

What is Capacity?

Capacity is the maximum amount that something can contain.

Examples:

"The bucket has a capacity of 9 litres."

"The measuring cup hold 4 1/2 cups."

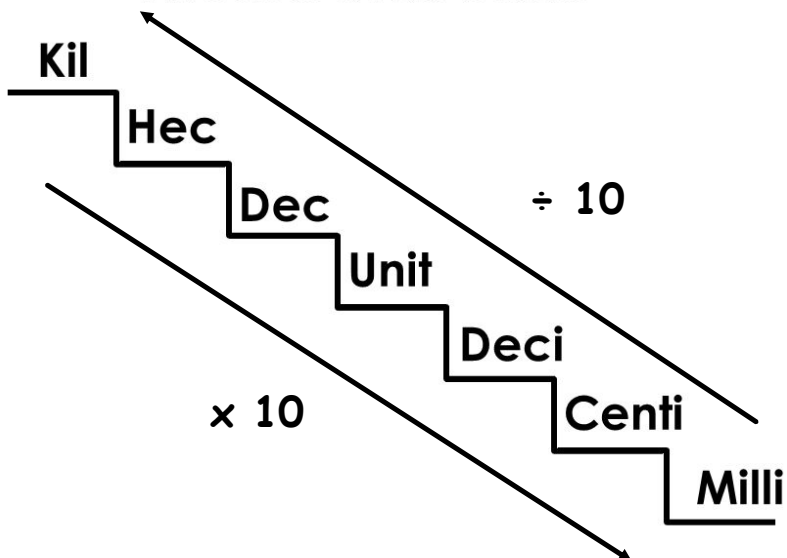


Capacity Conversions - Metric

The Metric system uses the basic unit Litre (L) and also:

- kilolitres (kL)
- hectolitres (hL)
- decalitres (daL)
- decilitres (dL)
- centilitres (cL)
- millilitres (mL)

Metric Staircase



5.2 - Metric units for Capacity page 128



Example: Cong ordered a case of 12 jars of pasta sauce. Each jar has a capacity of 680mL. How many litres of sauce did he order?

Your Turn!

complete # 2, 4, 5, 6 on page 129

Capacity Conversions - Imperial

The American Imperial system uses:

- Tablespoons (T) -Fluid Ounces (fl oz) -Cups (c)
- Pints (pt) -Quarts (qt) -Gallon (gal)

Ratios:

$$\frac{2 \text{ T}}{1 \text{ fl oz}}$$

$$\frac{8 \text{ fl oz}}{1 \text{ c}}$$

$$\frac{16 \text{ T}}{1 \text{ c}}$$

$$\frac{2 \text{ c}}{1 \text{ pt}}$$

$$\frac{16 \text{ fl oz}}{1 \text{ pt}}$$

$$\frac{32 \text{ T}}{1 \text{ pt}}$$

$$\frac{2 \text{ pt}}{1 \text{ qt}}$$

$$\frac{4 \text{ c}}{1 \text{ qt}}$$

$$\frac{32 \text{ fl oz}}{1 \text{ qt}}$$

$$\frac{64 \text{ T}}{1 \text{ qt}}$$

$$\frac{4 \text{ qt}}{1 \text{ gal}}$$

$$\frac{8 \text{ pt}}{1 \text{ gal}}$$

$$\frac{16 \text{ c}}{1 \text{ gal}}$$

$$\frac{128 \text{ fl oz}}{1 \text{ gal}}$$

$$\frac{256 \text{ T}}{1 \text{ gal}}$$

5.1 - Imperial units for Capacity page 126



Example: Evan is making punch for hospital volunteers. He needs $3\frac{1}{2}$ quarts of cranapple juice. How many cups is this?

Your Turn!

complete # 1, 4, 5 on page 127

Capacity Conversions- Metric and Imperial

When converting between systems, using the following ratios:

Metric to Imperial

$$\frac{0.03 \text{ fl oz}}{1 \text{ mL}}$$

$$\frac{2.11 \text{ pt}}{1 \text{ L}}$$

$$\frac{1.06 \text{ qt}}{1 \text{ L}}$$

$$\frac{0.26 \text{ gal}}{1 \text{ L}}$$

Imperial to Metric

$$\frac{29.57 \text{ ml}}{1 \text{ fl oz}}$$

$$\frac{0.47 \text{ L}}{1 \text{ pt}}$$

$$\frac{0.95 \text{ L}}{1 \text{ qt}}$$

$$\frac{3.79 \text{ L}}{1 \text{ gal}}$$

$$\frac{470 \text{ mL}}{1 \text{ pt}}$$

$$\frac{950 \text{ mL}}{1 \text{ qt}}$$

$$\frac{3\,790 \text{ mL}}{1 \text{ gal}}$$

5.3 - Capacity in Different Systems page 130



Example: Eli is installing a hot water tank with a capacity of 153 L.
What is the capacity of the tank, to the nearest gallon?

Your Turn!

complete # 1 and 4 on page 131