

## Answers

### DENSITY CALCULATIONS PRACTICE PROBLEMS

Solve the following problems involving density calculation and be sure to have the proper number of significant digits. Please show units where appropriate. Note that the final answers are posted at the front of the room and my website. **SHOW WORK!!**

#### Formulas For Density Calculations

• Density = Mass/Volume ( $D = M/V$ ) • Volume = Mass/Density ( $V = M/D$ )

• Mass = Density  $\times$  Volume ( $M = D \times V$ )

1) Wood has a density of  $5.53 \text{ g/cm}^3$ . What must the volume of 33.3 g of wood?

**$6.02 \text{ cm}^3$**

2) Copper has a density of  $4.44 \text{ g/cm}^3$ . What is the volume of 2.78g of copper?

**$0.626 \text{ cm}^3$**

3) Sodium has a density of  $1.95 \text{ g/cm}^3$ . What is the volume of 56.2g of sodium?

**$28.8 \text{ cm}^3$**

4) What is the density of a piece of iron that has a mass of 59.8g and a volume of  $2.08 \text{ cm}^3$ ?

**$28.8 \text{ g/cm}^3$**

5) What is the density of mercury that has a mass of 39.6 g and a volume of  $9.00 \text{ cm}^3$ ?

**$4.40 \text{ g/cm}^3$**

6) Granite has a density of  $4.67 \text{ g/cm}^3$ . What is the mass of  $46.8 \text{ cm}^3$  of granite?

**219 g**

7) Corn oil has density of  $6.89 \text{ g/cm}^3$ . What is the mass of  $34.0 \text{ cm}^3$  of corn oil?

**234 g**