Ionic and Covalent Review

1. What is an ionic bond?
2. What types of elements do ionic bonds occur between?
3. What are the 4 major properties / characteristics of ionic bonds?
4. What is a covalent bond?
5. What types of elements do covalent bonds occur between?
6. What are the 4 major properties / characteristics of covalent bonds?
7. Are diatomic molecules ionic or covalent substances?
8. What is a diatomic molecule?
9. What are the 7 diatomic molecules?

**Oxidation Numbers:** Write the oxidation number of each element listed below.

1. Oxygen Lithium Potassium Hydrogen Iodine

**Ionic or Covalent:** Tell me if each compound is ionic or covalent.

1. CCl4 Li2O NF3 CaCl2 SO2 MgBr2

**Lewis Dot Structure:** Draw the structures. Tell me if it is ionic or covalent. If it is ionic, show the arrow. If it is covalent, circle the electrons being shared.

1. NaCl (Ionic or Covalent?) 17. O2 (Ionic or Covalent?)
2. CO2 (Ionic or Covalent?) 18. Li3N (Ionic or Covalent?)

Is it Ionic or Covalent?

Directions:

First decide if the compound is Ionic or Covalent.

Then write the correct formula for the following compounds. (ex. H20)

**Compound’s Name Ionic/Covalent? Write the Formula:**

1. Potassium Fluoride \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Pentabromine Diphosphide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Silver (II) Chloride \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Nitrogen Dioxide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Titanium (I) Sulfide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Calcium Oxide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Hexafluroine Trisulfide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Barium Oxide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Copper (III) Oxide \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Compound’s Formula Ionic/Covalent? Write the Name:**

1. CO2 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. NaCl \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Ti2O3 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. F3Br4 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Fe2O \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. N2O3 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. MgBr2 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. NiCl3 \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_