ANSWER KEY

Warm-up: Density Review

Density is a physical property of matter that does not depend on the object's size. Density is the ratio of the mass of the object to the volume of the object.

Density is represented by the Greek letter "rho" or ρ.

Density is calculated by dividing the mass of an object by the volume of the object. The typical unit for density is g/mL or g/cm^3.

$$Density = \frac{mass}{Volume} \text{ or } \rho = \frac{m}{V}$$

1. Calculate the density of an aluminum block with a volume of $100cm^3$ and a mass of 270g.
D = m/V
D = 270g/1000 cm^3
D = 0.27g/ cm^3

2. Calculate the mass of a piece of gold with a volume of $1.80cm^3$ and a density of 19.3 g/cm^3.
D = m/V
19.3g/ cm^3 = m/1.8 cm^3
m = 19.3 g/ cm^3 * 1.8 cm^3
m = 34.74g

3. A piece of pine wood has a density of 0.50 g/cm^3. Find the volume of the piece of wood if it has a mass of 20 grams.
D = m/V
0.5g/ cm^3 = 20g/V
0.5g/ cm^3*V = 20g
V = 20g/0.5g/ cm^3
V = 40 cm^3