Lesson: Density	Name:

Teacher:	Date:

Worksheet 1 – Calculating Density Free Worksheet – STEM Scholars Hub

Instructions: Use the formula Density $= \frac{\text{Mass}}{\text{Volume}}$ to solve the problems. Show your work for each calculation. For some problems, select the correct answer from the multiple choices.

1. A block of wood has a mass of 120 g and a volume of 200 cm³. What is its density?

   a) 0.4 g/cm³   b) 0.6 g/cm³   c) 1.2 g/cm³   d) 2.0 g/cm³

2. A metal cube has a density of 7.8 g/cm³ and a volume of 10 cm³. What is its mass?

   a) 78 g   b) 70 g   c) 7.8 g   d) 800 g

3. A liquid has a mass of 250 g and occupies 200 mL. Calculate its density.

   a) 1.15 g/mL   b) 1.25 g/mL   c) 1.35 g/mL   d) 1.45 g/mL

4. A small stone has a mass of 45 g and a density of 2.25 g/cm³. Find its volume.

   a) 15 cm³   b) 20 cm³   c) 25 cm³   d) 30 cm³

5. A container holds 300 mL of oil with a density of 0.92 g/mL. Calculate its mass.

   a) 270 g   b) 276 g   c) 280 g   d) 290 g

6. A grape has a volume of 5 cm³ and a density of 1.05 g/cm³. What is its mass?

   a) 5.0 g   b) 5.25 g   c) 5.5 g   d) 6.0 g

7. Water has a mass of 500 g and a density of 1 g/mL. Find its volume.

    a) 400 mL   b) 450 mL   c) 500 mL   d) 550 mL

8. A syrup sample has a density of 1.4 g/mL and a mass of 280 g. What is the volume?

    a) 180 mL   b) 200 mL   c) 220 mL   d) 240 mL

9. A small bead floats on oil because its density is 0.85 g/mL. If its volume is 2 cm³, calculate its mass.

    a) 1.5 g   b) 1.6 g   c) 1.7 g   d) 1.8 g

10. Rubbing alcohol has a mass of 158 g and a density of 0.79 g/mL. What volume does it occupy?

    a) 190 mL   b) 200 mL   c) 210 mL   d) 220 mL

Answer Key – Worksheet 1

1. Density $= \frac{120}{200} = 0.6 \, \text{g/cm}^3 \rightarrow$ **b**

2. Mass $= 7.8 \times 10 = 78 \, \text{g} \rightarrow$ **a**

3. Density $= 250 \div 200 = 1.25 \, \text{g/mL} \rightarrow$ **b**

4. Volume $= 45 \div 2.25 = 20 \, \text{cm}^3 \rightarrow$ **b**

5. Mass $= 300 \times 0.92 = 276 \, \text{g} \rightarrow$ **b**

6. Mass $= 5 \times 1.05 = 5.25 \, \text{g} \rightarrow$ **b**

7. Volume $= 500 \div 1 = 500 \, \text{mL} \rightarrow$ **c**

8. Volume $= 280 \div 1.4 = 200 \, \text{mL} \rightarrow$ **b**

9. Mass $= 0.85 \times 2 = 1.7 \, \text{g} \rightarrow$ **c**

10. Volume $= 158 \div 0.79 \approx 200 \, \text{mL} \rightarrow$ **b**