This memorandum consists of 8 pages.
<table>
<thead>
<tr>
<th>QUESTION</th>
<th>SOLUTION(S)</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>28 kl ✓</td>
<td>✓Answer</td>
</tr>
<tr>
<td>1.2</td>
<td>R102,37 ✓</td>
<td>✓Answer</td>
</tr>
<tr>
<td>1.3</td>
<td>November ✓</td>
<td>✓Answer</td>
</tr>
<tr>
<td>1.4.1</td>
<td>19,5 kl ✓</td>
<td>✓Answer</td>
</tr>
<tr>
<td>1.4.2</td>
<td>19 × R4,57 ✓</td>
<td>✓Method(product) ✓Answer</td>
</tr>
<tr>
<td></td>
<td>= R86,83 ✓</td>
<td></td>
</tr>
<tr>
<td>1.4.3</td>
<td>R98,70 ÷ R4,57 ✓</td>
<td>✓Method(quotient) ✓Answer</td>
</tr>
<tr>
<td></td>
<td>= 21,60 ✓</td>
<td></td>
</tr>
<tr>
<td>1.4.4</td>
<td>21,60 + 5,6 ✓</td>
<td>✓Method(sum) ✓Answer</td>
</tr>
<tr>
<td></td>
<td>= 27,2 kl ✓</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Increase = 28kl – 22kl ✓</td>
<td>✓Calculating increase ✓Method(fraction) ✓Correct answer</td>
</tr>
<tr>
<td></td>
<td>= 6 kl ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Percentage increase = 6/22 × 100 ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= 27,27% ✓</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>R74,95 + R102,37 + R81,80 + R 68,55 + R101,91 + R89,12 = R518,70 ✓ ✓</td>
<td>✓2 marks for the correct answer or zero marks</td>
</tr>
<tr>
<td>1.7</td>
<td>✓ ✓ VAT = 14/100 × R518,70 = R72,62 ✓</td>
<td>✓VAT % ✓substituting R518,70 ✓Correct answer</td>
</tr>
<tr>
<td>1.8.1</td>
<td>A = P(1 + r/100)^n ✓</td>
<td>✓Formula ✓Substitution ✓Correct answer</td>
</tr>
<tr>
<td></td>
<td>= R102,37(1 + 1/100)^5 ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= R 107,59 ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C.I = R107,59 – R 102,37 ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= R5,22 ✓</td>
<td></td>
</tr>
<tr>
<td>1.8.2</td>
<td>S.I = P × r/100 × n ✓</td>
<td>✓Formula ✓Substitution ✓Correct answer</td>
</tr>
<tr>
<td></td>
<td>= R102,37 × 1/100 × 5 ✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= R5,12 ✓</td>
<td></td>
</tr>
</tbody>
</table>
1.8.3 **Compound Interest is higher**
Interest is paid on interest and not only on capital amount as is the case with simple interest.

<table>
<thead>
<tr>
<th>Correct answer</th>
<th>Explanation</th>
</tr>
</thead>
</table>

2.1.1 ii ✓✓

2.1.2 iv ✓✓

2.1.3 i ✓✓

2.1.4 ii ✓✓

2.2.1

<table>
<thead>
<tr>
<th>Correct answer</th>
<th>Explanation</th>
</tr>
</thead>
</table>

2.2.2

<table>
<thead>
<tr>
<th>Correct answer</th>
<th>Explanation</th>
</tr>
</thead>
</table>

2.2.3

<table>
<thead>
<tr>
<th>Correct answer</th>
<th>Explanation</th>
</tr>
</thead>
</table>

3.1.1 ii The second one. ✓✓

<table>
<thead>
<tr>
<th>Correct choice</th>
<th>Reason</th>
</tr>
</thead>
</table>

3.1.2 i The first one. ✓✓

<table>
<thead>
<tr>
<th>Correct choice</th>
<th>Reason</th>
</tr>
</thead>
</table>

3.1.3 The bowls of the two wheelbarrows are of different depth. ✓✓

<table>
<thead>
<tr>
<th>✓✓ 2 marks for</th>
<th></th>
</tr>
</thead>
</table>
(If the learners have other ways if identifying the wheelbarrows, take them on merit.)

| 3.2.1 | $A = l \times b$ ✓  

$= 8 \text{ m} \times 4\text{ m}$ ✓  

$= 32 \text{ m}^2$ ✓  |

| ✓ Formula  

 ✓ Substitution  

 ✓ Answer  |

| 3.2.2 | $A = \pi \times r \times r$ ✓  

$= \pi \times 0.5\text{ m} \times 0.5\text{ m}$ ✓  

$= 0.79 \text{ m}^2$ ✓  |

| ✓ Formula  

 ✓ Substitution  

 ✓ Answer  |

| 3.2.3 | Grass needed  

$= 32 \text{ m}^2 - 3(0.79 \text{ m}^2)$ ✓  

$= 29.63 \text{ m}^2$ ✓  |

| ✓ Substituting  

 $32\text{ m}^2$  

 ✓ Product  

 $3(0.79\text{ m}^2)$  

 ✓ Correct answer  |

| 3.3 | Number of cabbages  

$= 205 \text{ cm} \div 25 \text{ cm}$ ✓  

$= 8$ ✓  |

| ✓ quotient  

 ✓ Answer  |

| 3.4.1 | R300 ✓  |

| ✓ Answer  |

| 3.4.2 | 8 hours ✓  |

| ✓ Answer  |

| 3.4.3 | R100 : 4 hrs ✓  

i.e. R25 per hour ✓  |

| ✓ using any correct ratio  

 ✓ answer  |

| 3.4.4 | Payment = R25×no of hours worked ✓ ✓  |

| ✓ using hour rate  

 ✓ correct format  |

| 3.4.5 | Payment = R25×no of hours worked + 35 ✓ ✓  |

| ✓ add 35 to equation in 3.4.4  |

| 4.1 | $V = lbh$ ✓  

$= 6\text{ m} \times 3.5\text{ m} \times 2\text{ m}$ ✓  

$= 42\text{ m}^3$ ✓  |

| ✓ formula  

 ✓ correct substitution  

 ✓ answer  |

| 4.2 | Volume of rectangular figure  

$V = lbh$ ✓  

$= 3.5\text{ m} \times 2\text{ m} \times 0.8\text{ m}$ ✓  

$= 5.6\text{ m}^3$ ✓  |

| ✓ correct substitution  

 ✓ correct answer  |

Volume of triangular prism  

$V = \text{base area} \times \text{height}$  

$= \frac{1}{2} \times 2\text{ m} \times 0.8\text{ m} \times 3.5\text{ m}$ ✓ ✓  

$= 2.8\text{ m}^3$ ✓  |

| 2 marks for correct subst.  

 ✓ correct answer  |
### 4.3.1

**Volume of water**

\[ \text{Volume of pool} - \text{Volume of cemented portion} = 42m^3 - 8,4m^3 = 33,6m^3 \]

*Since given that 1000l = 1m³, then*

\[ 33,6m^3 \times 1000 = 33600l \]

1 mark for subst.
1 mark for answer
1 mark for conversion into litres

### 4.3.2

**Volume of cemented portion**

\[ = 5,6m^3 + 2,8m^3 = 8,4m^3 \]

1 mark for answer

### 4.4

**P = 2(l+b)**

\[ = 2(8m + 5,5m) = 27m \]

1 mark for subst.
1 mark for answer

### 4.5.1

**Theorem of Pythagoras**

\[ (1,2m)^2 + (0,5m)^2 = 1,44m^2 + 0,25m^2 = 1,69m^2 \]

\[ \therefore \text{length of crosspiece} = 1,3m \]

1 mark subst.
1 mark for answer
1 mark for showing 1,3m (answer)

### 4.5.2

**Length of gate**

\[ = \frac{1,2m}{50} = 0,024m \]

\[ = (0,024 \times 100)cm = 2,4cm \]

1 mark for subst.
1 mark for the answer

### 5.1.1(a)

**Ratio**

\[ \text{2 workers : 24 days} \]

\[ 1 \text{ worker : 2 \times 24 = 48 days} \]

✓ for correct ratio
✓ answer

### 5.1.1(b)

**Workers**

\[ 5 \text{ workers : 9,6 days} \]

Workers needed for 4,8 days = 48/4,8 = 10 workers

✓ for correct ratio
✓ answer

### 5.1.2

**Number of days**

\[ = \frac{48}{\text{Number of workers}} \]

1 mark for correct format
1 mark for answer

### 5.1.3

**Number of days**

\[ = \frac{48}{7} = 6,86 \]

1 mark for subst.
1 mark for the answer
1 mark for answer
5.1.4

\[0.86 \times 8 \text{ hours} = 7 \text{ hours} \checkmark\]
\[= 6 \text{ days } 7 \text{ hours} \checkmark\]

2 marks for the axes
1 mark for the scale
1 mark for shape
1 mark for the asymptote

5.1.5

Any integer value between 6 and 8 \checkmark

1 mark for any value \{i.e. 6, 7, 8\}

5.2.1

\[P(R) = \frac{3}{12} \checkmark\]
\[= \frac{1}{4} \checkmark\]

1 mark for fraction \(\frac{3}{12}\)
1 mark for simplification to \(\frac{1}{4}\)

5.2.1

\[P(\text{not black}) = \frac{9}{12} \checkmark\]
\[= \frac{3}{4} \checkmark\]

1 mark for fraction \(\frac{9}{12}\)
1 mark for simplification \(\frac{3}{4}\)

6.1

<table>
<thead>
<tr>
<th>Class intervals</th>
<th>Tally</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-15</td>
<td>///</td>
<td>3</td>
</tr>
<tr>
<td>16-21</td>
<td>/// /</td>
<td>6</td>
</tr>
<tr>
<td>22-27</td>
<td>/////</td>
<td>4</td>
</tr>
<tr>
<td>28-33</td>
<td>///</td>
<td>3</td>
</tr>
</tbody>
</table>

1 mark each for correct tally and frequency

6.2

\[\text{Range} = 30 - 10 \checkmark\]
\[= 20 \checkmark\]

1 mark for 30 -10
1 mark for the answer

6.3

\[x = \frac{\sum_{i=1}^{n} x_i}{n} = \frac{323}{16} \checkmark = 20.19 \checkmark \]

✓ correct formula
✓ for simplification to
### 6.4

<table>
<thead>
<tr>
<th>Numbers</th>
<th>Formula</th>
<th>Answer</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>10, 12, 13, 16, 17, 18, 18, 20, 21, 22, 22, 23, 24, 28, 29, 30</td>
<td>( \text{Median} = \frac{20 + 21}{2} )</td>
<td>20.5</td>
<td>[2]</td>
</tr>
</tbody>
</table>

1 mark for picking 20 & 21 as middle numbers
1 mark for the method (formula)
1 mark for answer

### 6.5

<table>
<thead>
<tr>
<th>Numbers</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 &amp; 22</td>
<td>[2]</td>
</tr>
</tbody>
</table>

1 mark each for 18 and 22

### 6.6

- Rangers vs Kaizer Chiefs
  - Both teams scored the same number of goals
  - Kaizer Chiefs won more games compared to Rangers

2 marks for any convincing answers read from the given data

### 7.1.1

![Bar Graph]

- For drawing a bar graph
- Label X-axis
- Label Y-axis
- Dimension on X-axis
- Dimension of Y-axis

[5]

### 7.1.2

- The infant mortality rate decreased slightly from 1990 to 1994
- There was an increase in the mortality rate since 1995
- A slight decrease occurred from 2000 to 2010

2 marks for these or any other convincing reason

### 7.2.1

<table>
<thead>
<tr>
<th>Year</th>
<th>Mortality Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>✔️ 7 deaths per 1000 babies ✔️ ✔️</td>
</tr>
</tbody>
</table>

[1]

- For any number from 7 to 7.3
- For stating per thousand

### 7.2.2

- Infant deaths = \( \frac{9.2}{\text{100}} \times 29395 \).
  - \( = 2704.3 \)
  - i.e. = 2705 deaths

[4]

- Correct equation
- Substitution
- Simplify
- Rounding

### 7.2.3

- A steady decrease occurs

### 7.2.5

- Mortality rate for South Africa is considerably higher than USA ✔️
- The rate for SA increase for this period whereas the rate for USA decrease ✔️

2 marks for these or any other convincing deduction.