

Convert 27.2 mL into L.

$$1 \text{ mL} = 1 \times 10^{-3} \text{ L.}$$

$$1 = 1 \times 10^{-3} \frac{\text{L}}{\text{mL}} = 1 \times 10^{-3} \text{ L mL}^{-1}$$

$$27.2 \text{ mL} \times 1 \times 10^{-3} \text{ L mL}^{-1}$$

$$27.2 \times 10^{-3} \text{ L.}$$

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Convert 27.2 cm<sup>3</sup> to dm<sup>3</sup>

$$\begin{aligned} \left[ \begin{array}{l} 1 \text{ cm} \\ 1 \text{ cm}^3 \end{array} \right] &= 1 \times 10^{-2} \text{ m.} \\ &= (1 \times 10^{-2})^3 \text{ m}^3 = 1 \times 10^{-6} \text{ m}^3. \end{aligned}$$

$$\left[ \begin{array}{l} 1 \text{ dm} \\ 1 \text{ dm}^3 \end{array} \right] = 1 \times 10^{-1} \text{ m.} \\ = (1 \times 10^{-1})^3 \text{ m}^3 = 1 \times 10^{-3} \text{ m}^3$$

$$1 = 1 \times 10^{-6} \text{ m}^3 \text{ cm}^{-3} \quad \textcircled{1}$$

$$1 = 1 \times 10^{-3} \text{ m}^3 \text{ dm}^{-3} \quad \textcircled{2}$$

$$\textcircled{1} / \textcircled{2} \quad 1 = \frac{1 \times 10^{-6} \text{ m}^3 \text{ cm}^{-3}}{1 \times 10^{-3} \text{ m}^3 \text{ dm}^{-3}} = 1 \times 10^{-3} \text{ dm}^3 \text{ cm}^{-3}$$

$$27.2 \text{ cm}^3 \times 1 \times 10^{-3} \text{ dm}^3 \text{ cm}^{-3} = 27.2 \times 10^{-3} \text{ dm}^3.$$