Molar Mass: The mass of 1 mol of any substance (atom, ion, comp., molecule)

Avg. Molar Mass: MM of all isotopes of element.

Molar Mass

$^{12}_{6}C$, 12g $^{13}_{6}C$, 13g

(MM = g/mol)

Avg. Molar Mass

6 ← Atomic #
C ← Element
Carbon
12.01 ← Avg. MM

Combined Molar Mass

Na: 11 Na 22.99 ← MM_{Na} 22.99 g/mol

Cl: 17 Cl 35.45 ← MM_{Cl} 35.45 g/mol

MM_{NaCl}

$MM_{Na} + MM_{Cl}$

MM_{NaCl} ① X each ② +

Na	1 X 22.99g
Cl	1 X 35.45g
NaCl	58.44 g/mol

Molar Mass Format

$X_a Y_b$

→ MM X
→ MM Y

a and b are subscripts

$a \cdot X_g + b \cdot Y_g$

MM XY (g/mol)

① X each
② +

$a = 1$ VF_3 $b = 3$

$V = 50.94g$ $F = 19.00g$

(X) V | $1 \times 50.94g$
(Y) F | $3 \times 19.00g$
(XY) VF_3 | 107.94 g/mol

Ni_2O_3

$[MM_{Ni} = 58.69g]$ $[MM_O = 16.00g]$

Ni : $2 \times 58.69g$
O : $3 \times 16.00g$
Ni_2O_3 : 165.38 g/mol

Calculator

2 [X] 58.69 [=]
[+] [(] 3 [X]
16.00 [)] [=]

TiS_2

$[MM_{Ti} = 47.87g][MM_S = 32.07g]$

$Ti: 1 \times 47.87g \quad S: 2 \times 32.07g$

$TiS_2: 112.01\ g/mol$