YEAR 6 – MEASUREMENT...

@whisto_maths

Converting Units

What do I need to be able to do?

By the end of this unit you should be able to:

- Recognise metric measures
- Convert metric measures
- Calculate with metric measures
- Understand Miles and Kilometre relationships
- Recognise Imperial measures and conversions

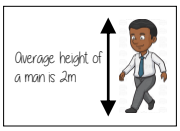
Keywords

Length: the distance from one point to another
Mass: a measure of how much matter is in an object
Capacity: the amount an object can contain (normally liquids)
Volume: the amount of 3-dimensional space an object takes up (units of length cubed)
Convert: to change a value or expression from one value to another
Imperial: a system of weights and measures originally developed in England
Metric: a system of measuring that replaced the imperial system to fall in line with the rest of Europe
Proportion: values of two items that increase in the same ratio

Metric measures

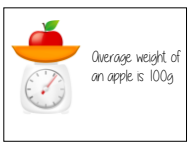
Length Common units of length or distance are

Millimetres (mm) – "Milli" prefix means one thousandth or ÷ 1000
Centimetres (cm) – "Centi" prefix means one hundredth or ÷ 100
Metres (m)
Kilometres (km) – "Kilo" prefix means a thousand × 1000



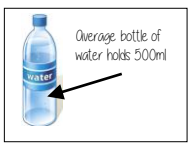
Mass (Weight)

Grams (g)
Kilograms (kg) – "Kilo" prefix means a thousand × 1000
Tonnes (t)



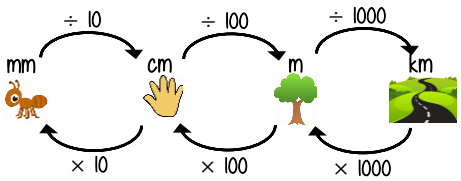
Capacity

Millilitre (ml) - "Milli" prefix means one thousandth or ÷ 1000
Litre (l)

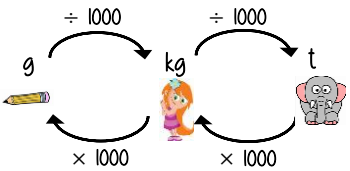


Metric conversions

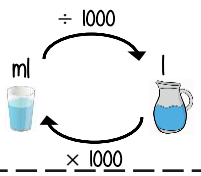
Length



Mass



Capacity

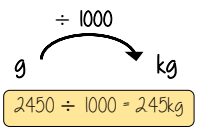


Milli – thousandth
Centi – hundredth
Kilo - thousand

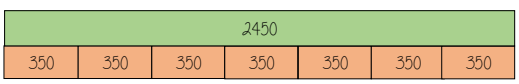
Metric calculations

A package weighs 350g. How much will 7 packages weigh? Give your answers in kilograms

The final weight is in grams



2450 ÷ 1000 = 2.45kg



Calculations tips:

- Do all calculations in the same unit (often the smaller measurement)
- Read for the units of your answer
- Do all conversions of units at the same time
- Represent your image pictorially where possible

Miles and Kilometres

Miles and kilometres are normally used as measures of distance

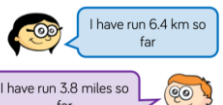
≈ symbol represents "is approximately equal to"

5 miles ≈ 8 kilometres

Conversion calculations

How many kilometres is 15 miles?

x 3 → 5 miles ≈ 8 kilometres
15 miles ≈ 24 kilometres



Ron and Annie are running a 5-mile race. Who has run the furthest?

Ron has 1.2 miles left to run
Annie has 1 mile left to run
Annie has run the furthest

5 miles ≈ 8 kilometres → ÷ 8
0.625 mile ≈ 1 kilometre
4 miles ≈ 6.4 kilometre → x 6.4

Imperial measures

Length

2.5 cm ≈ 1 inch

1 foot = 12 inches

Mass

1 pound (lb) = 16 ounces

1 stone = 14 pounds (lbs)

Capacity

1 gallon = 8 pints

In 1965 Britain converted to the metric system for measurement to fall in line with the rest of Europe. We still use an imperial measurement of miles for distance and speed on our roads.