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 | |  |