**

**KEY TO TOPIC SYMBOL:**

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

**QUESTION 1 [12 MARKS]**

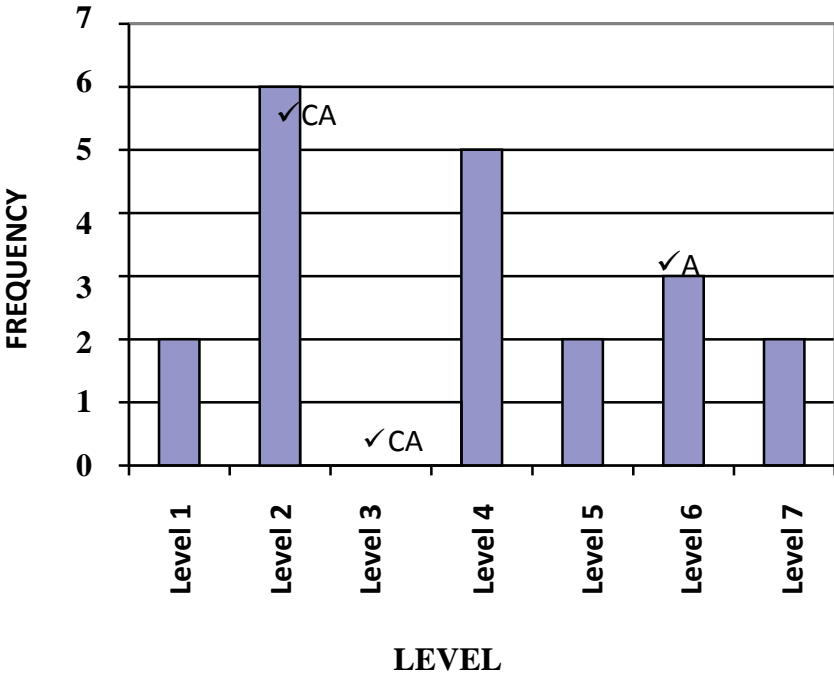
Q	Solution	Explanation	Topic & Level
1.1.1	$\begin{aligned} \text{Purchases for the month} & \quad \checkmark\checkmark \text{ M} \\ & = 476,00 + 135,50 + 99,50 + 77,50 + 129,50 + 57,00 \\ & = R975,00 \checkmark \text{ A} \end{aligned}$	2M Adding purchases 1A Total purchases (3)	F L2
1.1.2	$\begin{aligned} \text{Interest per month} & = \frac{0,31}{12} \text{ M} \\ & = 0,025833333 \checkmark \text{ A} \\ \text{Interest on outstanding amount} & \\ & = 0,025833333 \times 1215,80 \checkmark \text{ M} \\ & = R31,40816667 \\ & \approx R31,41 \checkmark \text{ CA} \end{aligned}$ <p style="text-align: center;"><b>OR</b></p> $\begin{aligned} \text{Interest payable} & = \frac{31}{100} \times 1215,80 \checkmark \text{ M} \\ & = \frac{376}{12} \text{ M} \\ & \approx R31,41 \checkmark \text{ M} \end{aligned}$	1M Divide by 12 1A Monthly interest 1M Multiply by 1215,80 1CA Interest amount 1M Multiply by 1215,80 1A Annual interest 1M Divide by 12 1CA Interest amount (4)	F L3
1.1.3	$\begin{aligned} \text{Percentage} & = \frac{327,34}{1636,71} \times 100\% \checkmark \text{ MA} \checkmark \text{ M} \\ & = 19,9998778 \% \\ & = 20 \% \checkmark \text{ CA} \end{aligned}$	1MA Numerator and denominator 1M Multiply by 100 1CA Percentage (3)	F L2
1.2	It cannot be said with certainty, because the days of the week are not given in the graph. $\checkmark\checkmark$ O	2O Opinion (2)	P L4

<b>QUESTION 2 [23 MARKS]</b>			
<b>Q</b>	<b>Solution</b>	<b>Explanation</b>	<b>Level</b>
2.1.1	Number of screws = $\frac{24}{6}$ = 4	1RT Total nr 1M divide by nr of chair 1A answer (3)	MP L2
2.1.2	✓RT ✓✓RT Chair seat and stretcher	1 RT chair seat 2A stretcher (3)	MP L2
2.1.3	Area = $41 \times 42$ cm = 1772 cm <sup>2</sup>	1A multiply by 42 1A answer 1A unit (3)	M L3
2.2 (a) (b)	$94 + 2 \times 1$ = 96 cm $42 + 2 \times 1$ = 44 cm Dimension = $96 \times 44 = 4224$	2D explanation 1A multiply by 10 1A answer (4)	M L3
2.3	The screw got a hole in the back where you fit the Allen key to fasten or loosen the screw. ✓✓	2A explanation (2)	M L2
2.4.1	Material needed = $6 \times 1,1$ = 6,6 m	1A multiply by 1.1m 1 A answer (2)	M L2
2.4.2	Cost of material needed = $6,6 \times R64,50$ = R450,70	1A Multiplication 1A answer (2)	F L2
2.4.3	Labour = $6 \times R75$ = R450,00 Total cost = (R450,00) + R425,70 = R875,70	1M × R75 1A answer 1Madding 1A answer (4)	F L3

**QUESTION 3 [23 MARKS]**

Q	Solution	Explanation	Topic & Level
3.1	Guests to invite = 112✓ – 2 M ✓ = 110 guests CA ✓ <b>OR</b> $13 \times 8 = 104 + 6$ = 110	1RD Number of seats 1M Subtract 2 1CA Number of guests (3)	MP L3
3.2	For easy movement. ✓✓ A <b>OR</b> Uncomfortable to sit on the short side. A <b>Accept any other logical reason.</b>	2O Reason (2)	MP L4
3.3	A Walk pass the dance floor, pass the podium and turn left. A ✓✓ <b>OR</b> <b>Accept any other logical explanation.</b>	1A Pass dance floor 1A Direction (2)	MP L4
3.4	Probability of guest sitting at table with even number $= \frac{1}{7}$ ✓M = 0,142857142 = 0,143 ✓CA	1CA Answer to 3 decimal places (2) <b>Answer must not be greater than 1</b>	P L4
3.5	Floor Area of hall = length $\times$ width = 16 m $\times$ 12 m SF ✓ = 192 m <sup>2</sup> ✓ Area of Dance floor = $\frac{1}{4} \times 192$ m <sup>2</sup> ✓ = 48 m <sup>2</sup> ✓	1SF Substitution 1CA Floor Area 1M $\times$ by 1 $\div$ 4 1CA Area of dance floor (4)	M L4
3.6	Hiring of the venue: R6 500,00✓ Draping and décor: R7 750,00✓ Cost for DJ = R350 $\times$ 7 hours✓ = R2 450✓ CA Catering = (R350 $\times$ 100 guests) + (R200 $\times$ 12)✓ MA = R35 000 + R2 400✓ = R37 400✓ CA  Total cost = R6 500,00 + R7750 + R2450 + R37 400✓ M = R54 100 ✓ CA  Statement invalid ✓ MA	CA from 3.1.1 1M R6500 1M R7750 1CA Cost for DJ 1MA 350 $\times$ 100 and 200 $\times$ 13 1CA  1M Adding all values 1CA Total cost  1O Invalid (10)	F L4

<b>QUESTION 4 [18 MARKS]</b>			
<b>Q</b>	<b>Solution</b>	<b>Explanation</b>	<b>Level</b>
4.1.1	25; 29; 30; 30; 32; 35; 35; 38; 56; 56; 58; 58; 58; 67; 67; 70; 74; 76; 84; 85 ✓M  $\text{Median} = \frac{56 + 58}{2} \checkmark M$  $= 57\% \checkmark A$	1A correct central values 1M dividing  1CA conclusion   (3)	L3
4.1.2	$\text{Range} = 85\% - 25\% \checkmark M$ $= 60\% \checkmark CA$	1M subtracting min and max values 1CA solution  (2)	L2
4.1.3	Mode = 58% ✓✓ A	2A Correct mode (2)	L3
4.2.1	$P = 0 \checkmark RT$  $Q = 6 \checkmark RT$	1A Read from table 2A Read from table  (2)	L2
4.2.2	$P = \frac{7}{20} \checkmark \times 100 \checkmark$  $= 35\% \checkmark CA$	1M writing probability 1M multiplying by 100 1CA answer  (3)	L2

Q	Solution	Explanation	Level																
4.2.3	<p style="text-align: center;"><b>NUMBER OF LEARNERS PER LEVEL</b></p>  <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for NUMBER OF LEARNERS PER LEVEL</caption> <thead> <tr> <th>LEVEL</th> <th>FREQUENCY</th> </tr> </thead> <tbody> <tr> <td>Level 1</td> <td>2</td> </tr> <tr> <td>Level 2</td> <td>6</td> </tr> <tr> <td>Level 3</td> <td>0</td> </tr> <tr> <td>Level 4</td> <td>5</td> </tr> <tr> <td>Level 5</td> <td>2</td> </tr> <tr> <td>Level 6</td> <td>3</td> </tr> <tr> <td>Level 7</td> <td>2</td> </tr> </tbody> </table>	LEVEL	FREQUENCY	Level 1	2	Level 2	6	Level 3	0	Level 4	5	Level 5	2	Level 6	3	Level 7	2	<p>1CA correct plotting of L2</p> <p>1CA correct plotting of L3</p> <p>1A correct plotting of L6</p> <p style="text-align: right;">(3)</p>	L3
LEVEL	FREQUENCY																		
Level 1	2																		
Level 2	6																		
Level 3	0																		
Level 4	5																		
Level 5	2																		
Level 6	3																		
Level 7	2																		
4.2.4	$\text{Share} = \frac{3}{5} \text{ of R}500$ $= \text{R}300 \text{ A}$ $\text{Each learner's share} = \frac{\text{R}300}{2}$ $= \text{R}150 \text{ A}$	<p>1A using ratio</p> <p>1A simplifying</p> <p>1CA answer</p> <p>(3)</p>	L4																

PROVINCIAL ASSESSMENT MATHEMATICAL LITERACY P2									
GRADE 10 PAPER 2									
QUESTION NO.	LEVEL 2	LEVEL 3	LEVEL 4		FINANCE	MEASUREMENT	MAPS/PLANS	DATA HANDLING	PROBABILITY
1.1.1	3				3				
1.1.2		4			4				
1.1.3	3				3				
1.2.1			2						2
<b>TOTAL</b>	<b>6</b>	<b>4</b>	<b>2</b>		<b>10</b>	<b>0</b>	<b>0</b>		<b>2</b>
2.1.1	3						3		
2.1.2	3						3		
2.1.3	3					3			
2.2		4				4			
2.3	2					2			
2.4.1	2					2			
2.4.2	2				2				
2.4.3		4			4				
<b>TOTAL</b>	<b>15</b>	<b>8</b>			<b>6</b>	<b>12</b>	<b>5</b>	<b>0</b>	<b>0</b>
3.1		3					3		
3.2		2					2		
3.3			2				2		
3.4			2						2
3.5		4				4			
3.6			10		10				
<b>TOTAL</b>		<b>9</b>	<b>14</b>		<b>10</b>	<b>4</b>	<b>7</b>	<b>0</b>	<b>2</b>
4.1.1		3						3	
4.1.2	2							2	
4.1.3		2						2	
4.2.1	2							2	
4.2.2	3							3	
4.2.3	3							3	
4.2.4			3					3	
<b>TOTAL</b>	<b>10</b>	<b>5</b>	<b>3</b>		<b>26</b>	<b>15</b>	<b>12</b>	<b>18</b>	<b>4</b>
<b>GRAND TOTAL</b>	<b>31</b>	<b>26</b>	<b>19</b>		<b>26</b>	<b>15</b>	<b>12</b>	<b>18</b>	<b>4</b>
<b>TOTAL 75</b>									
<b>%</b>	<b>41</b>	<b>35</b>	<b>25</b>		<b>40%</b>	<b>31%</b>	<b>11%</b>	<b>15%</b>	<b>4%</b>
<b>FINANCE</b> <b>35% ± 5%</b>	<b>MEASUREMENT</b> <b>20% ± 5%</b>		<b>MAPS/PLANS</b> <b>15% ± 5%</b>		<b>DATA</b> <b>25% ± 5%</b>		<b>PROBABILITY</b> <b>MIN 5%</b>		