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

This memorandum consists of 7 pages.
### QUESTION 1 [13]

<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Level</th>
</tr>
</thead>
</table>
| **1.1.1** | Base = 6 × 15 cm = 90 cm ✓A  
Height = 3 × 15 cm = 45 cm  
Area of a triangle = \( \frac{1}{2} \times \text{base} \times \text{height} \)  
= \( \frac{1}{2} \times 90 \text{ cm} \times 45 \text{ cm} \ ✓\text{SF} \)  
= 2 025 cm\(^2\) ✓CA | 1A length  
1SF substituting  
1 CA answer | (3) L3 |
| **1.1.2** | Diameter = 4 × 15 cm = 60 cm ✓A  
Radius = 30 cm ✓CA  
Area of a circle = \( \pi \times (\text{radius})^2 \)  
= 3,142 × (30 cm)\(^2\) ✓SF  
= 2 827,8 cm\(^2\) ✓CA | 1A diameter  
1CA radius  
1SF substituting  
1 CA answer | (4) L3 |
| **1.2.1** | Length of tape  
= Perimeter of rectangle + Perimeter of square ✓SF  
= 2 ×60 cm + 2 × 30 cm + 4 × 30 cm ✓SF  
= 120 cm + 60 cm + 120 cm S  
= 300 cm ✓CA | 1SF substituting into perimeter of rectangle  
1SF substituting into perimeter of square  
1S simplification  
1CA answer | (4) L3 |
| **1.2.2** | 300 cm = 3 m ✓C  
Cost = R19,50 × 3  
= R58,50 ✓CA | 1C converting cm to m  
1 CA answer | (2) L3 |
## QUESTION 2 [26]

<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1</td>
<td>Tariff = R5,994 ✓ ✓RT</td>
<td>2RT reading values from table</td>
<td>L2</td>
</tr>
</tbody>
</table>
| 2.1.2 | A = 40 × R5,994 ✓M ✓A OR A = \[
\frac{R273,33}{1,14}\] ✓M ✓A = R239,76 ✓A | 1M multiplying/dividing 1A answer | L2 |
| 2.2 | 114% × amount excluding VAT = C \[
C = \frac{116,28}{114%}\] ✓M ✓A \[
= 116,28
\frac{1}{1,14}
\] ✓A \[
= R102,00 ✓A
\] | 1M concept excluding VAT 1A dividing by 114% 1A simplification | L3 |
| 2.3.1 | The total due includes values, like rates, on which no VAT is charged (zero rated). ✓R ✓R | 2R answer | L4 |
| 2.3.2 | VAT at B = R273,33 – R239,76 = R33,57 ✓CA | 1CA VAT at B | L4 |
| | VAT at D = R116,28 – R102,00 = R14,28 ✓CA | 1CA VAT at D | L4 |
| | Total VAT ✓M \[
= R33,57 + R2,27 + R55,76 + R9,24 + R14,28 + R25,84
\] = R140,96 | 1M adding all the values | L4 |
<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Level</th>
</tr>
</thead>
</table>
| 2.4  | Monthly rates \(=\) Residential rate \(\times\) \(\frac{\text{rateable value}}{12}\)  
\[R732,38 = 1,89\% \times \frac{\text{rateable value}}{12}\]  
\[12 \times R732,38 = 0,0189\]  
Rateable value \(=\) \(R465\,003,17\)  
\[\checkmark\text{SF substitution into formula}\]  
\[\checkmark\text{M/A rearranging the formula}\]  
\[\checkmark\text{A answer}\] | 1SF substitution into formula  
1M/A rearranging the formula  
1A answer | L4 |
| 2.5.1| Amount in rand \(\checkmark\text{A}\)  
\[= 6,20 \times 5,42 + (\text{amount used} - 6,20) \times 10,94\] | 1A multiplying by 5,42  
1M subtracting 6,20  
1A multiplying by 10,94 | L3 |
| 2.5.2| Graph A \(\checkmark\checkmark\text{A}\)  
The graph shows that the tariff increases when more water is used. \(\checkmark\checkmark\text{R}\)  
(Any other suitable explanation) | 2A choice  
2R reason | L4 |
| 2.6.1| Mean \(\checkmark\text{M}\)  
\[= \frac{740 + 700 + 720 + 769 + 815 + 830 + 820 + 800 + 765 + 712 + 745 + 770}{12}\]  
\[= \frac{9186}{12}\]  
\[= 765,50 \text{kWh}\] | 1M finding mean  
1A simplifying  
1CA answer | L3 |
| 2.6.2| During the school holidays in June, more people could be at home using electricity \(\checkmark\text{O}\)  
June is a winter month, and the family could be using more electricity to keep themselves warm. \(\checkmark\text{O}\)  
(Any other opinion/reason) | 2O own opinion | L4 |
| 2.6.3| \(P(\text{less than 710}) = \frac{1}{12}\) \(\checkmark\text{A}\)  
1A numerator  
1A denominator | 2 | L3 |
### QUESTION 3 [14]

<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Level</th>
</tr>
</thead>
</table>
| 3.1  | Number of screws = \( \frac{24}{6} \)  
\[= 4 \checkmark \checkmark A\] | 2A answer | (2) L4 |
| 3.2  | \(\checkmark A\) \(\checkmark A\)  
Chair seat and stretcher | 1A chair seat  
2A stretcher | (3) L4 |
| 3.3  | Assemble the chair's side rails (C) to the front leg frame (B) using the \(\checkmark A\)  
wood dowel (J) and the JCBC screw (G) and the spring washer (H). \(\checkmark A\) \(\checkmark A\)  
Tighten in a clockwise direction using the Allen key (K). \(\checkmark A\) | 1A side rails and front leg frame  
1A wood dowel, JCBC screw and spring washer  
1A direction for tightening  
1A Allen key | (4) L4 |
| 3.4  | Area = \(42 \text{ cm} \times 41 \text{ cm} \) \(\checkmark SF\)  
\[= 1 722 \text{ cm}^2 \checkmark A \checkmark A\] | 1SF substitution into formula  
1A answer  
1A correct unit | (3) L2 |
| 3.5  | Scale height = \( \frac{94 \text{ cm}}{23,5} \) \(\checkmark A\)  
\[= 4 \text{ cm} \checkmark A\] | 1A using the scale  
1A answer | (2) L3 |
### QUESTION 4 [19]

<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1</td>
<td>25; 29; 30; 30; 32; 35; 35; 38; 56; 56; 58; 58; 58; 67; 67; 70; 74; 76; 84; 85 ✔ M</td>
<td>1M arranging data</td>
<td>L2 (1) L3 (1)</td>
</tr>
<tr>
<td></td>
<td>Mode = 58% ✔ ✔ A</td>
<td>2A mode</td>
<td>(2)</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Range = 85% – 25% ✔ M = 60% ✔ CA</td>
<td>1M subtracting min and max values 1CA solution</td>
<td>(2) L2</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Median = (\frac{56+58}{2}) ✔ M = 57% ✔ CA</td>
<td>1A correct central values 1M dividing 1CA conclusion</td>
<td>(3) L3</td>
</tr>
<tr>
<td>4.2.1</td>
<td>P = 0 ✔ A</td>
<td>1A solution 2A solution</td>
<td>(3) L2</td>
</tr>
<tr>
<td></td>
<td>Q = 6 ✔ ✔ A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2.2</td>
<td>P = (\frac{7}{20}) ✔ M = 0,35 ✔ CA</td>
<td>1A denominator 1M writing probability 1CA answer</td>
<td>(3) L2</td>
</tr>
</tbody>
</table>
### 4.2.3

#### NUMBER OF LEARNERS PER LEVEL

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>FREQUENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>1CA correct plotting of L2</td>
</tr>
<tr>
<td>Level 2</td>
<td>1CA correct plotting of L3</td>
</tr>
<tr>
<td>Level 3</td>
<td>1A correct plotting of L6</td>
</tr>
<tr>
<td>Level 4</td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td></td>
</tr>
<tr>
<td>Level 6</td>
<td></td>
</tr>
<tr>
<td>Level 7</td>
<td></td>
</tr>
</tbody>
</table>

#### Solution

- **4.2.4**
  - Share = \( \frac{3}{5} \) of R600
  - = R360 \( \checkmark A \)
  - Each learner’s share = \( \frac{R360}{2} \)
  - = R180 \( \checkmark A \)

#### Explanation

- 1CA using ratio
- 1A simplifying
- 1CA answer

#### Level

- (3) L3
- (3) L4

---

**TOTAL:** 75