

- 1) How many inches are there in 232 mm? (There are 2.54 cm in 1 inch)

$$232 \text{ mm} \times \frac{10^{-1} \text{ cm}}{1 \text{ mm}} \times \frac{1 \text{ in}}{2.54 \text{ cm}} = 9.13 \text{ in}$$

- 2) How many centimeters are there in 4.84×10^{-3} kilometers?

$$4.84 \times 10^{-3} \text{ km} \times \frac{1 \text{ m}}{10^{-3} \text{ km}} \times \frac{1 \text{ cm}}{10^{-2} \text{ m}} = 4.84 \times 10^2 \text{ cm or } 484 \text{ cm}$$

- 3) How many minutes are there in 2.35 years?

$$2.35 \text{ yr} \times \frac{365 \text{ day}}{1 \text{ yr}} \times \frac{24 \text{ hr}}{1 \text{ day}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 1.24 \times 10^6 \text{ min}$$

- 4) How many inches are there in 62.8 cm?

$$62.8 \text{ cm} \times \frac{1 \text{ in}}{2.54 \text{ cm}} = 24.7 \text{ in}$$

- 5) How many milliliters are in 2.6 cubic meters? (There are 1,000 L in 1 m^3)

$$2.6 \text{ m}^3 \times \frac{10^2 \text{ cm}}{1 \text{ m}} \times \frac{10^2 \text{ cm}}{1 \text{ m}} \times \frac{10^2 \text{ cm}}{1 \text{ m}} \times \frac{1 \text{ mL}}{1 \text{ cm}^3} = 2.6 \times 10^6 \text{ mL}$$

- 6) How many miles are there in 6.72×10^{10} cm?

$$6.72 \times 10^{10} \text{ cm} \times \frac{1 \text{ in}}{2.54 \text{ cm}} \times \frac{1 \text{ ft}}{12 \text{ in}} \times \frac{1 \text{ mi}}{5280 \text{ ft}} = 4.18 \times 10^5 \text{ miles}$$