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Relative Atomic Mass

Definition: is the average mass of one atom of an element, relative to one carbon atom, in atomic mass units (amu)

$$\text{RAM} = \frac{\text{isotope mass} \times \text{isotopic abundance}}{100}$$

Where:

RAM =

Relative Atomic Mass (amu)

| isotopes

Representing RAM

Symbolic Notation

To represent the properties of an atom, symbolic notation was developed, where the amount of protons, the atomic mass, and the symbol of an element could be shown in a shorthand way:

$${}_z^a x$$

where:

a = Atomic Mass

b = Atomic Number

z = Symbol of element

This allows us to quickly show any atom. Let us use Beryllium as an example. It's symbol is Be, and it has an atomic mass of 9, and a **Atomic number** of 4. Below is a diagram showing this physically, but we can also use symbolic notation.

[✎ Differences between periodic tables >](#)

Not all periodic tables show general notation the same way. There will be a key on the table to tell you where the values appear.

Formula Mass

Definition: the sum of the atomic masses of all the atoms in a molecule of formula. eg.

$$\text{Formula Mass} = \Sigma(\text{mass of molecules})$$

☰ 💡 Example ▾

$$H_2O \rightarrow 2 \times (1\text{amu}) + (16\text{amu}) = 18\text{amu}$$

$$CuSO_4 \rightarrow (63,5\text{amu}) + (32\text{amu}) + 4 \times (16\text{amu}) = 160\text{amu} \text{ (note, we round to the nearest integer)}$$
