Name _____

Significant Figures and Density Dilemmas Answer Key

1. $D = \frac{25.0}{3.2} = 7.8125 \rightarrow 7.8\ \text{g/cm}^3$ (2 sig figs)
2. Volume = $2.50^3 = 15.625\ \text{cm}^3$;
   $D = 125/15.625 = 8.00\ \text{g/cm}^3$ (3 sig figs)
3. $D = 45.67/12.4 = 3.682 \rightarrow 3.68\ \text{g/cm}^3$ (3 sig figs)
4. Only 2 sig figs allowed → **2.7 g/cm³**
5. a) 0.00790 → 3 b) 1.0020 → 5 c) 120 → 2 d) 120.0 → 4
6. $D = 37/4.0 = 9.25 \rightarrow 9\ \text{g/cm}^3$ (2 sig figs)
7. a) 1.0 b) 0.999 c) 0.9987
8. $D = 56.70/7.10 = 7.9859 \rightarrow 7.99\ \text{g/cm}^3$ (3 sig figs)