

Solutions

2.1 Density= $540/200=2.7 \text{ g/cm}^3$.

2.2 Pressure=force/area= $120/0.03=4000$.

2.3 $750 \text{ g}=0.75 \text{ kg}$, so $18/0.75=24$.

3.1 False. $1 \text{ g/cm}^3=(0.001 \text{ kg})/(0.000001 \text{ m}^3)=1000 \text{ kg/m}^3$. Convert both mass and volume.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.