Table 1: Writing Chemical Formula's for a Ternary Compound

Fill in the table with appropriate metal ion, non-metal ion and the chemical formula of the compound.

	Chemical Name	Metal ion (cation)	Polyatomic ion (anion)	Chemical Formula
1	Sodium carbonate	Na^{+1}	$(CO_3)^{-2}$	Na_2CO_3
2	Calcium nitrate			
3	Manganese (V) sulfate			
4	Aluminum hydrogen carbonate			
5	Potassium phosphate			
6	Beryllium hydroxide			
7	Gold (I) hydrogen sulfate			
8	Ammonium chloride			
9	Nickel (II) chlorate			
10	Mercury (I) hydroxide			
11	Ammonium nitrite			
12	Tin (IV) sulfite			

Table 2: Naming Ternary Ionic Compounds

Fill in the table with the name of the compound.

	Chemical Formula	Non-metal ion (anion)	Calculations	Metal ion (cation)	Chemical Name
1	$AuClO_3$	$(ClO_3)^{-1}$	1(1+) = 1(1-) Au ClO_3	Au^{+1}	gold (I) chlorate
2	$Fe(OH)_2$				
3	$CaCO_3$				
4	$(NH_4)_2SO_4$				
5	Li_2HPO_4				
6	$Be_3(PO_4)_2$				
7	$Cu(HSO_4)_2$				
8	$Sn(CN)_4$				
9	Na_2SO_4				
10	$Hg(NO_3)_2$				
11	$W(SO_4)_2$				
12	$Zn(HCO_3)_2$				

Table 3: A Mixture of Binary and Ternary Ionic Compounds

Part A: State if the compound is a binary compound (B) or a ternary compound (T). Write the cation, and anion, and the chemical formula for each of the following ionic compounds.

	Chemical Name	B or T	Cation	Anion	Chemical Formula
1	Sodium phosphate		Na^{+1}	$(PO_4)^{-3}$	Na_3PO_4
2	Silver carbonate				
3	Ammonium chlorate				
4	Antimony (III) nitride				
5	Uranium (IV) oxide				
6	Strontium iodide				
7	Magnesium phosphate				
8	Zinc cyanide				
9	Platinum (IV) hydroxide				
10	Lithium nitite				
11	Mercury (I) phosphate				
12	Zirconium hydroxide				

Table 4: Part B: State if the compound is a binary compound (B) or a ternary compound (T). State if the metal cation is regular monovalent (R) or multivalent (M), and write the chemical name for each compound.

	Chemical Formula	B or T	R or M	Chemical name
1	Mg_3P_2	B	R	Magnesium phosphide
2	Fe_2O_3			
3	$Co_2(SO_4)_3$			
4	$Al(OH)_3$			
5	$CaCO_3$			
6	VCl_5			
7	$Mn(CO_3)_2$			
8	$(NH_4)_3PO_4$			
9	$Ni(CN)_2$			
10	K_3As			
11	$BeSO_3$			
12	$Sn(ClO_3)_4$			