Name: Key

Density Problems

Period: _____

Date: _____

UNITS FOR ALL ANSWERS!!!!

1. Write a definition for density.

The amount of mass per volume

2. Write the mathematical formulas for the following values:

Density	Mass	Volume
$\frac{m}{V}$	$D \times V$	$\frac{m}{D}$

3. Calculate **density** if mass = 54g and volume = $6cm^3$

$$\frac{54g}{6cm^3} = \boxed{9\ g/cm^3}$$

4. Calculate **mass** if density = 20g/mL and volume = 15mL

$$20\ g/mL \times 15mL = \boxed{300g}$$

5. Calculate **volume** if mass = 42g and density = $6g/cm^3$

$$\frac{42g}{6\ g/cm^3} = \boxed{7\ cm^3}$$

6. What would be the **mass** of a 7.0 mL sample of material if it had a density of 5.0 g/mL?

$$5.0\ g/mL \times 7\ mL = \boxed{35g}$$

7. What would be the **volume** of a 24.0 g sample of material if it had a density of 8.0 g/mL?

$$\frac{24g}{8\ g/mL} = \boxed{3mL}$$

8. Calculate the **density** of a material for which a 6.4 mL sample has a mass of 13.203 g.

$$\frac{13.203g}{6.4\ mL} = \boxed{2.06\ g/mL}$$