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CHEM1	301/Homework 5
Atomic	Mass Practice
1.	Find the average atomic mass for B if 19.9% of B atoms are B-10 with a mass of 10.0129371 amu and 80.1% are B-11 with a mass of 11.0093055 amu.
2.	There are two isotopes of lithium, Li-6 and Li-7. If 7.5% of Li atoms are Li-6 with a mass of 6.0151223 amu and 92.5% are Li-7 with a mass of 7.0160041 amu, what is the atomic mass of lithium?
3.	Find the average atomic mass for Mg if 78.99% of Mg atoms are $^{24}_{12}Mg$ with a mass of
5.	23.9850419 amu, 10.00% are $^{25}_{12}Mg$ with a mass of 24.9858370 amu, and 11.01% are $^{26}_{12}Mg$ with a mass of 25.9825930 amu.

4.	The element copper has naturally occurring isotopes with mass numbers of 63 and 65. The relative abundance and atomic masses are 69.2% for a mass of 62.93amu and 30.8% for a mass of 64.93amu. Calculate the average atomic mass of copper.
5.	Calculate the average atomic mass of sulfur if 95.00% of all sulfur atoms have a mass of 31.972 amu, 0.76% has a mass of 32.971amu and 4.22% have a mass of 33.967amu.
6.	An unknown element is discovered that has 4 isotopes. Isotope 1 has a mass of 291.54 amu and an abundance of 43.52%. Isotope 2 has a mass of 294.65 amu and an abundance of 12.65%. Isotope 3 has a mass of 298.73 amu and an abundance of 32.01%. Isotope 4 has a mass of 304.45 amu and an abundance of 11.82%. What is the unknown element's atomic mass?
mass o	e are three isotopes of silicon. They have mass numbers of 28, 29 and 30. The average atomic f silicon is 28.086amu. What does this say about the relative abundances of the three isotopes? of the three isotopes? Ith here. Just explain briefly.)

1.	Write the	chemical	formula	for com	pounds	containing:

1 Nitrogen for every 3 oxygen atoms	
5 Phosphorus atoms for every 2 Nitrogen atoms	
1 Calcium and 2 nitrates (polyatomic)	
One Chromium and 2 Sulfur atoms	
2 ammonium ions and 1 carbonate	
2 nickel atoms and 2 sulfite ions	
2 Hydrogen atoms and one sulfur atom	
2 Sodium atoms and one sulfate ion	

2. Complete the table:

Formula	Number of CO ₃ -2 units	Number of carbon atoms	Number of oxygen atoms	Number of metal atoms
CaCO₃				
Al ₂ (CO ₃) ₃				
Ag ₂ CO ₃				

Formula	Number of PO ₄ -3 units	Number of P atoms	Number of oxygen atoms	Number of metal atoms
Ca ₃ (PO ₄) ₂				
K ₃ PO ₄				
Sn ₃ (PO ₄) ₄				

^{*}Make sure you use parenthesis and subscripts where needed. Order Counts!

Ionic Compound Practice

Using the cations and anions in the table below, make as many unique ionic compounds as possible. Write the formulas of the ionic compounds in the space provided. Then tell if it is Type 1 or 2.

Cations	Anions
Li ⁺	Cl ⁻
Ca ²⁺	CN ⁻
Ba ²⁺	Br ⁻
NH ₄ ⁺	O ²⁻ S ²⁻
Al ³⁺	S ²⁻
Fe ²⁺ Fe ³⁺	SO₃²- N³-
Fe³+	N ³⁻

CATION	ANION	TYPE?	CHEMICAL FORMULA	ТҮРЕ

CATION	ANION	TYPE?	CHEMICAL FORMULA	ТҮРЕ