Density


$$
\begin{aligned}
& \text { Density }=\frac{\text { Mass }}{\text { Volume }} \text { Volume }=\frac{\text { Mass }}{\text { Density }} \quad \text { Mass }=\text { Density } \times \text { Volume } \\
& \begin{array}{ccc} 
& \text { Mass } & \text { Density }
\end{array} \quad \text { Volume }{ }^{3} \quad 80 \mathrm{~g} \quad 4.2 \mathrm{~g}_{\mathrm{cm}}{ }^{3} \quad 19.05 \mathrm{~cm}^{3} \\
& \text { B } \quad 1450 \mathrm{~g} \quad 5.8 \mathrm{~g} / \mathrm{cm}^{3} \quad 250 \mathrm{~cm}^{3} \\
& C \quad \frac{75 g}{1605 \mathrm{~g}} \quad \frac{160 \mathrm{~cm}^{3}}{429.05 \mathrm{~cm}^{3}}
\end{aligned}
$$

$D$ is formed from $A, B, C$
Find density of $D$

$$
\begin{aligned}
\text { Density } & =\frac{\text { Total Mass }}{\text { Total Volume }} \\
& =\frac{1605 \mathrm{~g}}{429.05 \mathrm{cn}^{3}}=3.74 \mathrm{~g} / \mathrm{cm}^{3}
\end{aligned}
$$

$A$ and $B$ are mixed and the compound $A B$ has a density of $6 \mathrm{~g} / \mathrm{cm}^{3}$ and mass of 100 g .
$A$ has a mass of 30 g and density of $4 \mathrm{~g}_{\mathrm{cn}}{ }^{3}$

Find the density of $B$

$$
\begin{array}{llll} 
& \text { Mass } & V 01 & \text { Density } \\
A & 30 \mathrm{~g} & 7.5 \mathrm{~cm}^{3} & 4 \mathrm{~g} / \mathrm{cm}^{3} \\
B & 70 \mathrm{~g} & 9.17 \mathrm{~cm}^{3} & 7.63 \mathrm{~g} / \mathrm{cm}^{3} \\
A B & 100 \mathrm{~g} & 16.67 \mathrm{~cm}^{3} & 6 \mathrm{~g} / \mathrm{cm}^{3}
\end{array}
$$

