**FORM TWO MARKNG SCHEME**

| No | Working | Marks |
|---|---|---|
| 1 | Cost price = $\frac{100}{80} \times 500 = Sh.625$<br>Selling price = $\frac{110}{100} \times 625 = Sh.687.5$ | M1<br><br>M1 A1 |
| 2 | Area of sector = $\frac{60}{360} \times \frac{22}{7} \times 10.5 \times 10.5 = 57.75\ cm^2$<br>Area of triangle ABC = $0.5 \times 15.6 \times 7 = 54.6\ cm^2$<br>Area of segment = $57.75 - 54.6 = 3.15\ cm^2$ | <br>M1<br>M1 A1 |
| 3 | $3x - 4y = 1$ ..... (i)<br>$7x + y = 23$ ..... (ii)<br>$\Rightarrow y = 23 - 7x$<br>$3x - 4(23 - 7x) = 1$<br>$3x + 28x = 1 + 92$<br>$x = 3$<br>$y = 23 - 7(3) = 2$<br>Coordinates are $(3, 2)$ | <br><br><br><br>M1<br><br>M1<br>A1 |
| 4 | <table><tr><td>2</td><td>48</td><td>36</td><td>27</td></tr><tr><td>2</td><td>24</td><td>18</td><td>27</td></tr><tr><td>2</td><td>12</td><td>9</td><td>27</td></tr><tr><td>2</td><td>6</td><td>9</td><td>27</td></tr><tr><td>3</td><td>3</td><td>9</td><td>27</td></tr><tr><td>3</td><td>1</td><td>3</td><td>9</td></tr><tr><td>3</td><td>1</td><td>1</td><td>3</td></tr><tr><td></td><td>1</td><td>1</td><td>1</td></tr></table><br>LCM = $2^4 \times 3^3 = 432\ litres$ | M1<br><br>M1 A1 |
| 5 | $(5 \times 0.2525 \times 100) + (12 \times 0.1686 \times 10)$<br>$126.25 + 20.232$<br>$= 146.482$ | M1<br>M1<br>A1 |
| 6 | $3^{2x} + 3^{2x} = 54$<br>$2k = 54$<br>$k = 27 = 3^3$<br>$3^{2x} = 3^3$<br>$x = 1.5$ | <br>M1<br><br>M1<br>A1 |
| 7 | $\frac{2}{3}\ of\ \left(x - \left(\frac{1}{2}x + \frac{1}{8}x\right)\right) = 4000$<br>$\frac{1}{4}x = 4000$<br>$x = Sh.16\ 000$ | M1<br><br>M1<br>A1 |
| 8 | $\angle CHB = \angle DCI = 63°$ ⇒Corresponding angles<br>$\angle AGB = \angle HCB = 30°$ ⇒Alternate angles<br>$\angle GCJ = 180 - 93 = 87°$ | B1<br><br>M1 A1 |
| 9 | $\frac{18}{8} = \frac{6 + x}{x}$ | M1 |

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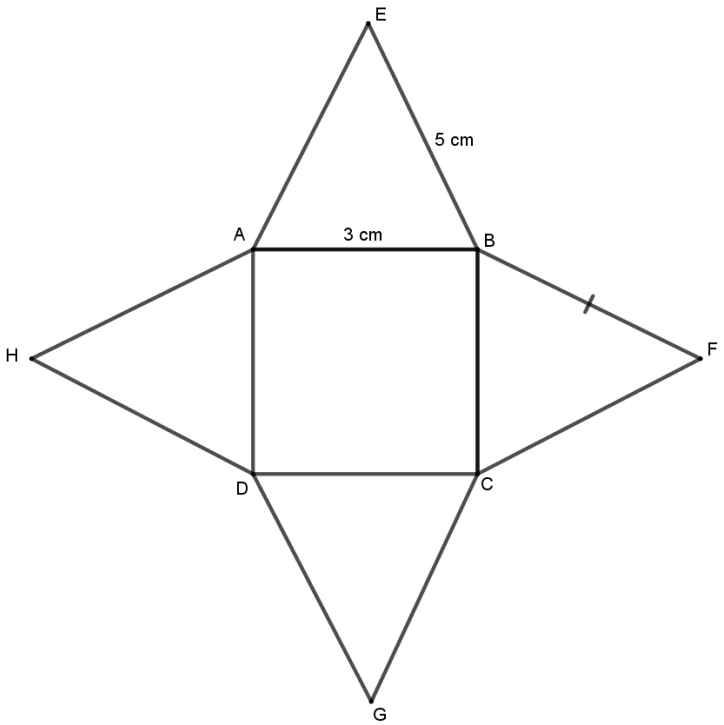
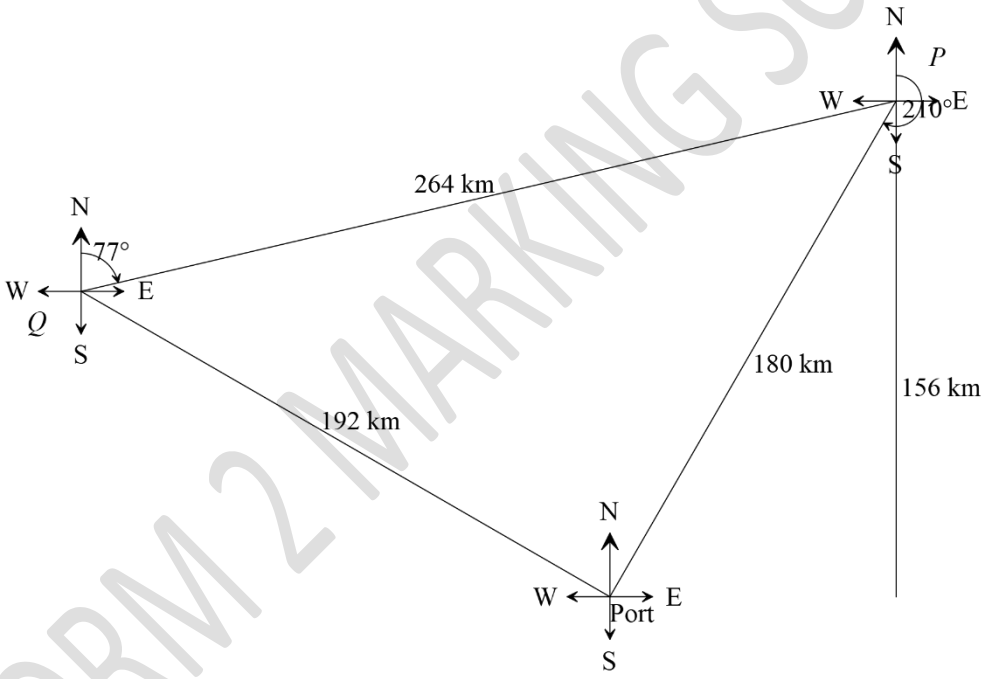
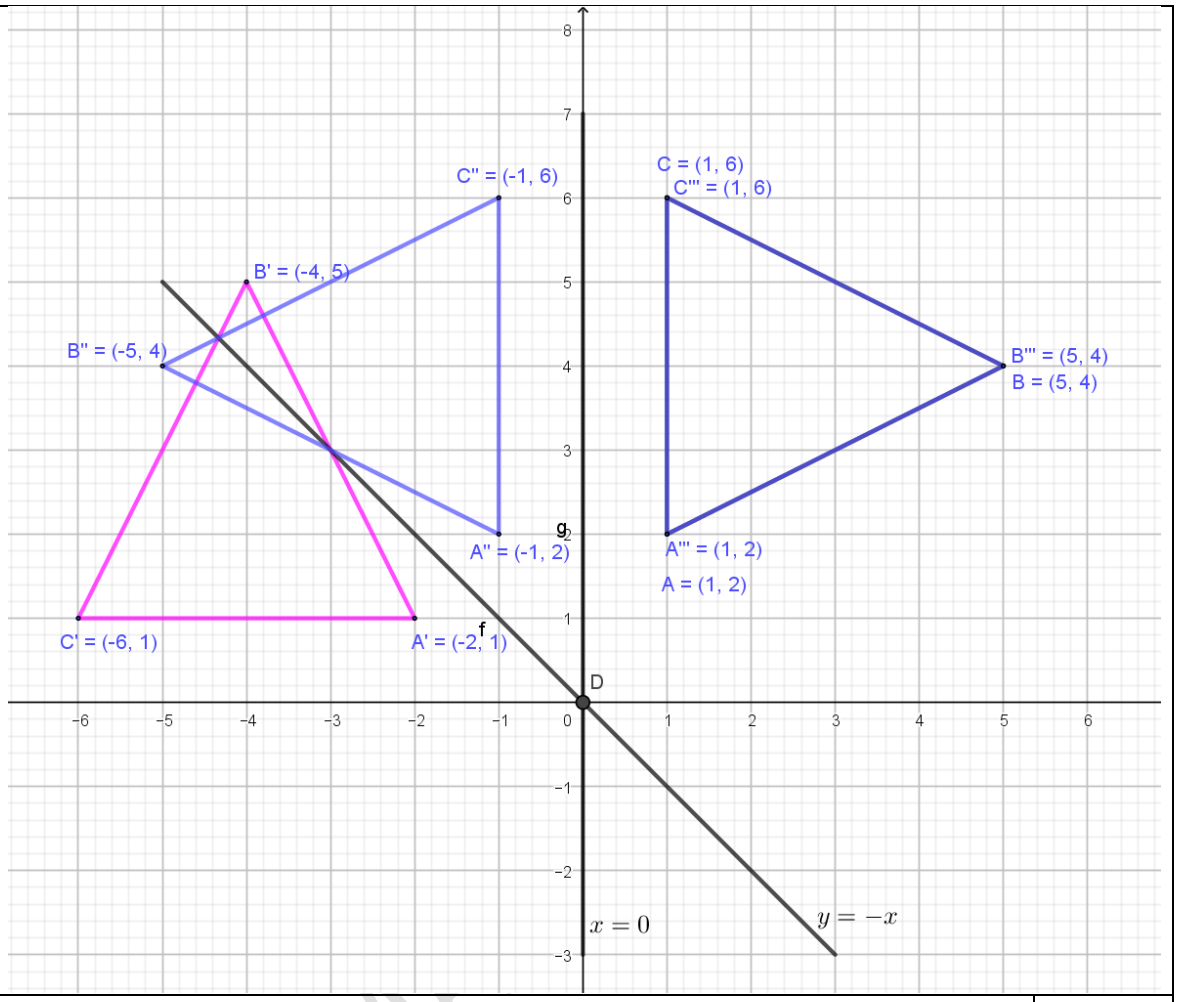
| | | |
|---|---|---|
| | $18x = 48 + 8x$<br>$x = 4.8\ cm$ | M1<br>A1 |
| 10 | $0.1573^3 = (1.573 \times 10^{-1})^3 = 3.891 \times 10^{-3}$<br>$6728^{\frac{1}{3}} = (6.728 \times 10^3)^{\frac{1}{3}} = 1.881 \times 10^1$<br>$0.003891 + 18.81 = 18.81389$ | B1<br>B1<br>B1 |
| 11 | $L.S.F = \sqrt[3]{\left(\frac{27}{8}\right)} = \frac{3}{2}$<br>A.S.F = $(3/2)^2 = \frac{9}{4}$<br>CSA = $\frac{9}{4} \times 352 = 792\ cm^2$ | M1<br>M1<br>M1 A1 |
| 12 | $\frac{\sqrt{5184}}{\sqrt[3]{2744}} = \frac{2^3 \times 3^2}{2 \times 7}$<br>$= \frac{36}{7} = 5\frac{1}{7}$ | M1 M1<br>A1 |
| 13 | $0.\dot{6} = \frac{2}{3}$<br>$0.00\dot{2}\dot{4} = \frac{2}{825}$<br>$\frac{2}{3} - \frac{2}{825} = \frac{548}{825}$ | M1<br>M1<br>A1 |
| 14 | (a)<br>  <br><br>(b) Total Surface Area = $(4 \times 7.15) + 9 = 37.6\ cm^2$ | B2<br>M1 A1 |
| 15 | Volume = $\frac{2200}{0.8} = 2750\ cm^3$ | M1 M1 |

FOR MARKING SCHEME

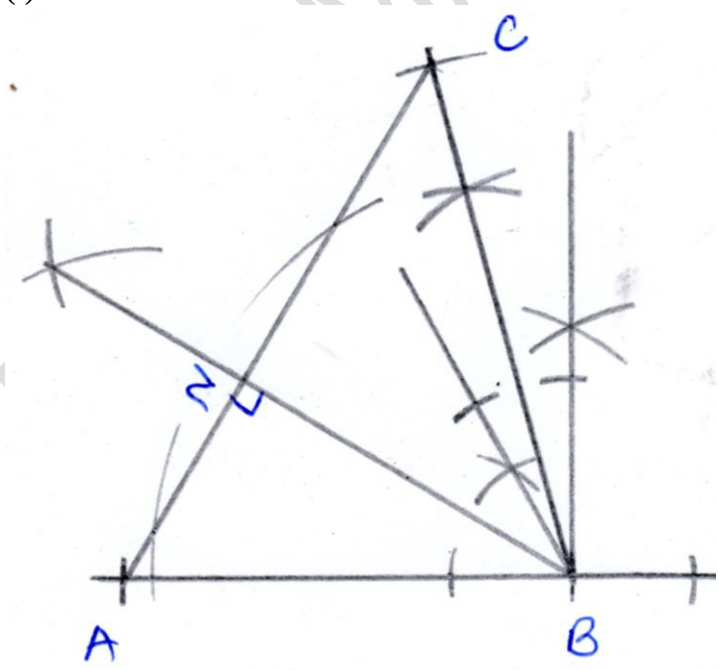
| | | |
|---|---|---|
| | Capacity = $^{2750}/_{1000} = 2.75\ litres$ | A1 |
| 16 | <table><tr><th>No</th><th>Std form</th><th>Log</th></tr><tr><td>0.64</td><td>$6.4 \times 10^{-1}$</td><td>$\bar{1}.8062$</td></tr><tr><td>$1.64^2$</td><td>$1.64 \times 10^0$</td><td>$0.2148 \times 2$</td></tr><tr><td></td><td></td><td>0.4296</td></tr><tr><td></td><td></td><td>**0.2358**</td></tr><tr><td>0.04</td><td>$4 \times 10^{-2}$</td><td>$\bar{2}.6021$</td></tr><tr><td>384.2</td><td>$3.842 \times 10^2$</td><td>2.5845</td></tr><tr><td></td><td></td><td>$\mathbf{1.1866}$</td></tr><tr><td>$N/D$</td><td>$\leftarrow\leftarrow\leftarrow\leftarrow\leftarrow$</td><td>$\mathbf{\bar{1}.0492 \div 2}$</td></tr><tr><td>**0.3347**</td><td>$10^{-1} \times 10^{0.5246}$</td><td>$\mathbf{\bar{1}.5246}$</td></tr></table> | M1- all logs<br>M1 – add, sub<br>M1 - division<br>A1- correct answer |
| 17 | (a)<br>  <br><br>(b) (i) Distance = $13.2 \times 20 = 264\ km$<br>Bearing = 077°<br>(ii) $S30°W$<br>(iii) Distance = $7.8 \times 20 = 156\ km$ | Every point B1<br>Correct bearing B1<br><br>M1 A1<br>B1<br>B1<br>M1 A1 |

FORM 2 MARKING SCHEME

18




19 (i)




B3

| | | |
|---|---|---|
| | (ii) $AC = 6.1 \pm 0.1\ cm$<br>(iii) $BN = 3.9 \pm 0.1\ cm$<br>(iii) Area = $\frac{1}{2} \times 6.1 \times 3.9$<br>$= 11.895\ cm^2$ | B2<br>B1<br>M1 M1<br>A1 |
| 20 | (a) Area of door $= 2 \times 2 \times 1.02 = 4.08\ m^2$<br>Area of windows = $4 \times 0.96 \times 0.6 = 2.304\ m^2$<br>Total area of walls = $2(4.8 \times 3) + 2(6.5 \times 3) + (6.5 \times 4.8)$<br>$= 28.8 + 39 + 31.2 = 99\ m^2$<br>Total area covered by planks = $99 - (4.08 + 2.304) = 92.616\ m^2$<br><br>(b) Number of planks = $\frac{92.616}{1.8 \times 0.15}$<br>$= 343.02 \cong 344\ planks$<br>(c) Cost of planks = $344 \times 45.5 = Sh.\ 15\ 652$ | M1<br><br>M1<br>M1 A1<br>M1 A1<br><br>M1<br>A1<br><br>M1 A1 |
| 21 | (a) (i) $m_1 = \frac{6-3}{-1+2} = 3$<br>(ii) $3 = \frac{y-6}{x+1}$<br>$y = 3x + 9$<br>(b) (i) $m_2 = -\frac{1}{3}$<br>(ii) $-\frac{1}{3} = \frac{y-6}{x+1}$<br>$x + 3y = 17$<br>(c) (i) $m_1 = m_3 = 3$<br>(ii) $3 = \frac{y-2}{x-1}$<br>$3x - 1 = y$<br>(iii) $x - intercept; x = \frac{1}{3}$<br>$y\ intercept; y = -1$ | M1<br><br>M1<br><br>A1<br><br>M1<br><br>M1<br><br>A1<br><br>M1<br>M1<br><br>A1<br><br>B1 |

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