

5.2

Using Metric Units for Capacity

Try These

i) $1.2 \times 10^2 = \underline{120}$

ii) $3.5 \times 10^3 = \underline{3500}$

iii) $0.8 \times 10^4 = \underline{8000}$

iv) $96 \times 10^{-3} = \underline{0.096}$

$$10^2 = 100$$

$$10^3 = 1000$$

$$10^{-3} = \frac{1}{10^3} = \frac{1}{1000}$$

$$96 \times \frac{1}{1000}$$

Mitchell is pouring orange juice from a 2 L carton into 300 mL bottles to put in his cooler. How many bottles can he fill?

Metric (SI) Units for Capacity

Unit	Relationship to litre
kilolitre (kL)	1 kL = 1000 L or 10^3 L
hectolitre (hL)	1 hL = 100 L or 10^2 L
decalitre (daL)	1 daL = 10 L or 10^1 L
litre (L)	
decilitre (dL)	1 dL = 0.1 L or $\frac{1}{10}$ L
centilitre (cL)	1 cL = 0.01 L or $\frac{1}{100}$ L
millilitre (mL)	1 mL = 0.001 L or $\frac{1}{1000}$ L

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① How many millilitres are in 2 L?

1 L = 1000 mL, so 2 L = 2000 mL

(milli) litres
1000

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- 2 How many bottles can Mitchell fill?

$$2000 \text{ mL} \div 300 \text{ mL/bottle} = 6.66\dots$$

Mitchell can fill 6 bottles.

Example

Cong ordered a case of 12 cans of pasta sauce. How many litres of sauce did he order?



Solution

- A. What is the total capacity in millilitres?

$$12 \text{ cans} \times 680 \text{ mL/can} = 8160 \text{ mL}$$

Example

Cong ordered a case of 12 cans of pasta sauce. How many litres of sauce did he order?



B. What is the capacity in litres?

1000 mL = 1 L, so 1 mL = $\frac{1}{1000}$ L

$$\underline{8160} \text{ mL} \times \underline{\frac{1}{1000}} \text{ L/mL} = \underline{8.16} \text{ L}$$

Cong ordered 8.2 L of sauce.