

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.

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

Write the formulas for the following compounds:

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

Chemical Formula Writing Worksheet Solutions

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.

	<i>zinc</i>	<i>iron (II)</i>	<i>iron (III)</i>	<i>gallium</i>	<i>silver</i>	<i>lead (IV)</i>
<i>chloride</i>	ZnCl₂	FeCl₂	FeCl₃	GaCl₃	AgCl	PbCl₄
<i>acetate</i>	Zn(C₂H₃O₂)₂	Fe(C₂H₃O₂)₂	Fe(C₂H₃O₂)₃	Ga(C₂H₃O₂)₃	Ag C₂H₃O₂	Pb(C₂H₃O₂)₄
<i>nitrate</i>	Zn(NO₃)₂	Fe(NO₃)₂	Fe(NO₃)₃	Ga(NO₃)₃	AgNO₃	Pb(NO₃)₄
<i>oxide</i>	ZnO	FeO	Fe₂O₃	Ga₂O₃	Ag₂O	PbO₂
<i>nitride</i>	Zn₃N₂	Fe₃N₂	FeN	GaN	Ag₃N	Pb₃N₄
<i>sulfate</i>	ZnSO₄	FeSO₄	Fe₂(SO₄)₃	Ga₂(SO₄)₃	Ag₂SO₄	Pb(SO₄)₂

Write the formulas for the following compounds:

- 1) copper (II) chloride **CuCl₂**
- 2) lithium acetate **LiC₂H₃O₂**
- 3) vanadium (III) selenide **V₂Se₃**
- 4) manganese (IV) nitride **Mn₃N₄**
- 5) beryllium oxide **BeO**
- 6) sodium sulfate **Na₂SO₄**
- 7) aluminum arsenide **AlAs**
- 8) potassium chromate **K₂CrO₄**
- 9) chromium (VI) cyanide **Cr(CN)₆**
- 10) tin (II) sulfite **SnSO₄**
- 11) vanadium (V) fluoride **VF₅**
- 12) ammonium nitrate **NH₄NO₃**

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) sulfite _____
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)	Be_2SO_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)	$\text{Ga(NO}_2)_3$ _____	36)	aluminum sulfate _____
17)	Ag_2SO_3 _____	37)	copper (I) carbonate _____
18)	NH_4OH _____	38)	barium oxide _____
19)	Al(CN)_3 _____	39)	ammonium sulfite _____
20)	$\text{Be(CH}_3\text{COO)}_2$ _____	40)	silver bromide _____

Naming Ionic Compounds – Answer Key

Give the name and molar mass of the following ionic compounds:

Name

- 1) Na_2CO_3 **sodium carbonate**
- 2) NaOH **sodium hydroxide**
- 3) MgBr_2 **magnesium bromide**
- 4) KCl **potassium chloride**
- 5) FeCl_2 **iron (II) chloride**
- 6) FeCl_3 **iron (III) chloride**
- 7) Zn(OH)_2 **zinc hydroxide**
- 8) Be_2SO_4 **beryllium sulfate**
- 9) CrF_2 **chromium (II) fluoride**
- 10) Al_2S_3 **aluminum sulfide**
- 11) PbO **lead (II) oxide**
- 12) Li_3PO_4 **lithium phosphate**
- 13) TiI_4 **titanium (IV) iodide**
- 14) Co_3N_2 **cobalt (II) nitride**
- 15) Mg_3P_2 **magnesium phosphide**
- 16) $\text{Ga(NO}_2)_3$ **gallium nitrite**
- 17) Ag_2SO_3 **silver sulfite**
- 18) NH_4OH **ammonium hydroxide**
- 19) Al(CN)_3 **aluminum cyanide**
- 20) $\text{Be(CH}_3\text{COO)}_2$ **beryllium acetate**

For the following compounds, give the formulas and the molar masses:

	Formula
21) sodium phosphide	Na₃P
22) magnesium nitrate	Mg(NO₃)₂
23) lead (II) sulfite	PbSO₃
24) calcium phosphate	Ca₃(PO₄)₃
25) ammonium sulfate	(NH₄)₂SO₄
26) silver cyanide	AgCN
27) aluminum sulfide	Al₂S₃
28) beryllium chloride	BeCl₂
29) copper (I) arsenide	Cu₃As
30) iron (III) oxide	Fe₂O₃
31) gallium nitride	GaN
32) iron (II) bromide	FeBr₂
33) vanadium (V) phosphate	V₃(PO₄)₅
34) calcium oxide	CaO
35) magnesium acetate	Mg(CH₃COO)₂
36) aluminum sulfate	Al₂(SO₄)₃
37) copper (I) carbonate	Cu₂CO₃
38) barium oxide	BaO
39) ammonium sulfite	(NH₄)₂SO₃
40) silver bromide	AgBr