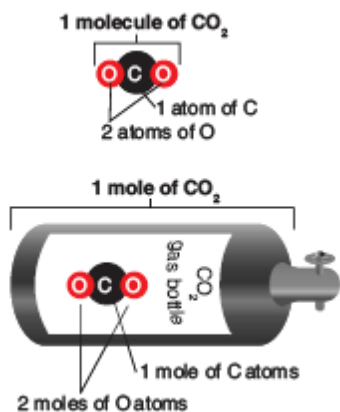


If the molecule contains more than one kind of atom, we can calculate the number of different atoms present in one mole of the substance. Remember 1 mole = 6.02×10^{23}



1 mole (can be shortened to mol) of carbon dioxide molecules contains:

- 1 mol of CO_2 molecules.
- _____ CO_2 molecules.
- _____ mol C atoms
- _____ C atoms
- _____ mol O atoms.
- _____ O atoms
- The molar mass of CO_2 is _____

Calculate the number of chlorine atoms or chloride ions in:

- a. 2.3 mol of chlorine atoms
- b. 15.8 mol of chlorine molecules, Cl_2
- c. 3.5 mol of sodium chloride, NaCl
- d. 0.5 mol of magnesium chloride, MgCl_2

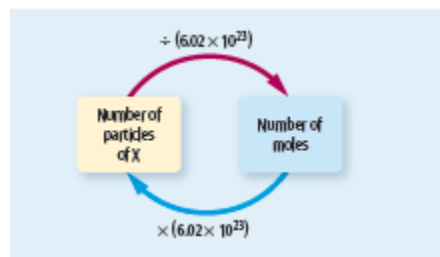
What is the total number of ions present in 0.5 mol of magnesium chloride, MgCl_2 .

Use the following formula to answer the questions below

The formula

$$n = \frac{\text{number of particles}}{6.02 \times 10^{23}}$$

can be used to calculate the number of moles.



Calculate

1. The number of atoms of neon in 3 mol of Ne.
2. The number of molecules of sulfur trioxide in 0.125 mol of SO_3 .
3. The number of mol in 1.44×10^{24} atoms of silver.
4. The number of mol in 1000 atoms of mercury
5. The total number of particles present in 5.6 mol of lactic acid ($\text{C}_3\text{H}_6\text{O}_3$)