



# basic education

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## NATIONAL SENIOR CERTIFICATE

**GRADE 12**

**MATHEMATICAL LITERACY P 1**

**FEBRUARY/MARCH 2018**

**MARKING GUIDELINES**

**MARKS: 150**

| SYMBOL | EXPLANATION                                              |
|--------|----------------------------------------------------------|
| M      | Method                                                   |
| MA     | Method with accuracy                                     |
| CA     | Consistent accuracy                                      |
| A      | Accuracy                                                 |
| C      | Conversion                                               |
| S      | Simplification                                           |
| RT/RG  | Reading from a table/graph/diagram                       |
| SF     | Correct substitution in a formula                        |
| O      | Opinion/Example/Definition/Explanation                   |
| P      | Penalty, e.g. for no units, incorrect rounding off, etc. |
| R      | Rounding off                                             |
| NPR    | No penalty rounding or omitting units                    |
| AO     | Answer only, full marks                                  |

**These marking guidelines consist of 12 pages.**

| <b>Question 1 [30Marks] AO</b> |                                                                                                   |                                                                                                    |                |
|--------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------|
| <b>Ques</b>                    | <b>Solution</b>                                                                                   | <b>Explanation</b>                                                                                 | <b>Topic/L</b> |
| 1.1.1                          | $3\frac{1}{2}$ years ✓✓A<br><b>OR</b><br>Three and half a years ✓✓A<br><b>OR</b><br>3,5 years ✓✓A | 2A numerical period<br><b>OR</b><br>2A period in words<br>3 years 6 months<br>(only 1 mark)<br>(2) | M<br>L1        |
| 1.1.2                          | Total Repayment Cost = R1 078,26 × 42 ✓M/A<br>= 45 286,92 ✓CA                                     | 1MA multiply term by instalment<br>1CA Total cost From Q1.1.1.<br>(2)                              | F<br>L1        |
| 1.1.3                          | Discount = R29 999,00 × 15%<br>= R4 499,85 ✓A                                                     | 1M calc. discount<br>1A saving<br>(2)                                                              | F<br>L1        |
| 1.2.1                          | AD : CB = 10,9 : 9,45 ✓M<br>= 218 : 189 ✓CA                                                       | 1M ratio form<br>1CA simplified form<br>Accept unit ratio<br>(1: 0,87) OR (1,15 : 1)<br>(2)        | MP<br>L1       |
| 1.2.2                          | CD = 125,92m – (57,5 + 10,9 + 9,45) ✓M/A<br>= 48,07m ✓CA                                          | 1M/A subtracting all lengths<br>1CA length<br>(2)                                                  | M<br>L1        |
| 1.2.3                          | Radius = $\frac{4,73}{2}$ m ✓M<br>= 2,365 m ✓A                                                    | 1M dividing by 2<br>1A simplification<br>NPR<br>(2)                                                | M<br>L1        |
| 1.2.4                          | Total Cost = R97,56/m × 57,5m<br>= R5 609,70 ✓CA                                                  | 1M/A multiply cost by correct distance<br>1CA simplification<br>(2)                                | F<br>L1        |
| 1.3.1                          | C ✓✓A                                                                                             | 2A city<br>(2)                                                                                     | D<br>L1        |
| 1.3.2                          | Range = 8°C – (– 7°C) ✓MA<br>= 15°C ✓CA                                                           | 1MA subtracting correct values<br>1CA temperature<br>(2)                                           | D<br>L1        |

| Ques         | Solution                                                                                                                                                                                                                                            | Explanation                                                                                                                                                                                | Topic/L     |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1.3.3<br>(a) | B ✓✓A                                                                                                                                                                                                                                               | 2A city<br>(2)                                                                                                                                                                             | P<br>L1     |
| 1.3.3<br>(b) | Likely <b>OR</b> less likely ✓✓A                                                                                                                                                                                                                    | 2A correct words<br>(2)                                                                                                                                                                    | P<br>L1     |
| 1.4.1        | Bar graph ✓✓A<br><br><b>OR</b><br>Single bar graph. ✓✓A<br><br><b>OR</b><br>Vertical bar graph ✓✓A<br><br><b>OR</b><br>Column graph ✓✓A                                                                                                             | 2A correct type<br>(2)                                                                                                                                                                     | D<br>L1     |
| 1.4.2        | ✓✓A<br>Three hundred and sixty one thousand nine hundred and forty eight.                                                                                                                                                                           | 2A number in words<br>(2)                                                                                                                                                                  | M<br>L1     |
| 1.4.3        | Q 5 ✓✓A                                                                                                                                                                                                                                             | 2A correct question<br>(2)                                                                                                                                                                 | D<br>L1     |
| 1.4.4        | Average time per mark = $\frac{180}{150}$ min ✓MA<br>= 1,2 min ✓CA<br><br><b>OR</b><br>Average time per mark = $\frac{3 \text{ hours}}{150}$ ✓MA<br>= 0,02 × 60 min<br>= 1,2 min ✓CA<br><b>OR</b><br>150 marks : 180 min ✓MA<br>1mark : 1,2 min ✓CA | 1MA numerator and denominator<br>1CA simplification<br><br><b>OR</b><br>1MA numerator and denominator<br>1CA simplification<br><b>OR</b><br>1MA correct ratio<br>1CA simplification<br>(2) | D<br>L1     |
|              |                                                                                                                                                                                                                                                     |                                                                                                                                                                                            | <b>[30]</b> |

| <b>Question 2 [44 Marks]</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                               |                |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Ques</b>                  | <b>Solution</b>                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Explanation</b>                                                                                                                                            | <b>Topic/L</b> |
| 2.1.1                        | <p><b>Stop order:</b> an instruction to an employer or bank to pay / divert monthly or transfer regularly a certain amount to a person or an account. ✓✓ O</p> <p><b>OR</b></p> <p><b>Stop order:</b> an instruction that an employee (individual) issue to the employer (bank) to make a series of future dated regular deductions ✓✓ O</p> <p><b>OR</b></p> <p><b>Stop order:</b> Future dated regular monthly deductions ✓✓ O</p> | <p>2O explanation</p> <p>(2)</p>                                                                                                                              | F<br>L1        |
| 2.1.2                        | <p>Difference = R940 465,89 – R536 523,25 ✓ M/A</p> <p>= R403 942,64 ✓ C/A</p>                                                                                                                                                                                                                                                                                                                                                       | <p>1M/A subtraction of correct value</p> <p>1CA simplification</p> <p>AO</p> <p>(2)</p>                                                                       | F<br>L1        |
| 2.1.3                        | <p>Number of years (2017 – 2029) = 12 ✓ M/A</p> <p>Number of months in 12 years = <math>12 \times 12</math><br/>= 144 ✓ C</p> <p>Number of months from 10 May to 1 November = 6 ✓ A</p> <p>Total number of contributions = <math>144 + 6</math><br/>= 150 ✓ CA</p>                                                                                                                                                                   | <p>1M/A calculating years</p> <p>1C converting years to months</p> <p>1A additional months</p> <p>1CA total number of months.</p> <p><b>AO</b></p> <p>(4)</p> | F<br>L2        |
| 2.1.4                        | <p>Total contribution value</p> <p>✓ M/A</p> <p>= <math>(5 \times 12) \times R740,22</math> ✓ RT</p> <p>= R44 413,20 ✓ CA</p>                                                                                                                                                                                                                                                                                                        | <p>1M/A multiplying (5 and 12)</p> <p>1RT reading monthly contribution</p> <p>1CA total contribution</p> <p><b>AO</b></p> <p>NPR</p> <p>(3)</p>               | F<br>L2        |
| 2.1.5                        | <p>a greater / an increased/ a higher / more/ bigger/ larger/ inflated / better ✓✓ A</p>                                                                                                                                                                                                                                                                                                                                             | <p>2A correct missing words</p> <p>(2)</p>                                                                                                                    | F<br>L1        |

| Ques  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Explanation                                                                                                                                                                                                                                                                                                        | Topic/L |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 2.1.6 | $\begin{aligned} & \checkmark\text{MA} \\ & \text{R}740,22 + \text{R}740,22 \times 8,5\% \\ & = \text{R}740,22 + \text{R}62,9187 \quad \checkmark\text{M} \\ & = \text{R}803,14 \end{aligned}$ <p style="text-align: center;"><b>OR</b></p> $\begin{aligned} & \checkmark\text{M} \\ & \text{R}740,22 \times 108,5\% \quad \checkmark\text{MA} \\ & = \text{R}803,14 \end{aligned}$ <p style="text-align: center;"><b>OR</b></p> $\begin{aligned} & 740,22 \times 8,5\% = 62,9187 \quad \checkmark\text{MA} \\ & \therefore 803,14 - 62,9187 = 740,22 \quad \checkmark\text{M} \end{aligned}$                                                                                      | <p>1MA percentage</p> <p>1M adding two values</p> <p><b>OR</b></p> <p>1M multiplying</p> <p>1MA 108,5%</p> <p><b>OR</b></p> <p>1MA percentage</p> <p>1M subtracting values</p> <p style="text-align: right;">(2)</p>                                                                                               | F<br>L1 |
| 2.2.1 | $\begin{aligned} \text{Hourly overtime rate} &= \text{R}17,76 \times 1\frac{1}{3} \quad \checkmark\text{MA} \\ &= \text{R}23,68 \quad \checkmark\text{CA} \end{aligned}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>1MA hours</p> <p>1CA rate</p> <p><b>AO</b></p> <p style="text-align: right;">(2)</p>                                                                                                                                                                                                                            | F<br>L1 |
| 2.2.2 | $\begin{aligned} \text{2017 Sunday wage rate} &= 19,39 \times 150\% = \text{R}29,09 \quad \checkmark\text{MA} \quad \checkmark\text{A} \\ \text{Total wage} &= 3 \times 9 \times \text{R}29,09 \quad \checkmark\text{A} \quad \checkmark\text{M} \\ &= \text{R}785,43 \quad \checkmark\text{CA} \end{aligned}$ <p style="text-align: center;"><b>OR</b></p> $\begin{aligned} \text{2016 Sunday wage rate} &= \text{R}17,90 \times 150\% = \text{R}26,85 \quad \checkmark\text{MA} \quad \checkmark\text{A} \\ \text{Total wage} &= 3 \times 9 \times \text{R}26,85 \quad \checkmark\text{A} \quad \checkmark\text{M} \\ &= \text{R}724,95 \quad \checkmark\text{CA} \end{aligned}$ | <p>1MA increasing by 150%</p> <p>1A Sunday hourly rate</p> <p>1A hours per day</p> <p>1M multiplying</p> <p>1CA wage</p> <p><b>AO</b></p> <p>1MA increasing by 150%</p> <p>1ASunday hourly rate</p> <p>1A hours per day</p> <p>1M multiplying</p> <p>1CA wage</p> <p>NPR</p> <p style="text-align: right;">(5)</p> | F<br>L2 |

| Ques         | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                             | Topic/L |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 2.2.3<br>(a) | $\begin{aligned} \text{\% increase} &= \frac{17,76 - 16,40}{16,40} \times 100\% \quad \checkmark M \\ &= 8,29268\dots\% \\ &\approx 8,3\% \end{aligned}$ <p style="text-align: center;">OR</p> $\begin{aligned} \text{\% increase} &= \frac{19,39 - 17,90}{17,90} \times 100\% \quad \checkmark M \\ &= 8,324\dots\% \\ &\approx 8,3\% \end{aligned}$ <p style="text-align: center;">OR</p> $16,40 \times 1,083 = 17,76 \quad \checkmark M$ <p style="text-align: center;">OR</p> $17,90 \times 1,083 = 19,39 \quad \checkmark M$ <p style="text-align: center;">OR</p> $17,76 \div 1,083 = 16,40 \quad \checkmark M$ <p style="text-align: center;">OR</p> $19,39 \div 1,083 = 17,90 \quad \checkmark M$ | <p>1M percentage<br/>1A correct values used</p> <p style="text-align: center;">OR</p> <p>1M percentage<br/>1A correct values used</p> <p style="text-align: center;">OR</p> <p>1M percentage<br/>1A correct values used</p> <p style="text-align: center;">OR</p> <p>1M percentage<br/>1A correct values used<br/>OR</p> <p>1M percentage<br/>1A correct values used<br/>OR</p> <p>1M percentage<br/>1A correct values used<br/>(2)</p> | F<br>L1 |
| 2.2.3<br>(b) | $A \times 108,3\% = 21,93 \quad \checkmark RT$ $A = \frac{21,93}{108,3\%} \quad \checkmark M$ $= R20,25 \quad \checkmark CA$ <p style="text-align: center;">OR</p> $A = \frac{21,93}{1,083} \quad \checkmark M$ $= R20,25 \quad \checkmark CA$                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>1RT reading values</p> <p>1M dividing by 108,3%</p> <p>1CA amount</p> <p style="text-align: center;">OR</p> <p>1RT reading values<br/>1M dividing by 108,3%</p> <p>1CA amount<br/><b>AO</b><br/>(3)</p>                                                                                                                                                                                                                              | F<br>L2 |

| Ques  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Explanation                                                                                                                                                                                                                                                                                                          | Topic/L |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 2.2.4 | <p>2017</p> <p>Total Weekly Wage ✓MA ✓RT<br/> <math>= (6 \times 9 \times R17,76) + (9 \times 150\% \times R17,76)</math></p> <p><math>= R959,04 + R239,76</math></p> <p><math>= R1\,198,80</math> ✓CA</p> <p style="text-align: center;"><b>OR</b></p> <p>2016</p> <p>Total weekly wage ✓MA ✓RT<br/> <math>= (6 \times 9 \times R16,40) + (9 \times 150\% \times R16,40)</math></p> <p><math>= R1\,107,00</math> ✓CA</p>                                                        | <p>1RT reading value from the table</p> <p>1MA multiply with no. of days and hours</p> <p>1CA simplification</p> <p style="text-align: center;"><b>OR</b></p> <p>1RT reading value from the table</p> <p>1MA multiply with no. of days and hours</p> <p>1CA simplification</p> <p style="text-align: right;">(3)</p> | F<br>L2 |
| 2.3   | <p>Total Income for the day<br/> <math>= 7 \times R70 + 35 \times R50 + 4 \times R75</math> ✓✓RT ✓M</p> <p><math>= R490 + R1\,750 + R300</math></p> <p><math>= R2\,540</math> ✓CA</p> <p style="text-align: center;"><b>OR</b></p> <p>Income from bakkies <math>= 7 \times R70 = R490</math> ✓A<br/> Income from Cars <math>= 35 \times R50 = R1\,750</math> ✓A<br/> Income from minibus <math>= 4 \times R75 = R300</math> ✓A<br/> Total Income <math>= R2\,540</math> ✓CA</p> | <p>2RT correct values</p> <p>1M multiply price by vehicle type</p> <p>1CA total income</p> <p style="text-align: center;"><b>OR</b></p> <p>1A bakkies</p> <p>1A cars</p> <p>1A minibus</p> <p>1CA total income</p> <p>AO</p> <p style="text-align: right;">(4)</p>                                                   | F<br>L1 |

| Ques         | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Explanation                                                                                                                                                                                                                                                                                                                                                     | Topic/L     |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 2.4.1        | <p>Employer provides people job/work for pay</p> <p style="text-align: right;">✓✓O</p> <p style="text-align: center;"><b>OR</b></p> <p>Employer is the company/individual who offers work opportunities for pay. ✓✓O</p> <p style="text-align: center;"><b>OR</b></p> <p>Employer owner of the company ✓✓O</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>2O explanation</p> <p style="text-align: right;">(2)</p>                                                                                                                                                                                                                                                                                                     | F<br>L1     |
| 2.4.2        | <p style="text-align: right;">✓O</p> <p>Get a few months reduced income after termination of work.</p> <p style="text-align: right;">✓O</p> <p style="text-align: center;"><b>OR</b></p> <p>To give employee a <b>short-term financial relief</b> should he/she become <b>unemployed</b>. ✓O</p> <p style="text-align: right;">✓O</p> <p style="text-align: center;"><b>OR</b></p> <p><b>Make provision</b> for some income when a person becomes <b>unemployed or retrenched</b> or retired from work. ✓O</p>                                                                                                                                                                                                                                                                                                                   | <p>2O reason</p> <p style="text-align: right;">(2)</p>                                                                                                                                                                                                                                                                                                          | F<br>L1     |
| 2.4.3<br>(a) | <p style="text-align: right;">✓RT</p> <p><math>B = R6\,272,16 - (R1\,184,40 + R350,88)</math></p> <p style="text-align: right;">✓M</p> <p><math>= R4\,736,88</math> ✓CA</p> <p style="text-align: center;"><b>OR</b></p> <p style="text-align: right;">✓M</p> <p><math>B = 9 \times 6 \times 4 \times 21,93</math> ✓RT</p> <p style="text-align: right;">✓CA</p> <p><math>= R4\,736,88</math> ✓CA</p>                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>1RT amounts<br/>1M subtracting<br/>1CA value of B</p> <p style="text-align: center;"><b>OR</b></p> <p>1RT amounts<br/>1M multiplying all values<br/>1CA value of B<br/>Accept B =<br/>(R5 131,62<br/>If 26 days used)</p> <p style="text-align: right;">(3)</p>                                                                                              | F<br>L1     |
| 2.4.3<br>(b) | <p>1% of gross salary = <math>R6\,272,16 - R6\,209,44</math> ✓MA</p> <p style="text-align: right;">✓A</p> <p><math>= R62,72</math> ✓A</p> <p>Total UIF amount = <math>2 \times R62,72</math></p> <p style="text-align: right;">✓CA</p> <p><math>= R125,44</math> ✓CA</p> <p style="text-align: center;"><b>OR</b></p> <p style="text-align: right;">✓A</p> <p>Total UIF amount = <math>2 \times (1\% \text{ of } R6\,272,16)</math></p> <p style="text-align: right;">✓MA</p> <p><math>= 2 \times R62,7216</math> ✓MA</p> <p style="text-align: right;">✓CA</p> <p><math>= R125,44</math> ✓CA</p> <p style="text-align: center;"><b>OR</b></p> <p style="text-align: right;">✓✓ MA</p> <p>Total UIF amount = <math>2\% \text{ of } R6\,272,16</math></p> <p style="text-align: right;">✓CA</p> <p><math>= R125,44</math> ✓CA</p> | <p>1MA subtracting correct values<br/>1A simplification</p> <p>1CA total amount payable</p> <p style="text-align: center;"><b>OR</b></p> <p>1A calculating 1%</p> <p>1MA 2 contributions<br/>1CA amount</p> <p style="text-align: center;"><b>OR</b></p> <p>2MA Calculating 2% of salary<br/>1CA amount<br/><b>AO</b></p> <p style="text-align: right;">(3)</p> | F<br>L2     |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                 | <b>[44]</b> |



| <b>QUESTION 3 [25 MARKS]</b> |                                                                                                                                                                                                                                                                                                          |                                                                                                |                |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------|
| <b>Ques</b>                  | <b>Solution</b>                                                                                                                                                                                                                                                                                          | <b>Explanation</b>                                                                             | <b>Topic/L</b> |
| 3.1.1                        | $\checkmark$ RT $\checkmark$ RT<br>6 months to 2 years. OR ( $\frac{1}{2}$ year to 2 years)<br>$\checkmark$ RT $\checkmark$ RT<br>OR 6 months to 24 months<br>$\checkmark$ RT $\checkmark$ RT                                                                                                            | 2RT age<br>Accept 23-24 months<br>(2)                                                          | M<br>L1        |
| 3.1.2                        | 8 kg $\checkmark\checkmark$ RT                                                                                                                                                                                                                                                                           | 2RT mass/weight<br>(2)                                                                         | M<br>L1        |
| 3.1.3                        | 12 months to 15 months $\checkmark\checkmark$ RT                                                                                                                                                                                                                                                         | 2RT (one age in this range)<br>(2)                                                             | M<br>L1        |
| 3.1.4                        | February $\checkmark\checkmark$ A                                                                                                                                                                                                                                                                        | 2A correct month<br>(2)                                                                        | M<br>L1        |
| 3.1.5                        | $\text{BMI} = \frac{\text{weight (in kg)}}{(\text{height in m})^2}$ $19,5 \text{ kg/m}^2 = \frac{11,2}{(\text{height in m})^2} \quad \checkmark \text{ SF}$ $\checkmark \text{ M}$ $\text{Height} = \sqrt{\frac{11,2}{19,5}} \quad \checkmark \text{ M}$ $= 0,758 \text{ m} \quad \checkmark \text{ CA}$ | 1SF correct values<br>1M new subject<br>1M finding sq. root<br>1CA simplification<br>AO<br>(4) | M<br>L2        |
| 3.2.1                        | $\text{Distance} = \frac{55 \text{ litre}}{7,6 \text{ litre}} \times 100 \text{ km} \quad \checkmark \text{ MA}$ $= 723,68$ $\approx 724 \text{ km} \quad \checkmark \text{ R}$                                                                                                                          | 1MA multiply by 100<br>1MA divide by 7,6<br>1R distance<br><b>AO</b><br>(3)                    | M<br>L2        |
| 3.2.2                        | $\text{Average speed} = \frac{\checkmark \text{ SF } 189}{01\text{h}45} = \frac{189}{1,75} \quad \checkmark \text{ C}$ $= 108 \text{ km/h} \quad \checkmark \text{ CA}$                                                                                                                                  | 1C to hours<br>1SF correct values<br>1CA Average speed<br><b>AO</b><br>(3)                     | M<br>L2        |
| 3.3.1                        | $\text{Volume} = 53,34\text{cm} \times 17,78\text{cm} \times 42,32 \text{ cm} \quad \checkmark \text{ SF}$ $= 40\,135,66 \text{ cm}^3 \quad \checkmark \text{ CA}$ $= \frac{40\,135,66}{1000} \text{ litres} \quad \checkmark \text{ MA}$ $= 40 \text{ litres} \quad \checkmark \text{ R}$               | 1SF correct substitution<br>1CA volume<br>1MA dividing by 1 000<br>1R volume in litres<br>(4)  | M<br>L3        |
| 3.3.2                        | $P_{(U)} = \frac{3}{12} \text{ or } \frac{12}{48} \quad \checkmark \text{ A}$ $= 0,25 \quad \checkmark \text{ CA}$                                                                                                                                                                                       | 1A numerator<br>1A denominator<br>1CA decimal<br><b>AO</b><br>(3)                              | P<br>L2        |
|                              |                                                                                                                                                                                                                                                                                                          |                                                                                                | <b>[25]</b>    |

| <b>QUESTION 4 [19 MARKS]</b> |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                  |                |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Ques</b>                  | <b>Solution</b>                                                                                                                                                                                                                                                                                                                                                                         | <b>Explanation</b>                                                                                                                                                                                               | <b>Topic/L</b> |
| 4.1.1                        | ✓ A ✓ A<br>N10 and N2                                                                                                                                                                                                                                                                                                                                                                   | 1A N10<br>1A N2<br>(2)                                                                                                                                                                                           | MP<br>L1       |
| 4.1.2                        | ✓✓ RT<br>Mountain Zebra N.P                                                                                                                                                                                                                                                                                                                                                             | 2RT correct name<br>(2)                                                                                                                                                                                          | MP<br>L1       |
| 4.1.3                        | Kirkwood ✓✓ A                                                                                                                                                                                                                                                                                                                                                                           | 2A correct hometown<br>(2)                                                                                                                                                                                       | MP<br>L2       |
| 4.1.4                        | $\begin{aligned} \text{Distance} &= 25 \text{ km} + (207 \text{ km} - 22 \text{ km}) + 24 \text{ km} \\ &= 234 \text{ km} \quad \checkmark \text{ CA} \end{aligned}$ <p style="text-align: center;"><b>OR</b></p> $\begin{aligned} \text{Distance} &= 24 \text{ km} + (380 \text{ km} - 195 \text{ km}) + 25 \text{ km} \\ &= 234 \text{ km} \quad \checkmark \text{ CA} \end{aligned}$ | 1RT correct distances<br>1M adding<br>1CA difference<br><br><b>OR</b><br>1RT correct distances<br>1M adding<br><br>1CA difference<br><b>AO</b><br>(3)                                                            | MP<br>L2       |
| 4.2.1                        | 3750 mm ✓✓ A                                                                                                                                                                                                                                                                                                                                                                            | 2A distance<br>(2)                                                                                                                                                                                               | MP<br>L1       |
| 4.2.2                        | Total exterior length of western wall<br>= 3 550 mm + 3750 mm ✓ A<br>= 7 300 mm<br>= 7,3 m ✓ C<br><br><p style="text-align: center;"><b>OR</b></p> Total exterior length of western wall<br>= 3,55 m + 1,7 m + 2,05 m ✓ A<br>= 7,3 m ✓ C                                                                                                                                                | 1A adding 3 correct distances<br><br>1C conversion to m<br><p style="text-align: center;"><b>OR</b></p> 1A adding correct distances of Eastern wall (opp. Side //)<br><br>1C conversion to m<br><b>AO</b><br>(2) | MP<br>L1       |
| 4.2.3                        | Living room. ✓✓ A                                                                                                                                                                                                                                                                                                                                                                       | 2A<br>(Passage and/or Kitchen maximum 1 mark)<br>(2)                                                                                                                                                             | MP<br>L1       |
| 4.2.4                        | Bedroom 2 ✓✓ A                                                                                                                                                                                                                                                                                                                                                                          | 2A room<br>(2)                                                                                                                                                                                                   | MP<br>L1       |
| 4.2.5                        | Wash basin/sink/water basin <b>OR</b> Shower <b>OR</b> ✓✓ A<br>Cupboard                                                                                                                                                                                                                                                                                                                 | 2A any item<br>(2)                                                                                                                                                                                               | MP<br>L1       |
|                              |                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                  | <b>[19]</b>    |

| <b>QUESTION 5 [32MARKS]</b> |                                                                                                                                                          |                                                                                                           |                |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------|
| <b>Ques</b>                 | <b>Solution</b>                                                                                                                                          | <b>Explanation</b>                                                                                        | <b>Topic/L</b> |
| 5.1.1                       | Numerical ✓✓A                                                                                                                                            | 2A answer<br>(2)                                                                                          | D<br>L1        |
| 5.1.2                       | 50% ✓✓A                                                                                                                                                  | 2A answer<br>(2)                                                                                          | D<br>L1        |
| 5.1.3                       | Range = Maximum - minimum ✓M<br><br>34 = 90 – F ✓RT<br><br>F = 90 – 34<br>= 56 ✓CA                                                                       | 1M range concept (can be implied)<br><br>1RT correct values<br>1CA simplification<br><br><b>AO</b><br>(3) | D<br>L2        |
| 5.1.4                       | Median % = $\frac{67 + 69}{2}$ ✓M<br>= 68 ✓A                                                                                                             | 1M concept of median<br>1A median<br><b>AO</b><br>(2)                                                     | D<br>L2        |
| 5.1.5                       | Inter-quartile range = $Q_3 - Q_1$ ✓M<br>Inter-quartile range = 70 – 20 ✓RT<br>= 50 ✓CA                                                                  | 1M IQR concept(implied)<br>1RT correct values<br>1CA simplification<br><br><b>AO</b><br>(3)               | D<br>L2        |
| 5.1.6                       | 66 ✓✓A                                                                                                                                                   | 2A mode<br>(2)                                                                                            | D<br>L1        |
| 5.1.7                       | Mean = $\frac{\text{sum of the marks}}{\text{total number of learners}}$<br><br>$70 = \frac{1741 + H}{26}$ ✓A ✓MA<br><br>1 820 = 1 741 + H<br>H = 79 ✓CA | 1MA mean concept (implied)<br>1A adding values<br><br><br>1CA value of H<br><b>AO</b><br>(3)              | D<br>L3        |
| 5.1.8                       | P <sub>(equal marks)</sub> = $\frac{13}{26}$ ✓A<br>= $\frac{1}{2}$ ✓CA                                                                                   | 1A numerator<br>1A denominator<br><br>1CA simplification<br><br><b>AO</b><br>(3)                          | P<br>L3        |

| Ques  | Solution                                                                                                                                                                                                                                                                                                                                                                  | Explanation                                                                                                                                                                                                                                  | Topic/L     |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 5.2.1 | $Q = 288\,912 + 393\,954 + 94\,552 + 192\,933 + 650\,033 + 299\,994 + 575\,371 + 312\,273 + 372\,090$ $= 3\,180\,118 \quad \checkmark \text{CA}$ <p style="text-align: center;"><b>OR</b></p> $Q = 15\,353\,036 - 12\,172\,919 = 3\,180\,118 \quad \checkmark \text{CA}$                                                                                                  | <p>1MA adding all Non-literate adults</p> <p>1CA Simplification</p> <p style="text-align: center;"><b>OR</b></p> <p>1MA subtracting Literate from Total</p> <p>1CA simplification</p> <p><b>AO</b></p> <p style="text-align: right;">(2)</p> | D<br>L1     |
| 5.2.2 | $\% \text{ literate} = \frac{12\,172\,919}{15\,353\,036} \times 100 \quad \checkmark \text{RT}$ $\approx 79,3 \quad \checkmark \text{CA}$ <p style="text-align: center;"><b>OR</b></p> $\% \text{ literate} = 100 - \left( \frac{3\,180\,118}{15\,353\,036} \times 100 \right) \quad \checkmark \text{M}$ $\approx 100 - 20,71$ $\approx 79,3 \quad \checkmark \text{CA}$ | <p>1RT numerator and denominator</p> <p>1M multiply by 100</p> <p>1CA answer</p> <p><b>AO</b></p> <p>1RT numerator and denominator</p> <p>1M multiply by 100</p> <p>1CA answer</p> <p>NPR</p> <p style="text-align: right;">(3)</p>          | D<br>L2     |
| 5.2.3 | <p>Non Literate: Literacy</p> $= 650\,033 : 1\,956\,497 \quad \checkmark \text{RT}$ $= \frac{650\,033}{650\,033} : \frac{1\,956\,497}{650\,033} \quad \checkmark \text{MA}$ $= 1 : 3,009842577$ $\approx 1 : 3 \text{ or } 1 : 3,01 \text{ or } 1 : 3,0099 \quad \checkmark \text{CA}$                                                                                    | <p>1RT both values</p> <p>1MA ratio in correct order</p> <p>CA unit ratio</p> <p>NPR</p> <p style="text-align: right;">(3)</p>                                                                                                               | D<br>L2     |
| 5.2.4 | $244\,282; 609\,029; 760\,029; 784\,347; 922\,171; 1\,120\,567; 1\,762\,494; 1\,956\,497; 4\,013\,463$                                                                                                                                                                                                                                                                    | <p>2MA arranging</p> <p style="text-align: right;">(2)</p> <p>(Descending 1 Mark; Omitting 1 value 1 mark)</p>                                                                                                                               | D<br>L1     |
| 5.2.5 | Northern Cape (NC) $\checkmark \checkmark \text{A}$                                                                                                                                                                                                                                                                                                                       | <p>2A correct province</p> <p style="text-align: right;">(2)</p>                                                                                                                                                                             | D<br>L1     |
|       |                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                              | <b>[32]</b> |

**TOTAL: 150**