

Unit 9 Lesson 4

Volumes using Metric and Imperial Measurements

Volume: how much space a three-dimensional object occupies. Measured in **cubic units** (ex. cm^3, in^3)

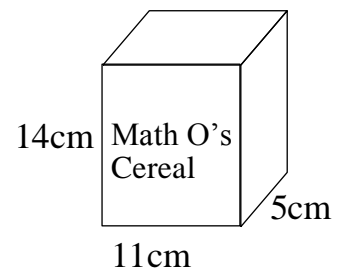
Capacity: the greatest volume the container will hold.

The litre (L) is a measure of capacity or volume used for liquids. $1L = 1000\text{ cm}^3$, 1 gallon = 4 quarts

Using your formula sheet, let's try this one together:

Example 1:

a) Calculate the volume of the given box of cereal.

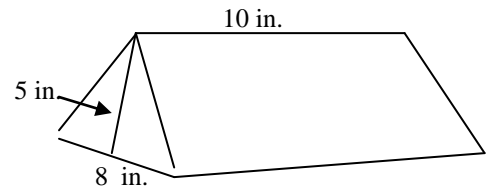


b) Express the capacity in litres.

Now try the following examples in pairs:

Example 2:

A large Toblerone Bar has the dimensions shown. Determine the volume of the Toblerone Bar.

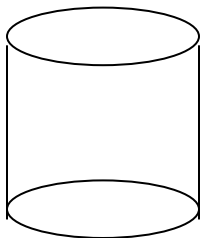


Example 3:

Determine the volume of the square base pyramid with base 3cm by 3cm and height 5cm.

Example 4:

A can of soup has a diameter of 7cm and a height of 12cm. Determine the volume of the can.



Example 5:

A farmer stores feed in a cone-shaped storage unit. The storage unit has base diameter 14.3m and height 27.4m. How much feed can this storage unit hold?

Example 6.

a) A spherical ball has a diameter of 60cm. What is the volume of the ball?

b) Find the capacity of the ball in litres. You can convert cubic metres to litres using the conversion $1 \text{ L} = 1000 \text{ cm}^3$.