

1-7 Review and Reinforcement

Problem Solving

Determine which of the measurements is equivalent to the given value and write the letter or letters on the line.

- _____ 1. 4.2×10^6 mm
a. 4.2×10^4 m
b. 4.2×10^2 km
c. 4.2×10^{12} nm
- _____ 2. 1.3×10^{-3} L
a. 1.3×10^{-9} ML
b. 1.3 mL³
c. 1.3×10^{-6} m³
- _____ 3. 8.06×10^{14} kg
a. 8.06×10^{18} mg
b. 8.06×10^{23} μ g
c. 8.06×10^{11} g

Use dimensional analysis to solve the following problems. Show all your work.

4. The density of air is 1 kg/m³. What is the density of air in g/cm³?

5. The density of water is 1.0 g/cm³. What is the mass of water in kilograms in a bathtub whose volume is 3 m³?

6. The volume of rock A is greater than that of rock B, while the mass of rock B is greater than that of rock A. Which rock has the greater density and why?
