KEY

Chemical Formulas

Rule #1 : When looking at a chemical formula, the subscript numbers below and to the left of a symbol tell us how many atoms of that particular element are present in that molecule.

ex. - H_2O : Two Hydrogen atoms and one Oxygen atom per molecule

Diagram :

Rule #2 : When brackets appear in a chemical formula it tells us that the molecule is made up of a group of elements that appear more than once. The number below and to the left tells us how many times that group is found in that molecule.

ex. - $Al(OH)_3$: One Aluminum atom, three Oxygen atoms and three Hydrogen atoms per molecule

Diagram :

Give the meaning (explain what atoms would be found in such a molecule) for each of the following chemical formulas :

a) PbS : ONE LEAD ATOM AND ONE SULPHUR ATOM PER MOLECULE

b) KNO_3 : ONE POTASSIUM ATOM AND ONE NITROGEN ATOM AND THREE OXYGEN ATOMS PER MOLECULE

c) NaOH : ONE ATOM OF SODIUM AND ONE ATOM OF OXYGEN AND ONE ATOM OF HYDROGEN PER MOLECULE

d) H_2O : TWO HYDROGEN ATOMS AND ONE OXYGEN ATOM PER MOLECULE

e) $C_{10}H_8$: TEN CARBON ATOMS AND EIGHT HYDROGEN ATOMS PER MOLECULE

f) H_2O_2 : TWO HYDROGEN ATOMS AND TWO OXYGEN ATOMS PER MOLECULE.

g) $CuSO_4$: ONE COPPER ATOM, ONE SULPHUR ATOM, AND FOUR OXYGEN ATOMS PER MOLECULE

h) Fe_2O_3 : TWO IRON ATOMS AND THREE OXYGEN ATOMS PER MOLECULE

i) C_2H_5OH : TWO CARBON ATOMS, SIX HYDROGEN ATOMS, AND ONE OXYGEN ATOM PER MOLECULE

j) $Ca(OH)_2$: ONE CALCIUM ATOM, TWO OXYGEN ATOMS, AND TWO HYDROGEN ATOMS PER MOLECULE

k) $Al_2(SO_4)_3$: TWO ALUMINUM ATOMS, THREE SULPHUR ATOMS, AND TWELVE OXYGEN ATOMS PER MOLECULE

l) $Cu(OH)_2$: ONE COPPER ATOM, TWO OXYGEN ATOMS AND TWO HYDROGEN ATOMS PER MOLECULE

m) $Zn_3(PO_4)_2$: THREE ZINC ATOMS, TWO PHOSPHOROUS ATOMS, AND EIGHT OXYGEN ATOMS PER MOLECULE

n) $Fe_2(SO_4)_3$: TWO IRON ATOMS, THREE SULPHUR ATOMS, AND TWELVE OXYGEN ATOMS PER MOLECULE

o) $Cu(ClO_3)_2$: ONE COPPER ATOM, TWO CHLORINE ATOMS, AND SIX OXYGEN ATOMS PER MOLECULE.