

Problem 56

Assuming the human body is made primarily of water, estimate the volume of a person.

Solution

The density of water is 10^3 kg/m^3 (page 25). The mass of a typical grown person can be rounded up to a hundred kilograms. Therefore, the volume is roughly

$$100 \cancel{\text{kg}} \times \frac{1 \text{ m}^3}{10^3 \cancel{\text{kg}}} = 10^{-1} \text{ m}^3.$$