

Copy and complete the following table into your class notebook with the heading: Ionic Formulas

(See text Sections 6.3 & 7.1)

Key

Part 1

For each of the following compounds:

- i.) write the name of the compound given
- ii.) write the symbol for the ions the compound contains
- ii.) name the compound

	<u>Ion Symbols</u>	<u>Chemical Formula</u>
1.) <u>Example:</u> Lithium carbonate	$\text{Li}^+, \text{CO}_3^{2-}$	Li_2CO_3
2.) Copper(I) sulfite	$\text{Cu}^+, \text{SO}_3^{2-}$	Cu_2SO_3
3.) Copper(II) sulfite	$\text{Cu}^{2+}, \text{SO}_3^{2-}$	CuSO_3
4.) Lead(II) nitrite	$\text{Pb}^{2+}, \text{NO}_2^-$	$\text{Pb}(\text{NO}_2)_2$
5.) Aluminum thiosulfate	$\text{Al}^{3+}, \text{S}_2\text{O}_3^{2-}$	$\text{Al}_2(\text{S}_2\text{O}_3)_3$
6.) Ammonium dichromate	$\text{NH}_4^+, \text{Cr}_2\text{O}_7^{2-}$	$(\text{NH}_4)_2\text{Cr}_2\text{O}_7$
7.) Barium bromide	$\text{Ba}^{2+}, \text{Br}^-$	BaBr_2
8.) Tin(II) hydroxide	$\text{Sn}^{2+}, \text{OH}^-$	$\text{Sn}(\text{OH})_2$
9.) Chromium(III) chromate	$\text{Cr}^{3+}, \text{CrO}_4^{2-}$	$\text{Cr}_2(\text{CrO}_4)_3$
10.) Potassium permanganate	$\text{K}^+, \text{MnO}_4^-$	KMnO_4
11.) Mercury(I) acetate	$\text{Hg}_2^{2+}, \text{C}_2\text{H}_3\text{O}_2^-$	$\text{Hg}_2(\text{C}_2\text{H}_3\text{O}_2)_2$
12.) Magnesium oxalate	$\text{Mg}^{2+}, \text{C}_2\text{O}_4^{2-}$	MgC_2O_4
13.) Cesium bisulfate	$\text{Cs}^+, \text{HSO}_4^-$	CsHSO_4
14.) Zinc perchlorate	$\text{Zn}^{2+}, \text{ClO}_4^-$	$\text{Zn}(\text{ClO}_4)_2$
15.) Hydrogen sulfide	$\text{H}^+, \text{S}^{2-}$	H_2S
16.) Manganese(II) phosphate	$\text{Mn}^{2+}, \text{PO}_4^{3-}$	$\text{Mn}_3(\text{PO}_4)_2$
17.) Calcium hydrogen phosphate	$\text{Ca}^{2+}, \text{HPO}_4^{2-}$	CaHPO_4
18.) Sodium thiosulfate	$\text{Na}^+, \text{S}_2\text{O}_3^{2-}$	$\text{Na}_2\text{S}_2\text{O}_3$

Part 2

For each of the following compounds:

- copy the formula for the compound given
- write the symbols for the ions in the compound
- name the compound

	<u>Ion Symbols</u>	<u>Compound Name</u>
<u>Example:</u> SrSO ₄	<u>Sr²⁺, SO₄²⁻</u>	<u>Strontium sulfate</u>
19.) ZnBr ₂	<u>Zn²⁺ Br⁻</u>	<u>Zinc bromide</u>
20.) Ag ₂ S	<u>Ag⁺ S²⁻</u>	<u>Silver sulfide</u>
21.) K ₃ PO ₄	<u>K⁺ PO₄³⁻</u>	<u>Potassium phosphate</u>
22.) Zn(ClO ₃) ₂	<u>Zn²⁺ ClO₃⁻</u>	<u>Zinc chlorate</u>
23.) NH ₄ C ₂ H ₃ O ₂	<u>NH₄⁺ C₂H₃O₂⁻</u>	<u>Ammonium acetate</u>
24.) Ca ₃ (PO ₄) ₂	<u>Ca²⁺ PO₄³⁻</u>	<u>Calcium phosphate</u>
25.) Sn(NO ₃) ₄	<u>Sn⁴⁺ NO₃⁻</u>	<u>Tin(IV) nitrate</u>
26.) MgSO ₄	<u>Mg²⁺ SO₄²⁻</u>	<u>Magnesium sulfate</u>

Part 3

For each of the following compounds:

- copy the formulas for the ions given
- write the chemical formula for the compound that would form
- name the compound

	<u>Chemical Formula</u>	<u>Compound Name</u>
<u>Example:</u> Pb ⁴⁺ , OH ⁻	<u>Pb(OH)₄</u>	<u>Lead(IV) hydroxide</u>
27.) Na ⁺ , F ⁻	<u>NaF</u>	<u>Sodium fluoride</u>
28.) K ⁺ , S ²⁻	<u>K₂S</u>	<u>Potassium sulfide</u>
29.) Ba ²⁺ , Br ⁻	<u>BaBr₂</u>	<u>Barium bromide</u>
30.) Al ³⁺ , O ²⁻	<u>Al₂O₃</u>	<u>Aluminum oxide</u>
31.) Ca ²⁺ , OH ⁻	<u>Ca(OH)₂</u>	<u>Calcium hydroxide</u>
32.) NH ₄ ⁺ , P ³⁻	<u>(NH₄)₃P</u>	<u>Ammonium phosphide</u>
33.) Cu ⁺ , NO ₃ ⁻	<u>CuNO₃</u>	<u>Copper(I) nitrate</u>
34.) Cu ²⁺ , NO ₃ ⁻	<u>Cu(NO₃)₂</u>	<u>Copper(II) nitrate</u>
35.) Fe ³⁺ , SO ₄ ²⁻	<u>Fe₂(SO₄)₃</u>	<u>Iron(III) sulfate</u>
36.) Li ⁺ , CO ₃ ²⁻	<u>Li₂CO₃</u>	<u>Lithium carbonate</u>