

## 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 "ZnCl<sub>2</sub>", 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>	<b>ZnCl<sub>2</sub></b>	<b>FeCl<sub>2</sub></b>	<b>FeCl<sub>3</sub></b>	<b>GaCl<sub>3</sub></b>	<b>AgCl</b>	<b>PbCl<sub>4</sub></b>
<i>acetate</i>	Zn(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub>	Fe(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>2</sub>	Fe(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>3</sub>	Ga(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>3</sub>	Ag C <sub>2</sub> H <sub>3</sub> O <sub>2</sub>	Pb(C <sub>2</sub> H <sub>3</sub> O <sub>2</sub> ) <sub>4</sub>
<i>nitrate</i>	Zn(NO <sub>3</sub> ) <sub>2</sub>	Fe(NO <sub>3</sub> ) <sub>2</sub>	Fe(NO <sub>3</sub> ) <sub>3</sub>	Ga(NO <sub>3</sub> ) <sub>3</sub>	<b>AgNO<sub>3</sub></b>	<b>Pb(NO<sub>3</sub>)<sub>4</sub></b>
<i>oxide</i>	<b>ZnO</b>	<b>FeO</b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>Ga<sub>2</sub>O<sub>3</sub></b>	<b>Ag<sub>2</sub>O</b>	<b>PbO<sub>2</sub></b>
<i>nitride</i>	<b>Zn<sub>3</sub>N<sub>2</sub></b>	<b>Fe<sub>3</sub>N<sub>2</sub></b>	<b>FeN</b>	<b>GaN</b>	<b>Ag<sub>3</sub>N</b>	<b>Pb<sub>3</sub>N<sub>4</sub></b>
<i>sulfate</i>	<b>ZnSO<sub>4</sub></b>	<b>FeSO<sub>4</sub></b>	Fe <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	Ga <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>	<b>Ag<sub>2</sub>SO<sub>4</sub></b>	<b>Pb(SO<sub>4</sub>)<sub>2</sub></b>

Write the formulas for the following compounds:

- 1) copper (II) chloride **CuCl<sub>2</sub>**
- 2) lithium acetate **LiC<sub>2</sub>H<sub>3</sub>O<sub>2</sub>**
- 3) vanadium (III) selenide **V<sub>2</sub>Se<sub>3</sub>**
- 4) manganese (IV) nitride **Mn<sub>3</sub>N<sub>4</sub>**
- 5) beryllium oxide **BeO**
- 6) sodium sulfate **Na<sub>2</sub>SO<sub>4</sub>**
- 7) aluminum arsenide **AlAs**
- 8) potassium permanganate **KMnO<sub>4</sub>**
- 9) chromium (VI) cyanide **Cr(CN)<sub>6</sub>**
- 10) tin (II) sulfite **SnSO<sub>3</sub>**
- 11) vanadium (V) fluoride **VF<sub>5</sub>**
- 12) ammonium nitrate **NH<sub>4</sub>NO<sub>3</sub>**

## Naming Ionic Compounds – Answer Key

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

		Name
1)	$\text{Na}_2\text{CO}_3$	sodium carbonate
2)	$\text{NaOH}$	sodium hydroxide
3)	$\text{MgBr}_2$	magnesium bromide
4)	$\text{KCl}$	potassium chloride
5)	$\text{FeCl}_2$	iron (II) chloride
6)	$\text{FeCl}_3$	iron (III) chloride
7)	$\text{Zn(OH)}_2$	zinc hydroxide
8)	$\text{Be}_2\text{SO}_4$	beryllium sulfate
9)	$\text{CrF}_2$	chromium (II) fluoride
10)	$\text{Al}_2\text{S}_3$	aluminum sulfide
11)	$\text{PbO}$	lead (II) oxide
12)	$\text{Li}_3\text{PO}_4$	lithium phosphate
13)	$\text{TiI}_4$	titanium (IV) iodide
14)	$\text{Co}_3\text{N}_2$	cobalt (II) nitride
15)	$\text{Mg}_3\text{P}_2$	magnesium phosphide
16)	$\text{Ga(NO}_2)_3$	gallium nitrite
17)	$\text{Ag}_2\text{SO}_3$	silver sulfite
18)	$\text{NH}_4\text{OH}$	ammonium hydroxide
19)	$\text{Al(CN)}_3$	aluminum cyanide
20)	$\text{Be(CH}_3\text{COO)}_2$	beryllium acetate

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

		<b>Formula</b>
21)	sodium phosphide	<b>Na<sub>3</sub>P</b>
22)	magnesium nitrate	<b>Mg(NO<sub>3</sub>)<sub>2</sub></b>
23)	lead (II) sulfite	<b>PbSO<sub>3</sub></b>
24)	calcium phosphate	<b>Ca<sub>3</sub>(PO<sub>4</sub>)<sub>3</sub></b>
25)	ammonium sulfate	<b>(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub></b>
26)	silver cyanide	<b>AgCN</b>
27)	aluminum sulfide	<b>Al<sub>2</sub>S<sub>3</sub></b>
28)	beryllium chloride	<b>BeCl<sub>2</sub></b>
29)	copper (I) arsenide	<b>Cu<sub>3</sub>As</b>
30)	iron (III) oxide	<b>Fe<sub>2</sub>O<sub>3</sub></b>
31)	gallium nitride	<b>GaN</b>
32)	iron (II) bromide	<b>FeBr<sub>2</sub></b>
33)	vanadium (V) phosphate	<b>V<sub>3</sub>(PO<sub>4</sub>)<sub>5</sub></b>
34)	calcium oxide	<b>CaO</b>
35)	magnesium acetate	<b>Mg(CH<sub>3</sub>COO)<sub>2</sub></b>
36)	aluminum sulfate	<b>Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub></b>
37)	copper (I) carbonate	<b>Cu<sub>2</sub>CO<sub>3</sub></b>
38)	barium oxide	<b>BaO</b>
39)	ammonium sulfite	<b>(NH<sub>4</sub>)<sub>2</sub>SO<sub>3</sub></b>
40)	silver bromide	<b>AgBr</b>