Name: _____ Block: _____

CHEMISTRY
Naming and Writing Ionic Compounds

How to name ionic compounds.

1. Ionic compounds are written as metal (cation) nonmetal (anion).

2. Name the metal by its elemental name (if there is only one metal atom in the compound formula). No numbering of metal atoms needed.

3. If the metal is polyvalent, the roman numeral of the charge will be in parentheses following the metal name.

4. If there is more than one metal atom of element in the compound, name the metals in order alkali metal first, alkaline earth metal second. Use the Greek prefixes for numbers to denote how many of each metal atoms are in the compound. If there is only one, no prefix is necessary.

4. Name the nonmetal by its elemental name, dropping the last syllable (or last two syllables) and adding the suffix -ide.

5. If there is more than one nonmetal in the compound, name the nonmetals in order nitrogen group first, oxygen group seconds, halogen last. Use the Greek prefixes for numbers to denote how many of each nonmetal atoms are in the compound. If there is only one atom of that element in the compound, no prefix is necessary.

6. Name polyatomic anions by their names.

1: Mono 2: Di 3: Tri 4: Tetra 5: Penta

Compound	Name
NaCl	**Sodium chloride**
$MgCl_2$	**Magnesium chloride**
NaK_2P	**Sodium dipotassium phosphide**
$MgCO_3$	**Magnesium carbonate**
$AlCl_2F$	**Aluminum dichloride fluoride**

Part 1: Write the correct chemical name for the compound. The chemical formulae are correct. The compounds consist of only monoatomic ions.

1	KF	
2	K_2O	
3	MgO	
4	FeS	
5	Fe_2O_3	
6	Cu_2S	
7	$AlBr_3$	
8	AlI_2Br	
9	$SnCl_2Fl_2$	
10	KNa_2P	
11	SrO	
12	Ca_3P_2	

Part 2: Write the correct chemical name for the compound. The chemical formulae are correct. Use the chart of polyatomic ions to help you.

13	KOH	
14	K_2CO_3	
15	$Mg(CN)_2$	
16	NH_4Cl	
17	NH_4NO_3	
18	$Cu(NO_3)_2$	
19	$Al_2(CO_3)_3$	
20	$FeSO_4$	
21	$KMnO_4$	
22	Na_2KPO_4	
23	$Al_2(SO_4)_3$	
24	Na_2CrO_4	

Part 3: Write the chemical formulae when given the compound name. Use the proper naming conventions. All compounds consist of **monoatomic ions**.

25		Lithium fluoride
26		Lithium oxide
27		Calcium bromide
28		Aluminum chloride
29		Calcium sulfide
30		Iron (III) oxide
31		Copper (I) nitride
32		Sodium potassium selenide
33		Calcium chloride fluoride
34		Strontium iodide
35		Dilithium sodium phosphide
36		Rubidium chloride

Part 4: Write the chemical formulae when given the compound name. Use the proper naming conventions. All compounds consist of one or two **polyatomic ions**.

37		Ammonium chloride
38		Sodium nitrate
39		Iron (II) nitrate
40		Calcium sulfate
41		Calcium sulfide
42		Lithium hydroxide
43		Magnesium hydroxide
44		Copper (II) sulfate
45		Sodium carbonate
46		Magnesium carbonate
47		Sodium permanganate
48		Magnesium phosphate