

Ionic Compound Formula Writing Worksheet

Write chemical formulas for the compounds in each box. The names are found by finding the intersection between the cations and anions. Example: The first box is the intersection between the "zinc" cation and the "chloride" anion, so you should write "ZnCl₂", as shown.

	zinc	iron (II)	iron (III)	gallium	silver	lead (IV)
chloride	ZnCl ₂					
acetate						
nitrate						
oxide						
nitride						
sulfate						

Write the formulas for the following compounds:

- 1) copper (II) chloride _____
- 2) barium acetate _____
- 3) vanadium (III) selenide _____
- 4) manganese (IV) nitride _____
- 5) beryllium oxide _____
- 6) sodium sulfate _____
- 7) aluminum arsenide _____
- 8) potassium chromate _____
- 9) chromium (VI) sulfide _____
- 10) tin (II) sulfate _____
- 11) vanadium (V) fluoride _____
- 12) ammonium nitrate _____

Formula Writing Exercise A

For each box write the chemical formula of the compound formed by the cation at the head of the column and the anion at the left of the row.

	Li^+	Mg^{2+}	NH_4^+	Al^{3+}	Na^+	Ba^{2+}	K^+	Ca^{2+}
Br^-	LiBr							
SO_4^{2-}								
OH^-								
F^-								
O^{2-}								
NO_3^-								
PO_4^{3-}								
Cl^-								
S^{2-}								
I^-								
CO_3^{2-}								

FORMULA WRITING – EXERCISE 2

Write chemical formulas for the following compounds:

1. Potassium iodide _____
2. Barium sulfate _____
3. Aluminum nitrate _____
4. Copper (II) carbonate _____
5. Gold (III) chloride _____
6. Ferric hydroxide _____
7. Lead (II) chromate _____
8. Nickel (II) hydroxide _____
9. Mercury (II) bromide _____
10. Silver acetate _____
11. Magnesium chlorate _____
12. Sodium peroxide _____
13. Manganese (II) phosphate _____
14. Ammonium sulfide _____
15. Platinum (IV) fluoride _____
16. Chromium (III) hydroxide _____
17. Calcium oxalate _____
18. Antimony trichloride _____
19. Ammonia _____
20. Silicon dioxide _____
21. Carbon monoxide _____
22. Hydrobromic acid _____
23. Nitrous acid _____
24. Acetic acid _____
25. Sulfuric acid _____

Name _____ Period _____ Date _____

Naming Ionic Compounds – Ch. 11

PART A – IONIC NAMES

Write names for the following ionic compounds. Remember to include Roman numerals for ions with variable oxidation numbers.

1. NaCl _____
2. MnS _____
3. K₂O _____
4. AlPO₄ _____
5. Na₂CO₃ _____
6. NH₄Cl _____
7. PbSO₄ _____
8. CuBr₂ _____

PART B – IONIC FORMULAS

Write formulas for the following ionic compounds.

9. barium fluoride _____
10. lithium bromide _____
11. calcium nitrate _____
12. chromium(III) chloride _____
13. sodium phosphate _____
14. zinc oxide _____
15. magnesium phosphide _____
16. lead(II) hydroxide _____

Names & Formulas for Ionic Compounds

Give the name or formula of the following ionic compounds:

Name		Formula	
1)	Na_2CO_3 _____	21)	sodium phosphide _____
2)	NaOH _____	22)	magnesium nitrate _____
3)	MgBr_2 _____	23)	lead (II) sulfate _____
4)	KCl _____	24)	calcium phosphate _____
5)	FeCl_2 _____	25)	ammonium sulfate _____
6)	FeCl_3 _____	26)	silver cyanide _____
7)	Zn(OH)_2 _____	27)	aluminum sulfide _____
8)	BeSO_4 _____	28)	beryllium chloride _____
9)	CrF_2 _____	29)	copper (I) arsenide _____
10)	Al_2S_3 _____	30)	iron (III) oxide _____
11)	PbO _____	31)	gallium nitride _____
12)	Li_3PO_4 _____	32)	iron (II) bromide _____
13)	TiI_4 _____	33)	vanadium (V) phosphate _____
14)	Co_3N_2 _____	34)	calcium oxide _____
15)	Mg_3P_2 _____	35)	magnesium acetate _____
16)	$\text{Ga(NO}_3)_3$ _____	36)	aluminum sulfate _____
17)	Ag_2SO_4 _____	37)	copper (I) carbonate _____
18)	NH_4OH _____	38)	barium oxide _____
19)	Al(CN)_3 _____	39)	ammonium sulfate _____
20)	$\text{Be(C}_2\text{H}_3\text{O}_2)_2$ _____	40)	silver bromide _____

