

Name: _____

Hour: _____ Date: _____

Chemistry: Ions in Chemical Compounds

Complete the following table, being sure that the total charge on the resulting compound is zero.

<u>Ions</u>	Chloride Cl^{1-}	Hydroxide OH^{1-}	Nitrate NO_3^{1-}	Sulfate SO_4^{2-}	Sulfide S^{2-}	Carbonate CO_3^{2-}	Phosphate PO_4^{3-}
Hydrogen H^{1+}	HCl	HCl	HNO_3	H_2SO_4	H_2S	H_2CO_3	H_3PO_4
Sodium Na^{1+}	NaCl	NaOH	NaNO_3	Na_2SO_4	Na_2S	Na_2CO_3	Na_3PO_4
Ammonium NH_4^{1+}	NH_4Cl	NH_4OH	NH_4NO_3	$(\text{NH}_4)_2\text{SO}_4$	$(\text{NH}_4)_2\text{S}$	$(\text{NH}_4)_2\text{CO}_3$	$(\text{NH}_4)_3\text{PO}_4$
Potassium K^{1+}	KCl	NH_4OH KOH	KNO_3	K_2SO_4	K_2S	K_2CO_3	K_3PO_4
Calcium Ca^{2+}	CaCl_2	$\text{Ca}(\text{OH})_2$	$\text{Ca}(\text{NO}_3)_2$	CaSO_4	CaS	CaCO_3	$\text{Ca}_3(\text{PO}_4)_2$
Magnesium Mg^{2+}	MgCl_2	$\text{Mg}(\text{OH})_2$	$\text{Mg}(\text{NO}_3)_2$	MgSO_4	MgS	MgCO_3	$\text{Mg}_3(\text{PO}_4)_2$
Aluminum Al^{3+}	AlCl_3	$\text{Al}(\text{OH})_3$	$\text{Al}(\text{NO}_3)_3$	$\text{Al}_2(\text{SO}_4)_3$	Al_2S_3	$\text{Al}_2(\text{CO}_3)_3$	AlPO_4
Ferrous Fe^{2+}	FeCl_2	$\text{Fe}(\text{OH})_2$	$\text{Fe}(\text{NO}_3)_2$	FeSO_4	FeS	FeCO_3	$\text{Fe}_3(\text{PO}_4)_2$
Iron (II) Fe^{2+}	FeCl_2	$\text{Fe}(\text{OH})_2$	$\text{Fe}(\text{NO}_3)_2$	FeSO_4	FeS	FeCO_3	$\text{Fe}_3(\text{PO}_4)_2$
Ferric Fe^{3+}	FeCl_3	$\text{Fe}(\text{OH})_3$	$\text{Fe}(\text{NO}_3)_3$	$\text{Fe}_2(\text{SO}_4)_3$	Fe_2S_3	$\text{Fe}_2(\text{CO}_3)_3$	FePO_4
Iron (III) Fe^{3+}	FeCl_3	$\text{Fe}(\text{OH})_3$	$\text{Fe}(\text{NO}_3)_3$	$\text{Fe}_2(\text{SO}_4)_3$	Fe_2S_3	$\text{Fe}_2(\text{CO}_3)_3$	FePO_4
Plumbous Pb^{2+}	PbCl_2	$\text{Pb}(\text{OH})_2$	$\text{Pb}(\text{NO}_3)_2$	PbSO_4	PbS	PbCO_3	$\text{Pb}_3(\text{PO}_4)_2$
Stannic Sn^{4+}	SnCl_4	$\text{Sn}(\text{OH})_4$	$\text{Sn}(\text{NO}_3)_4$	$\text{Sn}(\text{SO}_4)_2$	SnS_2	$\text{Sn}(\text{CO}_3)_2$	$\text{Sn}_3(\text{PO}_4)_4$
Copper (I) Cu^{1+}	CuCl	CuOH	CuNO_3	Cu_2SO_4	Cu_2S	Cu_2CO_3	$\text{Cu}_3(\text{PO}_4)$
Cupric Cu^{2+}	CuCl_2	$\text{Cu}(\text{OH})_2$	$\text{Cu}(\text{NO}_3)_2$	CuSO_4	CuS	CuCO_3	$\text{Cu}_3(\text{PO}_4)_2$

* can check answers once finished.

Compound Names and Formulas

For the list on the left, name the compound. For the list on the right, give the chemical formula that corresponds to the name

Name		Formula
1)	NaF	13) potassium fluoride
2)	K ₂ CO ₃	14) ammonium sulfate
3)	MgCl ₂	15) magnesium iodide
4)	Be(OH) ₂	16) copper (II) sulfite
5)	SrS	17) aluminum phosphate
* 6)	Cu ₂ S	18) lead (II) nitrite
7)	ZnI ₂	19) cobalt (II) selenide
8)	Ca ₃ (PO ₄) ₂	20) silver cyanide
9)	NH ₄ I	21) copper (II) bicarbonate
* 10)	Mn(NO ₃) ₃	22) iron (II) oxide
* 11)	FePO ₄	23) lithium cyanide
* 12)	CoCO ₃	24) lead (IV) sulfite

* = Transition Metal - use Roman Numerals