

## Molar Mass

Molar Mass is the mass in grams of 1 mole of any substance.

Molar Mass is found on your periodic table.

1mole = Molar Mass

Sometimes referred to as "molecular weight" or "gfm".



1

## Molar Mass

**Elements:** Molar Mass is the atomic mass on the periodic table.

**Compounds:** Molar Mass is found by adding together the molar masses of each of the atoms of elements in the compound.

*go to the tenths place!*



2

## Molar Mass

What is the molar mass of ...

Na  $22.99 \rightarrow 23.0 \text{ g}$

Cl  $35.45 \rightarrow 35.5 \text{ g}$

NaCl  $23.0 + 35.5 = 58.5 \text{ g}$



3

## Molar Mass

What is the molar mass of oxygen?

Oxygen  $\rightarrow \text{O}_2 \rightarrow 16 \times 2 = 32 \text{ g}$   
 Chlorine  $\rightarrow \text{Cl}_2 \rightarrow 35.5 \times 2 = 71 \text{ g}$

Diatomic Molecules exist in nature as two atoms joined together... *(all gases)*

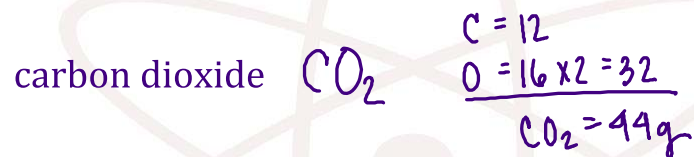
$\text{H}_2 \text{ N}_2 \text{ O}_2 \text{ F}_2 \text{ Cl}_2 \text{ Br}_2 \text{ I}_2$



4

## Molar Mass

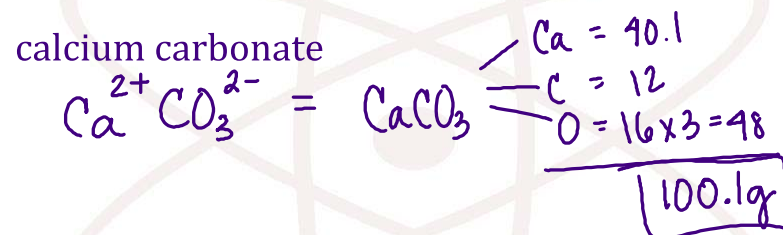
What is the molar mass of...



5

## Molar Mass

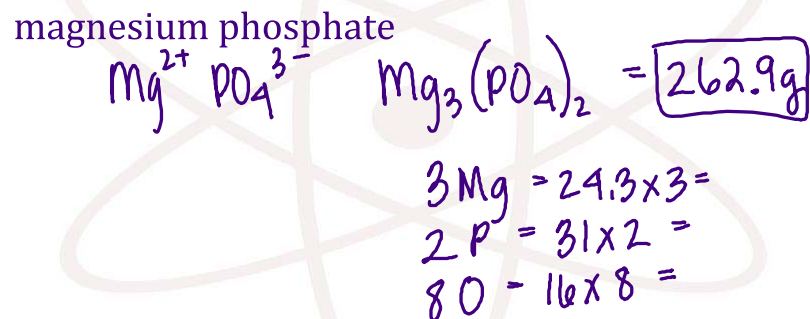
What is the molar mass of...



6

## Molar Mass

What is the molar mass of...



7

- Find molar mass
- 1)  $\text{Na}_2\text{CO}_3$  106g
  - 2)  $\text{Al}_2(\text{SO}_4)_3$  342.3g
  - 3) tin(IV)oxide 150.7g  
 $\text{SnO}_2$
  - 4) dinitrogen pentoxide 108g  
 $\text{N}_2\text{O}_5$



8

## Assignment

### Calculating Molar Mass Worksheet

Numbers 1 - 32

Hydrates - crystals surrounded by water

