

Chemistry 121-Worksheet 6

Nomenclature of Covalent and Ionic Compounds (two sided worksheet)

Part 1. Identify if the following compounds are covalent or ionic. If it is ionic write the symbols for the ions involved:

1. NF_3 Covalent
2. BaO Ionic Ba^{+2} O^{2-}
3. $(\text{NH}_4)\text{CO}_3$ Ionic $(\text{NH}_4)^{+1}$ $(\text{CO}_3)^{2-}$
4. $\text{Sr}(\text{H}_2\text{PO}_4)_2$ Ionic Sr^{+2} $(\text{H}_2\text{PO}_4)^{-1}$
5. IBr Covalent
6. Na_2O Ionic Na^{+1} O^{2-}

Part 2: For each of the following pairs of ions, write the formula of the compound they will form:

1. Ca^{+2} , S^{2-} CaS
2. NH_4^+ , SO_4^{2-} $(\text{NH}_4)_2(\text{SO}_4)$
3. Al^{+3} , Br^- AlBr_3

Part 3: Name the following covalent and ionic compounds

1. K_2S potassium sulfide
2. Cu_2O copper(I) oxide
3. AlN aluminum nitride
4. MgBr_2 magnesium bromide
5. MnI_2 manganese (II) iodide

6. Na_3PO_4
7. KMnO_4
8. $\text{Cr}(\text{OH})_3$
9. ZnSO_4
10. $\text{Sn}(\text{NO}_3)_4$
11. SF_4
12. P_4O_6

Part 4. Write formulas for the following covalent and ionic compounds

1. Calcium nitride
2. Magnesium nitrate
3. Potassium nitrate
4. Zinc oxide
5. Silver perchlorate
6. Gold (III) bromide
7. Sodium chromate
8. Lithium phosphide
9. Copper (I) sulfate
10. Ammonium sulfite
11. Carbon monoxide
12. Aluminum oxide
13. Lead (IV) carbonate
14. Phosphorus pentachloride

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15. Dinitrogen monoxide