**Ionic Compounds - Formula Writing**

Chemistry

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period: 1 2 3 4 5 6 7

**Suggested Strategy for Name 🡪 Formula:**

1. Identify and write the cation (metal – single element - or ammonium), including the charge.

2. Identify and write the anion (monatomic or polyatomic), including the charge.

5. How many of each ion do you need to make the compound neutral?

6. Use a subscript following each ion to show the required number of that ion.

**Write the formulas for the following ionic compounds:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Cation** | **Anion** | **Number of each ion for charge = 0?**  **(swap superscripts)** | **Formula** |
| silver oxide | Ag+ | O2-(“ide” = monatomic | 2 Ag+, 1 O2- | Ag2O |
| tin(IV) sulfide | Sn4+ | S2- | 1 Sn4+, 2 S2- | SnS2 |
| aluminum oxide | Al3+ | O2- | 2 Al3+, 3 O2- | Al2O3 |
| sodium nitride |  |  |  |  |
| barium fluoride |  |  |  |  |
| magnesium selenide |  |  |  |  |
| lead(II) sulfide |  |  |  |  |
| gallium iodide |  |  |  |  |
| calcium hydroxide | Ca2+ | OH- | 1 Ca2+, 2 OH- | Ca(OH)2 |
| ammonium carbonate | NH4+ | CO32- | 2 NH4+, 1 CO32- | (NH4)2CO3 |
| nickel(III) hydrogen sulfate | Ni3+ | HSO4- | 1 Ni3+, 3 HSO4- | Ni(HSO4)3 |
| iron(II) chromate |  |  |  |  |
| cobalt(II) nitrate |  |  |  |  |
| sodium carbonate |  |  |  |  |
| lithium acetate |  |  |  |  |
| chromium(II) oxalate |  |  |  |  |
| mercury(II) chlorate |  |  |  |  |
| cesium hydride |  |  |  |  |
| nickel(II) oxide |  |  |  |  |
| manganese(II) bromide |  |  |  |  |
| aluminum hydroxide |  |  |  |  |
| copper(II) chloride |  |  |  |  |

**Write the formulas for the following ionic compounds:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Cation** | **Anion** | **Number of each ion for charge = 0?**  **(swap superscripts)** | **Formula** |
| copper(I) phosphate |  |  |  |  |
| strontium dichromate |  |  |  |  |
| magnesium chlorite |  |  |  |  |
| aluminum hydrogen carbonate |  |  |  |  |
| chromium(VI) sulfate |  |  |  |  |
| tin(IV) chloride |  |  |  |  |
| zinc perchlorate |  |  |  |  |
| tin(II) carbide |  |  |  |  |
| ammonium nitrate |  |  |  |  |
| manganese(II) peroxide |  |  |  |  |
| cobalt(III) chromate |  |  |  |  |
| rubidium arsenide |  |  |  |  |
| mercury(I) cyanide |  |  |  |  |
| silver hydrogen phosphate |  |  |  |  |
| zinc iodide |  |  |  |  |
| lead(II) dihydrogen phosphate |  |  |  |  |
| magnesium cyanide |  |  |  |  |
| lithium nitrite |  |  |  |  |
| lead(IV) sulfite |  |  |  |  |
| copper(I) arsenide |  |  |  |  |
| potassium bromide |  |  |  |  |
| cadmium(II) phosphide |  |  |  |  |
| ammonium acetate |  |  |  |  |
| beryllium hydrogen sulfide |  |  |  |  |
| iron(III) hydrogen sulfite |  |  |  |  |