

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$

$$\text{Mass} = \text{Density} \times \text{Volume}$$

$$\text{Volume} = \frac{\text{Mass}}{\text{Density}}$$

**Problems:**

1. A block of wood measures 3cm x 6cm x 2cm and has a mass of 72g. Calculate the density of this object.

\_\_\_\_\_ g/cm<sup>3</sup>

2. Calculate the mass of an object that has a volume of 12 cm<sup>3</sup> and a density of 3.2 g/cm<sup>3</sup>.

\_\_\_\_\_ g

3. Calculate the volume of an object that has a mass of 5.6 g and a density of 10 g/cm<sup>3</sup>.

\_\_\_\_\_ cm<sup>3</sup>

4. Calculate the density of an object that has a mass of 44.5g and displaces 5 cm<sup>3</sup> volume of water.

\_\_\_\_\_ g/cm<sup>3</sup>

5. The density of a solid is 8 g/cm<sup>3</sup>. If the mass of the object is 105g, determine the volume.

\_\_\_\_\_ cm<sup>3</sup>

6. The volume change in a graduated cylinder is  $13 \text{ cm}^3$ , when you place an irregular shaped solid inside. The density of the solid is  $1.25 \text{ g/cm}^3$ . What is the mass of the solid?

\_\_\_\_\_ g

7. A sample of platinum occupying a volume of  $2.5 \text{ cm}^3$  has a mass of  $1.28 \text{ g}$ . Calculate the density of platinum.

\_\_\_\_\_  $\text{g/cm}^3$

8. You have a graduated cylinder with  $37 \text{ cm}^3$  of water in it. You add  $250 \text{ g}$  of lead weights, and the volume of water rises to  $42 \text{ cm}^3$ . What is the density of the lead?

Volume: \_\_\_\_\_  $\text{cm}^3$

Answer: \_\_\_\_\_  $\text{g/cm}^3$