

a) CaCO_3

$$\begin{aligned}\text{Ca} &= 40 \times 1 = 40 \\ \text{C} &= 12 \times 1 = 12 \\ \text{O} &= 16 \times 3 = 48 \\ &= 100\end{aligned}$$

c) HCl

$$\begin{aligned}\text{H} &= 1 \times 1 = 1 \\ \text{Cl} &= 35 \times 1 = 35 \\ &= 36\end{aligned}$$

d) HNO_3

$$\begin{aligned}\text{H} &= 1 \times 1 = 1 \\ \text{N} &= 14 \times 1 = 14 \\ \text{O} &= 16 \times 3 = 48 \\ &= 63\end{aligned}$$

e) $\text{C}_6\text{H}_{12}\text{O}_6$

$$\begin{aligned}\text{C} &= 12 \times 6 = 72 \\ \text{H} &= 1 \times 12 = 12 \\ \text{O} &= 16 \times 6 = 96 \\ &= 180\end{aligned}$$

f) MgO

$$\begin{aligned}\text{Mg} &= 24 \times 1 = 24 \\ \text{O} &= 16 \times 1 = 16 \\ &= 40\end{aligned}$$

b) $\text{Fe(NO}_3)_2$

$$\begin{aligned}\text{Fe} &= 56 \times 1 = 56 \\ \text{N} &= 14 \times 2 = 28 \\ \text{O} &= 16 \times 6 = 96 \\ &= 180\end{aligned}$$

d) Al(OH)_3

$$\begin{aligned}\text{Al} &= 27 \times 1 = 27 \\ \text{O} &= 16 \times 3 = 48 \\ \text{H} &= 1 \times 3 = 3 \\ &= 78\end{aligned}$$

f) H_2SO_4

$$\begin{aligned}\text{H} &= 1 \times 2 = 2 \\ \text{S} &= 32 \times 1 = 32 \\ \text{O} &= 16 \times 4 = 64 \\ &= 98\end{aligned}$$

h) NaOH

$$\begin{aligned}\text{Na} &= 23 \times 1 = 23 \\ \text{O} &= 16 \times 1 = 16 \\ \text{H} &= 1 \times 1 = 1 \\ &= 40\end{aligned}$$

j) CuSO_4

$$\begin{aligned}\text{Cu} &= 63 \times 1 = 63 \\ \text{S} &= 32 \times 1 = 32 \\ \text{O} &= 16 \times 4 = 64 \\ &= 159\end{aligned}$$



k) NH_3

$$\begin{aligned} \text{N} &= 14 \times 1 = 14 \\ \text{H} &= 1 \times 3 = 3 \\ &= 17 \end{aligned}$$

l) C_6H_{14}

$$\begin{aligned} \text{C} &= 12 \times 6 = 72 \\ \text{H} &= 1 \times 14 = 14 \\ &= 86 \end{aligned}$$

m) C_2H_2

$$\begin{aligned} \text{C} &= 12 \times 2 = 24 \\ \text{H} &= 1 \times 2 = 2 \\ &= 26 \end{aligned}$$

n) CO_2

$$\begin{aligned} \text{C} &= 12 \times 1 = 12 \\ \text{O} &= 16 \times 2 = 32 \\ &= 44 \end{aligned}$$

o) Fe_2O_3

$$\begin{aligned} \text{Fe} &= 56 \times 2 = 112 \\ \text{O} &= 16 \times 3 = 48 \\ &= 160 \end{aligned}$$

Cálculo de masa

Para realizar cálculos podemos recurrir a los llamados factores de conversión, de los cuales hay que tener en cuenta de donde partimos y hacia donde queremos llegar, planteando relaciones lógicas y verdaderas para así terminar en las unidades que nos piden

Ejemplo:

1. Calcular

- la cantidad de moles en 90 gramos de H_2O
- moléculas presentes en 90 gramos de H_2O

$$\frac{90 \text{ g } \text{H}_2\text{O}}{18 \text{ g } \text{H}_2\text{O}} = 5 \text{ mol } \text{H}_2\text{O}$$

Masa molecular