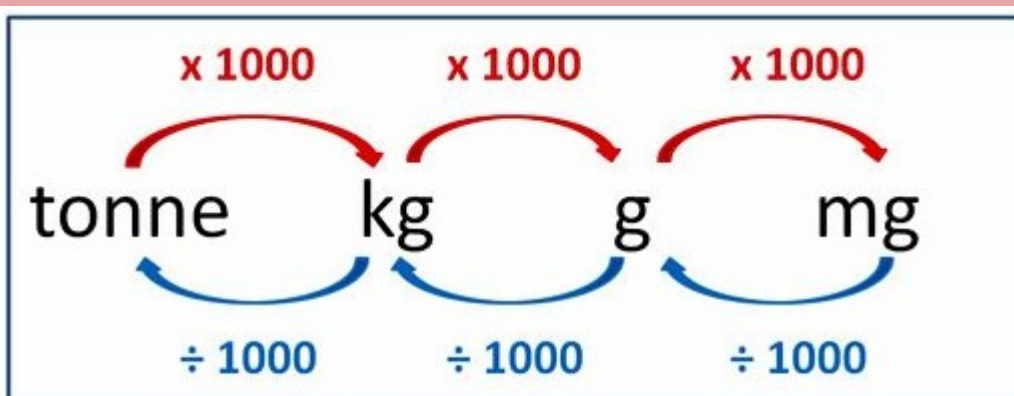


Conversion diagram: Metric units of mass



Mass conversions use 1000's, and usually create fairly large results.

$1.6 \text{ tonne} = ? \text{ kg}$ Need to $\times 1000$ $1.6 \times 1000 = 1600 \text{ kg}$ ✓

Example of problem solving using conversion:

Sam and Samantha want to make a cake for their mum's birthday. They need 750g flour to make the cake.

- There are 0.246kg of flour left in the first bag. How much more flour do they need?
- If they take the rest from a second 1kg bag of flour, how many kg of flour will be left in the second bag?

Solving a)

- Convert 0.246kg into grams
- Subtract this amount from 750g to find out how much more flour is needed

Solving b)

- Convert 1kg into grams
- Subtract the answer from a)
- Convert your answer into kilograms

4. Key Vocabulary

Metric units of mass

Choose Metric Unit to Measure Mass

a) Pencil **Grams** b) Book Bag **Kilograms** c) Small Feather **Milligrams**

Conversions: $1,000 \text{ mg} = 1 \text{ g}$ $1,000 \text{ g} = 1 \text{ kg}$

Imperial units of mass

This parcel weighs **7 lb**

lb is the abbreviation for "pound"

The main imperial units for mass are ounces (oz), pounds (lb) and stones (st).

$16 \text{ oz} = 1 \text{ lb}$

$14 \text{ lb} = 1 \text{ st}$

To change from one unit to another we multiply or divide by 16 or 14.

Mass or Weight?

- Mass** = The amount of matter in an object. Measured in g, kg etc.
- Weight** = The measurement of the force of gravity on an object. Measured in Newtons (N)
- An astronaut's **mass** is the same on the moon as it is on the Earth. His **weight** is different due to the differing measurements of gravity

