

Mole Basics

A mole is....

- 6.02×10^{23} things – just like a dozen is “12 things.”
- The gram formula weight of a substance. (for example—water has a formula weight of 18 amu. One mole of water is 18 grams.)
- 22.4 liters of any gas at standard temperature and pressure. (Standard temperature is 0 C and standard pressure is 1 atm).

Any of the above definitions can be used in equivalencies as part of conversion factors. For example:

For water $18 \text{ grams}/1 \text{ mole} = \text{“1”}$

or

$1 \text{ mole} / 18 \text{ grams} = \text{“1”}$

Use the “map” below to help you with conversions.

Mole Map

