Name _____

The Basics of Density Answer Key

1. $D = \frac{60}{20} = 3.0\ \text{g/cm}^3$
2. $D = \frac{65}{50} = 1.3\ \text{g/mL}$
3. $m = 7.8 \times 10 = 78\ \text{g}$
4. $V = \frac{0.4}{0.002} = 200\ \text{mL}$
5. $V = \frac{240}{8} = 30\ \text{cm}^3$
6.
   - Object A: $\frac{200}{50} = 4.0\ \text{g/cm}^3$
   - Object B: $\frac{150}{30} = 5.0\ \text{g/cm}^3$

   → **Object B** is denser.
7. $D = \frac{90}{45} = 2.0\ \text{g/mL}$

   → Denser than water (so it would sink).
8. Both mass and volume double, so the ratio $\frac{m}{V}$ stays the same.

   → **Density remains unchanged.**
9. Volume = $5 \times 4 \times 2 = 40\ \text{cm}^3$

   $D = \frac{160}{40} = 4.0\ \text{g/cm}^3$
10. Cutting doesn't change density.

    → Each half still has **2.7 g/cm³**.