## 2. *Similarities and enlargement*

| | | | |
|---|---|---|---|
| **1** | (a)<br>$512000:1000000$<br>$512:1000$<br>$64:125$<br>$4^3:5^3$<br>L.S.F 4:5<br>$5 \equiv 300cm$<br>$\therefore 4 \equiv \frac{4\times300}{5} = 240cm$<br>(b)<br>$25 \equiv 1200m^2$<br>$16 = \frac{16\times1200}{25} m^2$<br>$= 768m^2$<br>(c)<br>$64 \equiv 800\,kg$<br>$\therefore 125 \equiv \frac{125\times800}{64}$<br>$\equiv 1562.5kg$ | $M_1$<br>$M_1$<br>$M_1$<br>$A_1$<br>$B_1$<br>$M_1$<br>$A_1$<br>$B_1$<br>$M_1$<br>$A_1$ | ✓A.S.F<br>✓ex<br>✓V.S.F |
| **2.** | Centre<br>(x,y) A(1,4) A1(2,5)<br>$3\begin{pmatrix}1-x\\-4-y\end{pmatrix}=\begin{pmatrix}2-x\\5-y\end{pmatrix}$<br>3 – 3x = 2 – x<br>x = ½<br>-12 – 3y = 5 – y<br>y = -8 ½<br>centre ( ½ , =8 ½ ) | M1<br>M1<br>A1 | |
| | | 03 | |
| **3.** | 10 = x + 6 ✓<br>5 6<br>60 = 5x + 30<br>30 = 5x<br>6 = x ✓<br>10 = 5 + y | M1<br>A1 | Application of L.S.F |

| | | | |
|---|---|---|---|
| | 5 y<br>10y = 25 + 5y<br>5y = 25<br>Y = 5 ✓ | B1 | |