A

Blackline Master 5.8

Ionic Compounds: Names and Formulas Worksheet

1. Write the formulas for the following compounds.

(a) magnesium oxide _____

(b) sodium fluoride _____

(c) aluminum nitride _____

(d) potassium sulfide _____

(e) lithium iodide _____

(f) calcium bromide _____

(g) beryllium oxide _____

(h) nickel (III) chloride _____

(i) magnesium nitride _____

(j) aluminum sulfide _____

(k) copper(I) bromide _____

(l) tin(II) iodide _____

(m) iron(III) chloride _____

(n) calcium phosphide _____

(o) lead(II) oxide _____

(p) lead(IV) fluoride _____

(q) tin(IV) bromide _____

(r) copper(II) sulfide _____

(s) iron(II) oxide _____

(t) calcium nitride _____

2. Write the names for the following compounds.

(a) Li_2O _____

(b) $AlCl_3$ _____

(c) MgS _____

(d) CaO _____

(e) KBr _____

(f) BeF_2 _____

(g) Na_3N _____

(h) Al_2O_3 _____

(i) $CuCl_2$ _____

(j) $FeBr_3$ _____

(k) PbS _____

(l) SnO_2 _____

(m) Na_2S _____

(n) Mg_3P_2 _____

(o) NiO _____

(p) CuI _____

(q) $PbCl_4$ _____

(r) FeP _____

(s) CaF_2 _____

(t) K_3P _____

(B)

Blackline Master 5.9

Polyatomic Compounds: Names and Formulas Worksheet

1. Write the formulas for the following compounds.

(a) magnesium sulfate _____

(b) sodium chlorate _____

(c) aluminum nitrate _____

(d) potassium hydroxide _____

(e) lithium phosphate _____

(f) calcium carbonate _____

(g) beryllium sulfate _____

(h) sodium bicarbonate _____

(i) magnesium hydroxide _____

(j) aluminum phosphate _____

(k) copper(I) chlorate _____

(l) calcium sulfate _____

(p) lead(II) nitrate _____

(r) copper(II) hydroxide _____

(s) iron(II) phosphate _____

(t) calcium chlorate _____

2. Write the names for the following compounds.

(a) Li_2CO_3 _____

(b) $Al(HCO_3)_3$ _____

(c) $Mg_3(PO_4)_2$ _____

(d) $Ca(NO_3)_2$ _____

(e) K_2SO_4 _____

(f) HNO_3 _____

(g) $NaNO_3$ _____

(h) $Al(OH)_3$ _____

(i) $CuSO_4$ _____

(j) $Fe(ClO)_3$ _____

(k) $Pb_3(PO_4)_2$ _____

(l) $Sn(ClO_3)_2$ _____

(m) $NaOH$ _____

(n) H_3PO_4 _____

(o) H_2CO_3 _____

(p) $CuNO_3$ _____

(q) H_2SO_4 _____

(r) $FeSO_4$ _____

(s) $Ca(HCO_3)_2$ _____

(t) K_3PO_4 _____

Name: _____
Blk.: ___ Date: _____

Worksheet - Naming Ionic Compounds

Summary of Rules:

1. Write the name of the **metallic** element (if more than 1 ion charge, use roman numerals in parenthesis) or polyatomic ion.
2. Then write the name of the **non-metallic** element (with an "**ide**" ending) or polyatomic ion.

Part 1: Simple Ionic Compounds:

1. $NaCl$ _____
2. $CaBr_2$ _____
3. NaI _____
4. K_2O _____
5. $MgBr_2$ _____
6. Al_2O_3 _____
7. CaF_2 _____
8. Li_3P _____
9. Ag_2S _____
10. Be_3N_2 _____
11. CaO _____
12. Na_2S _____
13. AlI_3 _____
14. K_3P _____
15. KI _____
16. NaF _____
17. $BaCl_2$ _____
18. Be_3N_2 _____

Part 2: Ionic Compounds with Radicals:

1. $NaOH$ _____
2. KNO_3 _____
3. $CaCO_3$ _____
4. $BaSO_4$ _____
5. $AlPO_4$ _____
6. $SrCr_2O_7$ _____
7. $LiHCO_3$ _____
8. NH_4Cl _____
9. $Zn(OH)_2$ _____
10. Rb_2SO_4 _____
11. $Mg(NO_3)_2$ _____
12. $BeCr_2O_7$ _____
13. $Ca(HCO_3)_2$ _____
14. $Zn_3(PO_4)_2$ _____
15. NH_4Br _____
16. $ScPO_4$ _____
17. $Cd(NO_3)_2$ _____
18. NH_4I _____

Part 3: Ionic Compounds with Metals of More Than 1 Ion Charge:

		valence of metal			valence of metal	
1.	$CuBr_2$	2+		10. $FeSO_4$	2+	
2.	$FeCl_3$	3+		11. $CuCO_3$	2+	
3.	$FeSO_4$	2+		12. $AuPO_4$	3+	
4.	$Pb(OH)_4$	4+		13. Ni_2S_3	3+	
5.	CrF_2	2+		14. $MnBr_4$	4+	
6.	NiN	3+		15. HgCl	1+	
7.	$Sn(OH)_4$	4+		16. $Cr(OH)_3$	3+	
8.	NiS	2+		17. $CoCO_3$	2+	
9.	Au_2O	1+		18. $Sn(HCO_3)_4$	4+	

Part 4: Ionic Compounds (all 3 types mixed): *(see note below)*
Use your periodic table for this section.

1. HI
2. $BaCO_3$
3. AgCl
4. $PbCl_4$
5. $Cd(OH)_2$
6. $AuCl_3$
7. $Li_2Cr_2O_7$
8. $Al_2(SO_4)_3$
9. ZnO
10. $CsHCO_3$
11. NH_4Br
12. $HgSO_4$
13. CsF
14. HNO_3
15. $Fe(NO_3)_3$
16. $Pb_3(PO_4)_4$
17. $(NH_4)_2O$
18. Li_2S
19. $CoBr_3$
20. $Cd(HCO_3)_2$
21. Na_3PO_4
22. $(NH_4)_3N$
23. K_3P
24. $ZnCO_3$
25. Sn_3N_4
26. $Al(OH)_3$
27. $CuCr_2O_7$
28. $Mg(NO_3)_2$
29. H_2S
30. NH_4OH

Note: For metals with more than one valence, use the highest valence number on your Periodic Table.