Unit 3

3.4 Volume

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Objective

Understand and work with different volumes

Definitions

capacity: the total amount that something can hold

Start

Intro

Volume is a lot like length, sort of. It works in another dimension, but the steps we used will be repeated as we approach this.

Volume

First we have to understand what volume is. It is essentially height, length, and depth, all taken into account to find the volume. For a cube, this is simply all 3 sides multiplied together. Notice that because we are multiplying a unit 3 times, our answer will be in some unit cubed.

A litre is defined to be just that. A box that is 10 cm long, 10 cm wide, and 10 cm deep.

So

$$1litre = 10^{-3}m^3$$

There are 1000 milli(latin for thousand)litres in one litre. We can use this knowledge to convert between the two.

However, the imperial system once again is not that simple.

- There are 16 ounces in one pint
- 2 pints equals 1 quart
- and 4 quarts equals 1 gallon.

Given that we know 1 Liter = 33.8140226 ounces, as an exercise, figure out the rest.

Dry and wet

When looking up this information, remember that there are dry conversions, and wet conversions. This is because when cooking a dry amount of material takes up less room then a wet counterpart (due to wet taking up all the extra room dry cannot)

Example 1

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Example 2

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Assignment

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End

Puzzle it out pg. 131