

Atomic mass and Molar mass

Sample Problems

- ① Find the molar mass of H_2O_2

$$\begin{aligned} 2 \times H &= 2 \times 1.01 \text{ g/mol} = 2.02 \text{ g/mol} \\ 2 \times O &= 2 \times 16.00 \text{ g/mol} = \underline{32.00 \text{ g/mol}} + \\ & \quad 34.02 \text{ g/mol} \end{aligned}$$

The molar mass of H_2O_2 is 34.02 g/mol

- ② Find the molar mass of H_2SO_4

$$\begin{aligned} 2 \times H &= 2 \times 1.01 \text{ g/mol} = 2.02 \text{ g/mol} \\ 1 \times S &= 1 \times 32.06 \text{ g/mol} = 32.06 \text{ g/mol} \\ 4 \times O &= 4 \times 16.00 \text{ g/mol} = \underline{64.00 \text{ g/mol}} \\ & \quad 98.08 \text{ g/mol} \end{aligned}$$

- ③ Find the molar mass of $Mg_3(PO_4)_2$

$$\begin{aligned} 3 \times Mg &= 3 \times 24.31 \text{ g/mol} = 72.93 \text{ g/mol} \\ 2 \times P &= 2 \times 30.97 \text{ g/mol} = 61.94 \text{ g/mol} \\ 8 \times O &= 8 \times 16.00 \text{ g/mol} = \underline{128.00 \text{ g/mol}} \\ & \quad 262.87 \text{ g/mol} \end{aligned}$$