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

Writing Formulas & Naming

|  |  |  |
| --- | --- | --- |
| **NOTES:** | **Type I** | **Type II** |
| **Who’s Bonding?** | 2 non-metals | Metal + non-metal |
| **Example**  | **N2O3****Dinitrogen trioxide** | **CaCl2****Calcium chloride** |
| **Rule: name 1st element** | Prefix (except if only 1) + full name | Full Name  |
| **Rule: name 2nd element** | Prefix + -ide ending  | -ide ending\*  (\*unless polyatomic ion) |
| **Special rules for this type?** | 1: mono- 2: di- 3: tri- 4: tetra 5: penta 6: hexa- 7:hepta- 8: octa- 9:nona- 10: deca-  |  “**Swap & Drop”!** |
| -Write Ion charges-Swap & drop the numbers-Write as a formula:  Ca Cl2   | Special situations:* **Transition metals**

 (use roman numerals)   Ex: CuBr2 🡪 Copper (II) Bromide* **Polyatomic Ions**

(name according to P. Table)  EX: Ca(NO3)2 🡪 Calcium Nitrate |

Part I – Covalent Compounds (2 non-metals)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Formula** |  | **Formula** | **Name** |
| 1. phosphorus trichloride |  |  | 9. CO2 |  |
| 2. phosphorus pentachloride |  |  | 10. CO |  |
| 3. sulfur dioxide |  |  | 11. NH3 |  |
| 4. sulfur hexachloride |  |  | 12. SO3 |  |
| 5. silicon dioxide |  |  | 13. P2Cl5 |  |
| 6. carbon tetrachloride |  |  | 14. NO |  |
| 7. dinitrogen monoxide |  |  | 15. N2O3 |  |
| 8. nitrogen dioxide |  |  | 16. Cl2 |  |
|  |
|  |

Part II – Ionic Compounds (metal/ non-metal)

|  |
| --- |
| 1. **Simple Binary Ionic Compounds**
 |
| **Name** | **Formula** |  | **Formula** | **Name** |
| 1. sodium fluoride
 |  |  | 1. BeF2
 |  |
| 1. lithium sulfide
 |  |  | 1. NaI
 |  |
| 1. calcium bromide
 |  |  | 1. AlBr3
 |  |
| 1. strontium iodide
 |  |  | 1. K2S
 |  |
| 1. potassium oxide
 |  |  | 1. SrO
 |  |
| 1. magnesium nitride
 |  |  | 1. BaCl2
 |  |
| 1. aluminum sulfide
 |  |  | 1. Li2O
 |  |
| 1. **Binary Ionic Compounds w/ Transition Metals**
 |
| **Name** | **Formula** |  | **Formula** | **Name** |
| 1. lead (II) phosphide
 |  |  | 1. Cu2S
 |  |
| 1. Lead (IV) phosphide
 |  |  | 1. CuS
 |  |
| 1. gold (I) oxide
 |  |  | 1. HgI2
 |  |
| 1. gold (III) oxide
 |  |  | 1. HgI
 |  |
| 1. tin (IV) sulfide
 |  |  | 1. FeCl3
 |  |
| 1. tin (II) sulfide
 |  |  | 1. FeCl2
 |  |
| 1. cobalt (II) nitride
 |  |  | 1. MnBr2
 |  |
| 1. **Compounds Containing Polyatomic Ions**
 |
| **Name** | **Formula** |  | **Formula** | **Name** |
| 1. Aluminum nitrate
 |  |  | 1. Na3(PO4)
 |  |
| 1. Potassium phosphate
 |  |  | 1. (NH4)2CO3
 |  |
| 1. Magnesium hydroxide
 |  |  | 1. SrCrO4
 |  |
| 1. Ammonium bromide
 |  |  | 1. Ni2(SO3)3
 |  |
| 1. Iron (II) sulfate
 |  |  | 1. Cr(NO3)2
 |  |
| 1. Lithium carbonate
 |  |  | 1. KOH
 |  |
| 1. Sodium acetate
 |  |  | 1. Ca(MnO4)2
 |  |