

## The Mole

1 mole =  $6.02 \times 10^{23}$  entities

Entities are atoms, ions,  
molecules, formula units, etc.

Mole day is on October 23.  
This is in honor of Avogadro's  
Number,  $N_A$ . Avogadro's  
number is  $6.02 \times 10^{23}$ .

What is the molar mass of oxygen?

How many grams are in one mole of carbon?

How many nitrogen atoms are in 6.25 moles of nitrogen?

What is the mass of one aluminum, Al, atom?

Calculate the number of moles in 24.25 g of copper, Cu.

How many copper atoms are in 24.25 g of copper, Cu?

Calculate the number of moles in  $2.45 \times 10^{24}$  magnesium, Mg, atoms.