

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:

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

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	Na_3P
22) magnesium nitrate	$\text{Mg}(\text{NO}_3)_2$
23) lead (II) sulfite	PbSO_3
24) calcium phosphate	$\text{Ca}_3(\text{PO}_4)_3$
25) ammonium sulfate	$(\text{NH}_4)_2\text{SO}_4$
26) silver cyanide	AgCN
27) aluminum sulfide	Al_2S_3
28) beryllium chloride	BeCl_2
29) copper (I) arsenide	Cu_3As
30) iron (III) oxide	Fe_2O_3
31) gallium nitride	GaN
32) iron (II) bromide	FeBr_2
33) vanadium (V) phosphate	$\text{V}_3(\text{PO}_4)_5$
34) calcium oxide	CaO
35) magnesium acetate	$\text{Mg}(\text{CH}_3\text{COO})_2$
36) aluminum sulfate	$\text{Al}_2(\text{SO}_4)_3$
37) copper (I) carbonate	Cu_2CO_3
38) barium oxide	BaO
39) ammonium sulfite	$(\text{NH}_4)_2\text{SO}_3$
40) silver bromide	AgBr