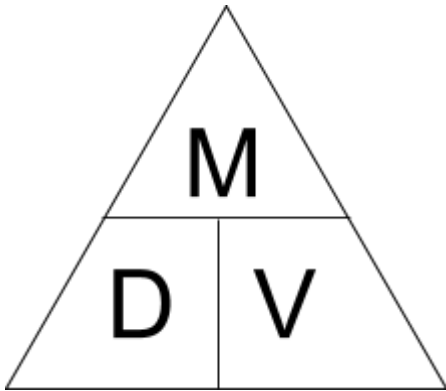


**WorksheetCloud: WORKSHEET**

**Grade 8**

**Subject: Natural Sciences**

**Topic: Introduction to Density: Calculations**



$$\text{Density} = \frac{\text{mass}}{\text{volume}}$$

### ACTIVITY 1:

1. Calculate the density of the following.

- a) Water has a mass of 1g and a volume of  $1\text{cm}^3$
- b) Object B has a mass of 30g and a volume of  $100\text{cm}^3$
- c) Object C has a mass of 100g and a volume of  $10\text{cm}^3$

2. Calculate the volume of the following

- a) Object D has a mass of 1kg and a density of  $6.1\text{g/cm}^3$
- b) Object E has a mass of 500g and a density of  $2.1\text{g/cm}^3$

3. Calculate the mass of the following

Object F has a volume of  $1\text{m}^3$  and a density of  $0.6\text{g/cm}^3$

## ACTIVITY 2:

### Multiple Choice

- 2.1. Mass is measured in the following unit
- A. cm
  - B. g
  - C.  $\text{g}\cdot\text{cm}^{-3}$
  - D. m
- 2.2. The unit for volume is
- A. cm
  - B.  $\text{g}\cdot\text{cm}^{-3}$
  - C. kg
  - D.  $\text{cm}^3$
- 2.3. The formula for determining the volume of a rectangular block is
- A.  $l \times b$
  - B.  $l + b + h$
  - C.  $l \times l \times l$
  - D.  $l \times b \times h$
- 2.4. The SI unit for density is
- A.  $\text{kg}\cdot\text{m}^3$
  - B.  $\text{cm}^3\cdot\text{g}^{-1}$
  - C.  $\text{kg}\cdot\text{cm}^{-3}$
  - D.  $\text{g}\cdot\text{cm}^{-3}$
- 2.5. The side length of a cube is 10cm. Its mass is 100g. The material's density is:
- A.  $0,1\text{g}\cdot\text{cm}^{-3}$
  - B.  $0,1\text{cm}^3\cdot\text{g}^{-1}$
  - C.  $10\text{g}\cdot\text{cm}^{-3}$
  - D.  $1\text{g}\cdot\text{cm}^{-3}$
- 2.6. The density of silver is  $10,5\text{g}\cdot\text{cm}^{-3}$ . Which one of the following statements is true?
- A. The mass of  $2\text{cm}^3$  of silver is 5,25g
  - B. 105g of silver occupies a volume of  $100\text{cm}^3$
  - C.  $1000\text{cm}^3$  of silver has a mass of 10,5kg
  - D.  $1\text{cm}^3$  of silver has a mass of 1,05kg