

Part I: Name the following compound or write the chemical formula. Indicate whether the compound is an ionic compound or molecular compound. Break the following compounds down into its respective ions. (Hint: there may be no ions, if so, write "no ions").

Compound/Formula	Name/Formula	Ionic or Molecular?	Ion Components
N_2O			
NH_4Br			
Ammonia			
Aluminum permanganate			

1. Which has more moles of oxygen, 5.0 moles of hydrogen peroxide or 8.0 moles of water?

2. Determine the number of atoms of oxygen in 1.50 moles of aluminum oxide.

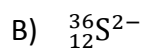
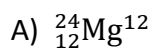
3. How many oxygen atoms are there in 2.5g of barium sulfate?

4. How many grams of oxygen are there in 15.6g of aluminum sulfate?

Part III: Isotopes



1. What do the variables A, Z, and C represent?
2. For each of the following species, indicate the number of protons, neutrons, and electrons.



_____ protons
_____ neutrons
_____ electrons

_____ protons
_____ neutrons
_____ electrons

3. Copper has two isotopes, ${}^{63}\text{Cu}$ and ${}^{65}\text{Cu}$. If the atomic mass of copper is 63.5 g/mol, what is the % of each isotope?