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Province of the
EASTERN CAPE
EDUCATION

# O.R TAMBO
# INLAND DISTRICT

## GRADE 11

**MATHEMATICAL LITERACY**
**PAPER 2**
**MEMORANDUM**
**PRE EXAMINATION**
**JUNE 2023**

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**MARKS: 75**

| Codes | Explanation |
|---|---|
| M | Method |
| MA | Method with Accuracy |
| CA | Consistent Accuracy |
| A | Accuracy |
| C | Conversion |
| D | Define |
| J | Justification / Reason / Explain |
| S | Simplification |
| RT / RD / RG | Reading from a table OR a graph OR a diagram OR a map OR a plan |
| F | Choosing the correct formula |
| SF | Substitution in a formula |
| O | Opinion |
| P | Penalty, for no units, incorrect rounding-off, etc. |
| R | Rounding-off |
| NP | No penalty for rounding-off OR omitting units |

**This Memorandum consists of 6 pages including the cover page and grid analysis.**

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| QUESTION 1[32] | | | | |
|---|---|---|---|---|
| **Qns** | **Solution** | **Explanation** | **Marks** | **TL** |
| 1.1.1 | Volume is the amount of space occupied by a three-dimensional shape or object. ✓✓ | 2M (Definition) | (2) | 1 |
| 1.1.2 | Volume = $\pi \times r^2 \times h$<br>= 3,142 × 0,3m × 0,3m × 1,2m ✓✓✓<br>= $0,339336m^3$ ✓ | 1M, C<br>1M, radius<br>1SF<br>1CA | (4) | 2 |
| 1.1.3 | Volume = l × b× h<br>= 12,5m × 5m × 2,4m ✓✓<br>= $150m^3$ | 1SF<br>1 SF<br>1 CA | (3) | 2 |
| 1.1.4 | Number of drums = $\frac{150m^3}{0,339336m^3}$ ✓<br>= 442,03974282 ✓<br>= 442 ✓ | 1 SF<br>1CA<br>1R, (CA) | (3) | 3 |
| 1.1.5 | Area(open) = 2 × 3,142 × 0,3m × 1,2m ✓✓<br>= $2,26m^2$ ✓ | 1F<br>1SF<br>1CA | (3) | 2 |
| 1.1.6 | The area of one drum = $2,26m^2$<br>Number of litres to paint one drum = $\frac{2,26m^2}{1,5m^2}$ ✓<br>= 1,50666667 ✓<br>Two coats for one drum = 1,50666667 × 2✓<br>= 3,013333<br>Number of litres paint 80 drums = 3,013333×80 ✓<br>= 241,066664<br>= 242 ✓ | 1M, (Division)<br>1A<br>1M, (Multiply by 2)<br>1M, (× 80)<br>1 CA | (5) | 4 |
| 1.2.1 | Perimeter is the distance around the edges of a 2-dimensional shape. ✓✓ | 2M, Definition | (2) | 1 |
| 1.2.2 | 10,4 inches ✓✓ | 2 RD | (2) | 1 |

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| | | | | |
|---|---|---|---|---|
| 1.2.3 | Area of A = length × width<br>= 10,4 inches × 18,796cm ✓<br>= (10,4 × 2,54) × 18,796 ✓<br>= 26,416 × 18,796 ✓<br>= 496,515136$cm^2$ ✓<br>= 496,5$cm^2$ ✓ | 1 RT<br>1C (Conversion)<br>1M (Multiplication)<br>1CA (Answer)<br>1R (Rounding 1dp) | (5) | 3 |
| 1.2.4 | $\frac{Perimeter}{2} = Length + Width$<br>$\frac{201,93cm}{2} = 66,04cm + Width$ ✓<br>100,965= 66,04 + width<br>100,965-66,04 = width ✓<br>Width = 34,925cm ✓ | 1 SF<br>1 S<br>1 CA | (3) | 2 |
| **QUESTION 2[19]** | | | | |
| Quest. | Solution | Explanation | Mark | TL |
| 2.1 | 547 x 1 000 ✓<br>547 000 m ✓ | 1 MA<br>1A(Answer) | (2) | 1 |
| 2.2 | N7 ✓✓<br>N14 ✓✓ | 2A(Accuracy)<br>2A(Accuracy) | (4) | 1 |
| 2.3 | 4 ✓✓ | 2A(Accuracy) | (2) | 1 |
| 2.4 | From Vanrhynsdorp move south on the N7 ✓<br>Pass Clanwilliam and Citrusdal ✓<br>Turn left on R44<br>Pass Tulbagh and move forward till you reach Ceres ✓ | 3 A(Accuracy) giving clear directions to Ceres | (3) | 3 |
| 2.5 | Probability = $\frac{2}{5}$ = 0,40 ✓ | 1RM (numerator)<br>1RM(denominator)<br>1 CA | (3) | 2 |
| 2.6 | Distance = 495 km ✓<br>Time = 4+ 30 ÷ 60 = 4,5 hours ✓ | 1 A corr. Distance<br>1C convert to hours | | 4 |

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| | | | | |
|---|---|---|---|---|
| | Speed = $\frac{495km}{4,5hrs}$ ✓<br>= 110 km /hr ✓<br><br>He is within the accepted speed limit ✓ | 1SF<br>1CA speed<br>1 O(Opinion) | (5) | |
| **QUESTION 3[24]** | | | | |
| Quest. | Solution | Explanation | Mark | TL |
| 3.1.1 | Bar scale ✓✓ | 2A (Accuracy) | (2) | 1 |
| 3.1.2 | Johannesburg<br>Kimberley ✓<br>Beaufort West ✓<br>Oudtshoorn<br>(Any two) | 2A (Accuracy) | (2) | 1 |
| 3.1.3 | South West OR SW ✓✓ | 2A (Accuracy) | (2) | 2 |
| 3.1.4 | Use N1 and the turn to N11 and finally N3. ✓✓✓<br>OR<br>Use N1 then turn to N11 and finally turn to N2. ✓✓✓<br>OR<br>Use N1 then to (N5 or N11) and then turn to N3. ✓✓✓ | 3A (Accuracy) | (3) | 3 |
| 3,1.5 | Distance from Cape to Pretoria = 10,4 cm ✓<br>OR between (10,2cm to 10,6cm)<br>Scale = 1:16 000 000<br>Then 10,4cm: $x$<br>Actual distance = 10,4cm× 16 000 000 ✓<br>= 166 400 000<br>= 166 400 000 ÷ 100 000km ✓<br>= 1 664 km ✓<br>OR | 1M/A (from the map)<br>1 MCA<br>1C (cm to km)<br>1A (Accuracy) | (4) | 4 |

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| | | | | |
|---|---|---|---|---|
| | If 10,2cm; then actual distance = 1 632km<br>If 10,6cm; then actual distance = 1 696km | | | |
| 3.1.6 | Distance = 986km<br>No. of litres = $\frac{986km \times 2,5l}{30km}$ ✓✓<br>= 82,17 litres ✓ | 1M (× by 2,5*l*)<br>1M (÷ 30*km*)<br>1CA | (3) | 3 |
| 3.1.7 | Fuel cost = 82,17 × 1 650 cent ✓<br>= 135 580,5 cents<br>= 135 580,5 ÷ 100 ✓<br>= R1 355,81 ✓ | 1M (× 1650 cents)<br>1C (Cent to rand)<br>1CA (Answer) | (3) | 3 |
| 3.2.1 | Green balls = 24 – (8 + 3 + 3) = 10 ✓<br>Prob. = $\frac{10}{24} = \frac{5}{12}$ ✓ | 1M<br>1M (numerator)<br>1M (denominator) | (3) | 2 |
| 3.2.2 | Prob. $\frac{0}{24} = 0$ ✓ | 1M (numerator)<br>1M (denominator)<br>OR<br>2 AO(only answer) | (2) | 2 |
| | | **TOTAL:** | | **75** |

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| TAXONOMY LEVELS | | | | | |
|---|---|---|---|---|---|
| GRADE 11 | | | | | |
| MATHEMATICAL LITERACY | | | | | |
| PAPER 2 TERM 2 – 2022 | | | | | |
| MARKS: 50 | | | | | |
| QUESTION | KNOWLEDGE | ROUTINE PROCEDURES | COMPLEX PROCEDURES | PROBLEM SOLVING | TOTAL |
| DESIRED % | 30% | 30% | 20% | 20% | 100% |
| 1.1.1 | 2 | | | | 2 |
| 1.1.2 | | 4 | | | 2 |
| 1.1.3 | | 3 | | | 2 |
| 1.1.4 | | | 3 | | 2 |
| 1.1.5 | | 3 | | | 3 |
| 1.1.6 | | | | 5 | 2 |
| 1.2.1 | 2 | | | | 2 |
| 1.2.2 | | | 5 | | 2 |
| 1.2.3 | | 3 | | | 3 |
| 1.2.4 | 2 | | | | 2 |
| 2.1 | 2 | | | | 2 |
| 2.2 | 4 | | | | 4 |
| 2.3 | 2 | | | | 2 |
| 2.4 | 3 | | | | 3 |
| 2.5 | | 3 | | | 3 |
| 2.6 | | | | 5 | 5 |
| 3.1.1 | 2 | | | | 2 |
| 3.1.2 | 2 | | | | 2 |
| 3.1.3 | 2 | | | | 2 |
| 3.1.4 | | | 3 | | 3 |
| 3.1.5 | | | | 4 | 4 |
| 3.1.6 | | | 3 | | 3 |
| 3.1.7 | | | 3 | | 3 |
| 3.2.1 | | 3 | | | 3 |
| 3.2.2 | | 2 | | | 2 |
| **Total** | **23** | **21** | **17** | **14** | **75** |
| **Actual %** | **30** | **28** | **23** | **19** | **100** |
| **Desired %** | **30%** | **30%** | **20%** | **20%** | **100** |

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