Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_

**Ions and Ionic Compounds**

1. **Name the monatomic ions below. Write formulas for the monatomic ions below.**

1. Li1+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. sulfide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Co2+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8. zinc \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Ba2+\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. bromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. O2-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. iron (II) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Br1-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 11. nitride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. P3- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. magnesium \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**II. Name the polyatomic ions below. Write the formulas for the polyatomic ions below.**

13. PO43- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 17. hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. NH41+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 18. ammonium \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

15. NO3-1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 19. carbonate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

16. SO42- \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 20. acetate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Write compounds in the table by matching the given ions and balancing the charges.**

|  |  |  |
| --- | --- | --- |
|  |  | **Anions = negative ions** |
|  |  | Cl- | SO4-2 | NO3- | S-2 | Br- | PO4-3 |
| **Cations = positive ions** | Na+ |  |  |  |  |  |  |
| Ca+2 |  |  |  |  |  |  |
| Al+3 |  |  |  |  |  |  |
| NH4+ |  |  |  |  |  |  |
| Fe+2 |  |  |  |  |  |  |
| Co1+ |  |  |  |  |  |  |

1. **Write the chemical name for the following compounds:**

Binary Compounds:

* 1. CaI2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. BaO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. AlCl3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. LiI \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Compounds with Polyatomic Ions

* 1. KNO3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. K3PO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. NaOH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. CaCO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. NH4Cl \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	6. Al2(SO4)3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Compnds with Transition Metals (Rom Num)

* 1. FeO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Fe2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. PbSO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Cu(NO3)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. ZnCl2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	6. CoCO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	7. AgNO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. **Write the chemical name for the compounds below.**

1. AgC2H3O2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. (NH4)2SO4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. MgO \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Zn3(PO4)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. K2CO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Fe(OH)3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. FeS \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Al2O3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. Ca(OH)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.AgCl\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Cu(NO3)2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Cu2CO3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**VI. Write formulas for the following compounds:**

Binary Compounds:

* 1. calcium fluoride \_\_\_\_\_\_\_\_\_\_\_\_\_
	2. lithium sulfide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. magnesium bromide \_\_\_\_\_\_\_\_\_\_
	4. sodium oxide \_\_\_\_\_\_\_\_\_\_\_\_\_

Compounds with Polyatomic Ions

* 1. potassium nitrate \_\_\_\_\_\_\_\_\_\_\_\_
	2. barium hydroxide \_\_\_\_\_\_\_\_\_\_
	3. ammonium sulfate \_\_\_\_\_\_\_\_\_\_\_
	4. aluminum phosphate \_\_\_\_\_\_\_\_\_
	5. ammonium hydroxide \_\_\_\_\_\_\_\_\_\_\_\_\_

Compounds with Transition Elements

* 1. zinc oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
	2. iron (II) chloride \_\_\_\_\_\_\_\_\_\_
	3. lead (II) acetate \_\_\_\_\_\_\_\_\_\_\_
	4. copper (II) sulfate \_\_\_\_\_\_\_\_\_
	5. silver phosphide \_\_\_\_\_\_\_\_\_\_\_\_\_

All Compounds

* 1. nickel (II) oxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. sodium carbonate \_\_\_\_\_\_\_\_\_\_
	3. sodium phosphate \_\_\_\_\_\_\_\_\_\_\_\_
	4. silver acetate \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. magnesium oxide \_\_\_\_\_\_\_\_\_\_
	6. lithium carbonate \_\_\_\_\_\_\_\_\_\_\_\_
	7. iron (III) chloride \_\_\_\_\_\_\_\_\_\_\_\_
	8. barium carbonate \_\_\_\_\_\_\_\_\_\_\_\_
	9. zinc fluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	10. lead (IV) hydroxide \_\_\_\_\_\_\_\_\_
	11. sodium nitrate \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	12. sodium fluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	13. sodium nitride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	14. aluminum oxide \_\_\_\_\_\_\_\_\_\_\_\_\_
	15. copper (I) chloride \_\_\_\_\_\_\_\_\_\_\_
	16. iron (III) sulfate \_\_\_\_\_\_\_\_\_\_\_\_\_