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- A block of metal has a mass of 14.0 g and a volume of 2.0 mL. What is the density?
A) 14.0 g/mL B) 7.0 g/mL
C) 2.0 g/mL D) 0.5 g/mL
 - Ethyl acetate, an organic liquid, has a density of 0.90 g/mL. What is the mass of 20. mL of ethyl acetate?
A) 5.0 g B) 9.0 g C) 10. g D) 18 g E) 20. g
 - A large family car produces 8000 kg of carbon dioxide (CO₂) in a year, contributing to global warming. What volume of CO₂ is produced? The density of carbon dioxide is 2.0 g/L. (NOTE: grams/L not kilograms.)
A) 0.00025 L B) 4.0 x 10³ L
C) 16,000 L D) 4.0 x 10⁶ L
E) 1.6 x 10⁷ L
 - A bottle of sulfuric acid has a mass of 3,620 g and a density of 1.81 g/mL. What is the volume?
A) 0.50 L B) 1.0 L
C) 1.81 L D) 2.0 L
E) 3.62 L
 - A block of plastic has a mass of 2.72 g and a volume of 3.13 mL. What is the density?
A) 0.869 g/mL B) 0.933 g/mL
C) 1.15 g/mL D) 1.37 g/mL
E) 8.51 g/mL
 - A sample of helium gas has a volume of 1.37 L. Helium has a density of 0.179 g/L. What is the mass in grams?
A) 0.131 g B) 0.245 g
C) 1.37 g D) 4.08 g
E) 7.65 g
 - A bottle contains 39.5 g of liquid perfluorooctane (density 1.77 g/mL). What is the volume of the liquid?
A) 0.0448 mL B) 10.1 mL
C) 22.3 mL D) 47.0 mL
E) 69.9 mL
 - A solid gold royal crown, density 18.4 kg/L, weighs 1.84 kg. If the crown were placed into a completely full bathtub of water, what volume of water would be displaced?
A) 1.84 L B) 18.4 L
C) 10 L D) 1.0 L
E) 0.10 L
 - Molten iron metal (density 7.55 kg/L) is flowing out of a furnace, which originally contained 10,000 kg (10 tonnes) metal. So far, the steel workers have collected 40 ingots that are each 25 L in size. Assuming the density of iron stays the same, how many more ingots can they expect to collect?
A) 53 B) 40 C) 27 D) 17 E) 13
 - A batch of crude paracetamol weighed 370 kg when wet with a solvent, ethanol. During the drying process, 100 L ethanol (density 0.79 kg/L) was removed. What mass of dry paracetamol remained?
A) 470 kg B) 449 kg
C) 291 kg D) 270 kg
E) 79 kg
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