

## Exercise 91

Calculate these volumes.

- (a) What is the volume of 25 g iodine, density = 4.93 g/cm<sup>3</sup>?
- (b) What is the volume of 3.28 g gaseous hydrogen, density = 0.089 g/L?
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### Solution

#### Part (a)

Start with the given mass of iodine and use the density to determine the volume.

$$25 \text{ g} \times \frac{1 \text{ cm}^3}{4.93 \text{ g}} \approx 5.1 \text{ cm}^3$$

#### Part (b)

Start with the given mass of gaseous hydrogen and use the density to determine the volume.

$$3.28 \text{ g} \times \frac{1 \text{ cm}^3}{0.089 \text{ g}} \approx 37 \text{ L}$$