MARKS: 150

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>EXPLANATION</th>
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<tr>
<td>M</td>
<td>Method</td>
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<tr>
<td>MA</td>
<td>Method with accuracy</td>
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<td>Consistent accuracy</td>
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<td>NPR</td>
<td>No penalty for rounding</td>
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<td>J</td>
<td>Justification /Reason</td>
</tr>
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</table>

NO PENALTY IF UNITS OMITTED UNLESS STATED OTHERWISE

This memorandum consists of 22 pages.
### KEY TO TOPIC SYMBOLS:

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

### QUESTION 1 [38]

<table>
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<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
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</thead>
</table>
| 1.1.1 | 17 % ✓ ✓ RD  
OR 0,17 ✓ ✓ RD  
OR \( \frac{17}{100} \) ✓ ✓ RD | 2 RD reading from diagrams  
Max 1 mark for 17 | **F** L1 |
| 1.1.2 (a) | R\(2 \ 443,49 \div 24\ ✓ ✓ M/A\)  
= R\(101,81\ ✓ ✓ CA\) | 1M/A division by 24  
1CA only if using R\(2 \ 100\) | **F** L1 |
|  | Accept correct answer only |  |  |
| 1.1.2 (b) | Original selling price = R\(1 \ 989 + R210\ ✓ ✓ M/A\)  
= R\(2 \ 199\ ✓ ✓ A\) | 1M/A adding  
1A simplify | **F** L1 |
|  | Accept correct answer only |  |  |
| 1.1.2 (c) | 15% \(\times R2 \ 100\) OR \(\frac{15}{100} \times R2 \ 100\ ✓ ✓ M/A\)  
OR 0,15 \(\times R2 \ 100\)  
= R\(315\ ✓ ✓ CA\) | 1M/A multiplying  
1CA simplify | **F** L1 |
|  | Accept correct answer only |  |  |
### Ques 1.1.2 (d)

**Solution:**

- **RD**
  - Total payment = R88 × 30 months
    - = R2 640  ✓M/A
  - Total cost = R199 + R2640
    - = R2 839  ✓CA

**Explanation:**

1RD reading values from advert
1M/A multiplication
1M addition of R199
1CA simplify

Accept correct answer only

### Ques 1.2.1

**Clover milk ✓✓ A**

**Explanation:**

2A correct item

Full marks if answer is given as 1 l (liter) OR milk only

### Ques 1.2.2

**Cost of 1 tin of condensed milk**

- = R16,95 – R1,00 = R15,95  ✓M/A

**Number of tins of condensed milk**

- = R159,50 ÷ R15,95 = 10  ✓CA

**OR**

**Cost of 1 tin of condensed milk**

- = R159,50 ÷ R16,95  ✓M
  - = 9,4

**Number of tins of condensed milk ≈ 10 ✓✓ RO**

Accept correct answer only
<table>
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<tr>
<th>Ques</th>
<th>Solution</th>
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</thead>
<tbody>
<tr>
<td>1.2.3</td>
<td>$A = R289,52 + R29,07 = R318,59$</td>
<td>1M adding 1A simplify</td>
<td>F L1</td>
</tr>
<tr>
<td></td>
<td>$A = 14,99 + 21,95 + R159,50 + R9,95 + R19,95 + R14,99 + R14,99 + R46,99 + R8,29 + R6,99 = R318,59$</td>
<td>1M adding 1A simplify</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accept correct answer only</td>
<td></td>
</tr>
<tr>
<td>1.2.4</td>
<td>12/10/2013 till 12/12/2013 $\Rightarrow$ RD</td>
<td>1RD Reading from slip 1A simplify</td>
<td>F L1</td>
</tr>
<tr>
<td></td>
<td>= 2 months $\Rightarrow$ A OR 61 days OR 62 days OR 60 days</td>
<td>Accept 2 or 3 days Max 1 mark for until (or up to) 12/12/2013</td>
<td></td>
</tr>
<tr>
<td>1.2.5</td>
<td>$135 \text{ g} \div 1000 = 0,135\text{kg}$ $\Rightarrow$ C</td>
<td>1C Convert to kg 1M Dividing 1CA cost per kg</td>
<td>F L1</td>
</tr>
<tr>
<td></td>
<td>$R19,95 \div 0,135\text{ kg} \Rightarrow M$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$= R147,78 \Rightarrow CA$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$R19,95 \div 135\text{ g} = R0,1477\ldots$ per gram $\Rightarrow M$</td>
<td>1M Dividing 1C convert to kg 1CA cost per kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Rightarrow C$</td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$R0,14777\ldots \times 1\text{ 000 g} = R147,78$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$\Rightarrow C$</td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$135\text{ g} : 1\text{ 000 g}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$R19,95 : x \Rightarrow M \Rightarrow CA$</td>
<td>1C Convert to g 1M multiply &amp; divide 1CA cost per kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$x = R19,95 \times 1\text{ 000 g} \div 135 = R147,78$</td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td>Ques</td>
<td>Solution</td>
<td>Explanation</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-------------</td>
<td>-------</td>
</tr>
</tbody>
</table>
| 1.2.6 | $\sqrt{M}$ R14,99 + R9,95 + R19,95 + R14,99 + R14,99 + R6,99 = R81,86 ✓A  
OR $\sqrt{M}$ R318,59 – (R21,95 + R8,29 + R46,99 + R159,50) = R318,59 – R236,73 = R81,86 ✓A | 1M adding values  
1A simplify  
OR  
1M adding values  
1A simplify | (2) |
| 1.2.7 (a) | B = R318,59 round down ✓CA = R318,55✓CA  
OR B = R318,59 round up ✓CA = R318,60✓CA | 1CA identify correct value for rounding  
1CA rounding down from Q 1.2.3  
OR  
1CA identify correct value for rounding  
1CA rounding up from Q 1.2.3 | (2) |
| 1.2.7 (b) | C = R200 + (2 × R100) = R400✓M/A  
D = R400 – R318,55 = R81,45✓CA  
OR D = R400 – R318,60 = R81,40✓CA | 1M/A adding money  
1M Subtracting  
1CA from Q 1.2.7(a)  
OR  
1M Subtracting  
1CA from Q 1.2.7(a) | (3) |
### Solution

#### 1.2.8 (a)

**Profit per packet**

\[ \text{Profit per packet} = R14.99 - R12.00 = R2.99 \]

**Profit per dozen**

\[ \text{Profit per dozen} = 12 \times R2.99 = R35.88 \]

**OR**

**Cost price per dozen**

\[ \text{Cost price per dozen} = 12 \times R12.00 = R144 \]

**Selling price per dozen**

\[ \text{Selling price per dozen} = 12 \times R14.99 = R179.88 \]

**Profit per dozen**

\[ \text{Profit per dozen} = R179.88 - R144 = R35.88 \]

#### 1.2.8 (b)

**Percentage mark up**

\[ \text{Percentage mark up} = \left( \frac{\text{selling price} - \text{cost price}}{\text{cost price}} \right) \times 100\% \]

\[ = \left( \frac{R14.99 - R12.00}{R12.00} \right) \times 100\% \]

\[ = 24.916\% \approx 25\% \]

**OR**

**Profit**

\[ \text{Profit} = R14.99 - R12.00 = R2.99 \]

**Percentage profit**

\[ \text{Percentage profit} = \left( \frac{R2.99}{R12.00} \right) \times 100\% \]

\[ = 24.916\% \approx 25\% \]

---

### Explanation

- **1M calculate profit per packet**
- **1A profit**
- **1A multiply by 12**
- **1CA profit of 1 dozen**

- **OR**
- **1A cost price per dozen**
- **1A selling price per dozen**
- **1M calculate profit per dozen**
- **1CA profit**

- **F L1**

- **1 SF substitute in formula**
- **1A simplify**
- **1RO rounding to whole percentage**

- **OR**
- **1M profit**
- **1M % profit simplify**
- **1RO rounding to whole percentage**

- **F L2**

---

**Accept correct answer only**
### QUESTION 2 [26]

<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1</td>
<td>7 ✓ ✓ A</td>
<td>2A number of fields</td>
<td>M L1</td>
</tr>
<tr>
<td>2.1.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>✓M ✓M ✓A Length of fencing = 33 m + 33 m = 66 m ✓A Total length to buy = 70 m ✓RO OR 14 rolls</td>
<td>1M addition 1A length 1RO rounding to nearest 5</td>
<td>M L1</td>
</tr>
<tr>
<td></td>
<td>OR ✓M Length of fencing = 33 m × 2 = 66 m ✓A Total length to buy = 70 m ✓RO OR 14 rolls</td>
<td>1M multiplying by 2 1A length 1RO rounding to nearest 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accept correct answer only</td>
<td>Max 2 marks for 165m or 33 rolls</td>
<td></td>
</tr>
<tr>
<td>2.1.2</td>
<td>✓M ✓M ✓CA Number of poles = 66 m ÷ 1,5 m = 44 poles</td>
<td>1M using 66 m 1M dividing by 1,5 1CA no. of poles as whole number from Q 2.1.2 (a)</td>
<td>M L1</td>
</tr>
<tr>
<td>(b)</td>
<td>OR ✓M ✓M ✓CA Number of poles = (33 ÷ 1,5) × 2 = 44 poles</td>
<td>1M divide by 1,5 1M multiply by 2 1CA no. of poles as whole number from Q 2.1.2 (a)</td>
<td></td>
</tr>
<tr>
<td>2.1.3</td>
<td>New length = 125 m + 33 m = 158 m ✓A Length of old field : Length of extended field 125 : 158 ✓M</td>
<td>1A length 1M writing as a ratio using at least 125</td>
<td>M L2</td>
</tr>
</tbody>
</table>
### 2.1.4
Area = 158 m × 95 m
- ✔ CA
- ✔ A

Area = 15 010 m²

**1SF substitution**

**1CA area**

**1A unit of m²**

(3)

### 2.2.1
Diameter = 2 200 mm ÷ 1 000 = 2,2 m

**RT 2200 mm**

**A diameter in m**

(2)

Accept correct answer only

### 2.2.2
Radius = 1,1 m

Volume = 3,142 × (1,1)² × 3

= 11,40546 m³

= 11,405,46 litres

**SF**

**CA**

**A**

**CA**

**C**

**OR**

Radius = 1,1 m

Volume = 3,142 × (1,1)² × 3000

= 11 405,46 litres

Max 3 marks if calculation is simplified (without squaring)

(5)

**1CA radius from Q 2.2.1**

**1SF substitution**

**1CA volume**

**1C multiply by 1 000**

**1CA litres**

**OR**

**1CA radius from 2.2.1**

**1C multiply by 1 000**

**1SF substitution**

**2CA litres**

(5)
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<th>Topic</th>
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</table>
| 2.3.1 | Time = 11:56 ✓ RD ✓ M  
Time it switched on = 11h56 – 2h45 = 09h11  
Time it switched on = 09:11 ✓ A  
OR 9.11 am  
OR 11 minutes past nine in the morning.  
 OR  
Time = 11:56 ✓ RD  
Subtract 2 hours = 9h56  
Subtract 45 minutes = 9h11 ✓ M  
Time it switched on = 09:11 ✓ A  
OR 9.11 am  
OR 11 minutes past nine in the morning  | 1RD reading time  
1M subtracting time  
1A simplify  | M L1(2) L2(1) |
| 2.3.2 | Temperature in °F=(1,8×25°)+32° ✓ SF  
= ✓ A  
= 45° + 32°  
= 77° ✓ CA  | 1SF substitute  
1A simplify  
1CA degrees Fahrenheit  | M L2 |

Accept correct answer only
### QUESTION 3 [25]

<table>
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<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1</td>
<td>✓A The actual size of the shirt is 18 times bigger in reality than shown on the diagram OR ✓A ✓A ✓A ✓A ✓A ✓A *Every unit in the diagram represents 18 units in reality OR ✓A ✓A ✓A ✓A ✓A ✓A *Every mm/cm on diagram = 18 mm/cm in reality OR ✓A ✓A ✓A ✓A ✓A ✓A The diagram is $\frac{1}{18}$ of the actual size of shirt. ✓A ✓A ✓A ✓A ✓A ✓A ✓A ✓A The diagram is 18 times smaller than the actual shirt.</td>
<td>1A actual size 1A 18 times bigger OR 1A unit on diagram 1A 18 units in reality OR 1A mm/cm diagram 1A 18 mm/cm reality OR 1A $\frac{18}{1}$ 1A actual size of shirt 1A 18 times smaller 1A actual size of shirt</td>
<td>MP L1</td>
</tr>
<tr>
<td>3.1.2</td>
<td>✓M 486 mm ÷ 18 = 27 mm ✓A OR ✓M 1 : 18 = s : 486 ✓M 18s = 486 ✓M s = $\frac{486}{18}$ mm ✓A ✓M ✓M ✓M ✓M ✓M Accept correct answer only</td>
<td>1M dividing by 18 1A scaled length OR 1M ratio 1A scaled length</td>
<td>MP L2</td>
</tr>
<tr>
<td>3.1.3</td>
<td>✓ ✓A 10 buttons (as seen on diagram) OR ✓A ✓A 11 buttons for assuming the collar has a button</td>
<td>2A number of buttons 2A number of buttons</td>
<td>MP L1</td>
</tr>
</tbody>
</table>

* Both units must be the same

(2)
<table>
<thead>
<tr>
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<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
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</thead>
</table>
| 3.1.4 | Length of strip = 21.5 mm ✓ A  
Actual length = 21.5 mm $\times$ 18 ✓ M  
= 387 mm ✓ CA  
**OR**  
Alternative possible measurements:  
Accept: 378 mm to 396 mm | 1A length in mm  
21mm OR 22mm  
1M multiplication by 18  
1CA simplify | MP  
L1(1)  
L2(2) |
| 3.1.5 | Right hand side ✓ ✓ A | 2A interpret diagram | MP  
L1 |
| 3.2.1 | $\sqrt{M/A}$  
K = 60 cm + 90 cm + 60 cm  
= 210 cm ✓ A | 1M/A adding  
1A simplify | MP  
L1 |
| 3.2.2 | Maximum number of persons = $9 \times 4$  
= 36 ✓ ✓ A | 1M/A multiplying  
1A no of persons | MP  
L1 |
| 3.2.3 | $\sqrt{RD}$ ✓ ✓ CA ✓ ✓ M  
T = 900 cm – 150 cm – (3 $\times$ 210 cm) – (2 $\times$ 50 cm)  
= 20 cm ✓ CA  
**OR**  
T = (900 – 210 – 50 – 210 – 50 – 210 – 150) cm  
= 20 cm ✓ CA  
**OR**  
T = 900 – (60 × 6) – (90 × 3) – (50 × 2) – 150  
= 900 – 880  
= 20 cm ✓ CA | 1RD length of 900 cm  
1 CA tables $\times$ 3  
1M subtracting values  
1CA simplify  
**OR**  
1M length of 210 cm  
1M subtracting  
1M correct values  
1CA length  
**OR**  
1M length of 6 chairs  
1M length of 3 tables  
1M spaces between tables  
1CA simplify | MP  
L2 |
<table>
<thead>
<tr>
<th>Ques</th>
<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.4</td>
<td><img src="image" alt="Diagram" /></td>
<td>1A line drawn northern direction (up), passing between 2 pairs of tables 1A line drawn western direction (left) to point Y</td>
<td><strong>MP L2</strong></td>
</tr>
</tbody>
</table>

Does not have to be horizontal or vertical straight lines. Accept any indication of the route.

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</thead>
<tbody>
<tr>
<td>3.2.5</td>
<td><img src="image" alt="Diagram" /></td>
<td><strong>Accept exact direction only</strong></td>
<td><strong>MP L1</strong></td>
</tr>
</tbody>
</table>

2A compass direction

1 mark for North East
Accept SSW or WSW or NNE or ENE

(2)
<table>
<thead>
<tr>
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<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
</tr>
</thead>
</table>
| 3.2.6 | Two tables joined requires 6 chairs  
\[ \sqrt{M}, \sqrt{A} \]  
Number of tables = \( 24 \div 6 = 4 \text{ pairs} \) OR 8 | 1M method  
1A number of tables | MP L1 |
| OR | 2 Tables requires 6 chairs  
\[ \sqrt{M} \]  
Ratio of tables as to chairs = \( 2 : 6 \)  
\[ \sqrt{A} \]  
Number of tables = \( 24 \div 3 = 8 \) OR \( 24 \times \frac{2}{6} \) | 1M method (ratio)  
1A number of tables | (2) |
| Accept correct answer only | | | |
### QUESTION 4 [37]

<table>
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<th>Solution</th>
<th>Explanation</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1</td>
<td>R13,78 ✓ ✓ RD</td>
<td>2 RD Class C cost 2 (2)</td>
<td>DH L1</td>
</tr>
<tr>
<td>4.1.2</td>
<td>✓A Ihobhe and Sunbird</td>
<td>1A Ihobhe 1A Sunbird</td>
<td>DH L1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Only 1 mark if two incorrect names added. No mark if more than two names added</strong></td>
<td>(2)</td>
</tr>
<tr>
<td>4.1.3 (a)</td>
<td>Mean = [\frac{7,50 + 7,50 + 7,28 + 7,28 + 6,90 + 6,90 + 8,40 + 8,40 + 6,45}{17}] + [\frac{6,45 + 8,03 + 8,03 + 7,13 + 7,13 + 6,30 + 6,30 + 1,50}{17}] ✓A</td>
<td>1RT correct values 1A dividing by 17 1M sum of values 1CA mean</td>
<td>DH L2</td>
</tr>
<tr>
<td></td>
<td>= [\frac{117,48}{17}] ✓M</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>= R6,91 ✓ CA</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Accept correct answer only</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.3 (b)</td>
<td>Ordering: ✓ ✓ M/A 1,50; 6,30; 6,30; 6,45; 6,45; 6,90; 6,90; 7,13; 7,13; 7,28; 7,28; 7,50; 7,50; 8,03; 8,03; 8,40; 8,40</td>
<td>2M/A ordering of values 1CA median</td>
<td>DH L2</td>
</tr>
<tr>
<td></td>
<td>Median = R7,13 ✓ CA</td>
<td></td>
<td>(3)</td>
</tr>
<tr>
<td>Ques</td>
<td>Solution</td>
<td>Explanation</td>
<td>Topic</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>4.1.3 (c)</td>
<td>Median is the better representation ✓A ✓✓J &lt;br&gt;The mean is affected by the R1,50 which is an outlier. OR ✓A &lt;br&gt;Both the mean and the median are suitable representations because the difference between them (R0,22) is negligible ✓✓J</td>
<td>1A Identify the correct central tendency (with a possible reason) &lt;br&gt;2J Correct reason ✓A ✓✓J &lt;br&gt;OR 1A both mean and median (with a possible reason) &lt;br&gt;2J Correct reason ✓A ✓✓J</td>
<td>DH L3</td>
</tr>
<tr>
<td>4.1.4</td>
<td>Difference = R6,50 – R4,87 ✓M/A &lt;br&gt;= R 1,63 ✓CA</td>
<td>1RT reading values from table &lt;br&gt;1M/A subtraction (one value correct) &lt;br&gt;1CA difference ✓RT ✓M/A ✓CA</td>
<td>DH L1</td>
</tr>
<tr>
<td>4.1.5</td>
<td>✓M ✓CA &lt;br&gt;3,21 : 8,03 = 321:803 OR 1:2,5</td>
<td>1M ratio &lt;br&gt;1CA ratio simplified ✓M ✓CA</td>
<td>DH L1</td>
</tr>
<tr>
<td>4.1.6</td>
<td>Amount saved = R5,63 – R2,91 &lt;br&gt;= R2,72 ✓CA</td>
<td>1M/A subtracting correct values of Pikoko &lt;br&gt;1CA value ✓M/A ✓CA</td>
<td>DH L1</td>
</tr>
</tbody>
</table>
### 4.1.7

**E-toll tariffs of five selected gantries**

<table>
<thead>
<tr>
<th>Name of gantry</th>
<th>Tariff in rand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbet</td>
<td>12</td>
</tr>
<tr>
<td>Fiscal</td>
<td>8</td>
</tr>
<tr>
<td>Flamingo</td>
<td>16</td>
</tr>
<tr>
<td>Sunbird</td>
<td>12</td>
</tr>
<tr>
<td>Tarentaal</td>
<td>8</td>
</tr>
</tbody>
</table>

**Solution**

5A correctly drawing the 5 (five) bars/plotting the points correctly.

NB: Sunbird may NOT be drawn on a gridline. MUST be between the 16 and 16,50 line.

Max 3 marks if values of other columns are used on condition that all 5 bars are used from the same column of values.

### 4.2.1

**External Loans**

- **OR**
  - E ✓ ✓ ✓ A

2A reading data

### 4.2.2

100% – (11% + 2% + 12% + 3% + 14%) = 58%

**OR**

11% + 2% + 12% + 3% + 14% = 42% ✓ M
100% – 42% = 58% ✓ CA

Accept correct answer only

1M sum of all given %
1CA required %

1 mark if 1 value is omitted
<table>
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<th>Explanation</th>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>4.2.3</td>
<td><strong>Value of External Loans</strong> = ( \frac{14}{100} \times R587 646 376 ) ( \sqrt{\text{RG}} ) ( \sqrt{\text{M}} ) ( \sqrt{\text{CA}} ) = R82 270 492,64 ( \sqrt{\text{CA}} )</td>
<td><strong>OR</strong></td>
<td><strong>DH L1</strong></td>
</tr>
</tbody>
</table>

**Accept correct answer only**

| 4.2.4 | Recreation Facilities \( \sqrt{\text{RG}} \) \( \sqrt{\text{RG}} \) OR L \( \sqrt{\text{RG}} \) | 2RG reading data | **DH L1** |

(2)

| 4.2.5 | Twenty eight **million**, four hundred and one thousand, seven hundred and thirty six rand. \( \sqrt{\text{A}} \) | 1A millions 1A word format of number | **DH L1** |

(2) No penalty for units

[37]
### QUESTION 5 [24]

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<tbody>
<tr>
<td>5.1.1</td>
<td>✓A ✓A ✓A Cost (R) = 50 + 12 \times (\text{number of kilometres} - 3) OR ✓A ✓A ✓A Cost (R) = 50 + 12 \times (\text{number of kilometres}) - 36 OR ✓✓A ✓A ✓A Cost (R) = 14 + 12 \times \text{number of kilometres} OR ✓A ✓A ✓A Cost (R) = 50 + 12 \times (k - 3) Where ( k = \text{number of kilometres} ) OR ✓A ✓A ✓A Cost (R) = 14 + 12 \times k Where ( k = \text{number of kilometres} )</td>
<td>1A R50 call-out fee 1A 12 × no km 1A no. km – 3 OR 1A R50 call-out fee 1A 12 × no km 1A no. km – 3 OR 2A R14 1A 12 × no. km OR 1A 50 – 36 1A 12 1A k (with description)</td>
<td>F L2</td>
</tr>
</tbody>
</table>

Max 2 marks if variable is used and explained incorrectly

(3)
5.1.2

Total cost of a single trip

1A y-intercept at R50 and must be an open circle
1A horizontal line from 1 – 3 km;
2A any other 2 points correct
1A inclined line passing through correct plotted points

(5)
### Ques 5.1.3

**Solution**

Cost (without call out fee) = R1 214 – R50 = R 1 164

Kilometres charged = R1 164 ÷ 12 = 97 km

Distance travelled = 97 + 3 = 100 km

**OR**

Distance = \[\left( \frac{R1 214 – R50}{R12} \right) + 3 \text{ km} \]

= (R1 164 ÷ R12) + 3 km

= 97 km + 3 km

= 100 km

**OR**

If number of kilometers = \(n\)

1 214 = 50 + [12 \times (n – 3)]

1 214 = 50 + 12n – 36

12n = 1 214 – 50 + 36

\(n = \frac{1 214 – 50 + 36}{12}\)

\(n = 100\)

**Table used:**

<table>
<thead>
<tr>
<th>km</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>494</td>
<td>614</td>
<td>734</td>
<td>854</td>
<td>974</td>
<td>1094</td>
<td>1214</td>
</tr>
</tbody>
</table>

Distance = 100 km

**OR**

Distance travelled = \(\frac{R1214 – R14}{R12}\) km

= 100 km

Accept correct answer only

---

**Explanation**

1M/A subtracting R50

1M dividing by 12

1M adding 3 km

1A distance

1M/A subtract R50

1M divide by R12

1M Adding 3 km

1A distance in km

1SF substitution

1S simplify

1M dividing by 12

1A distance in km

4A distance in km

1M value of 14

1M divide by 12

2A distance

(4)
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<tr>
<td>5.1.4</td>
<td><strong>✓M/A ✓M</strong>&lt;br&gt;Total taxi fare = R50 + (2 × R12) + R100 + (5 × R12)&lt;br&gt;<strong>✓S ✓S</strong>&lt;br&gt;= R50 + R24 + R100 + R60&lt;br&gt;= R234.00 ✓CA</td>
<td>1M/A R50 call out fee&lt;br&gt;1M add R100&lt;br&gt;1S cost of R24&lt;br&gt;1S cost of R60&lt;br&gt;1CA cost of trip</td>
<td>F&lt;br&gt;L1 (2)&lt;br&gt;L2 (3)</td>
</tr>
<tr>
<td></td>
<td><strong>✓M</strong>&lt;br&gt;Return distance from meeting = 5km × 2 = 10 km ✓A&lt;br&gt;Reading from table : R134 for 10 km ✓RT&lt;br&gt;Taxi fare = R134 + R100 ✓M&lt;br&gt;= R234 ✓CA</td>
<td>1M multiply&lt;br&gt;1A 10 km&lt;br&gt;1RT R134&lt;br&gt;1M add R100&lt;br&gt;1CA cost of trip</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>✓M/A ✓M</strong>&lt;br&gt;Total taxi fare = 50 + [12 × (10 – 3)] + 100&lt;br&gt;= 50 + (12 × 7) + 100 ✓M&lt;br&gt;<strong>✓S</strong>&lt;br&gt;= 50 + 84 + 100&lt;br&gt;= R234 ✓CA</td>
<td>1M/A R50 call out fee&lt;br&gt;1M subtract 3 km&lt;br&gt;1M add R100&lt;br&gt;1S 84&lt;br&gt;1CA cost of trip</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>✓M</strong>&lt;br&gt;Reading from graph&lt;br&gt;5km × 2 = 10 km ✓A&lt;br&gt;10 km cost R134 ✓RG&lt;br&gt;Total taxi fare = R134 + R100 ✓M&lt;br&gt;= R234 ✓CA</td>
<td>1M multiply&lt;br&gt;1A 10 km&lt;br&gt;1RG R134&lt;br&gt;1M add R100&lt;br&gt;1CA cost of trip</td>
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<tr>
<td></td>
<td><strong>✓M/A ✓M</strong>&lt;br&gt;Total taxi fare = 50 + [12 × (10 – 3)] + 100&lt;br&gt;= 50 + (12 × 7) + 100 ✓M&lt;br&gt;<strong>✓S</strong>&lt;br&gt;= 50 + 84 + 100&lt;br&gt;= R234 ✓CA</td>
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Max three marks if answer is R174 or R248
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| 5.2.1 | ![Diagram](image) | **NOTE:** Accept answers if written in words. | **P**  
**L3** |
| 5.2.2 | C ✓ ✓CA  
2A statement | | **P**  
**L1** |
| 5.2.3 | ![Fraction](image)  
OR  
≈55,56% ✓ ✓CA  
OR  
≈0,56 ✓ ✓CA | 1CA numerator  
1CA denominator  
2CA in % form  
2CA in decimal form | **P**  
**L3**  
[24] |