

Name _____ Period ____ Date ____

Molecular and Ionic Compounds
Practice Worksheet

1. Name the following molecular compounds

- | | |
|---------------------------------|-------------------------------|
| a. PCl_2 _____ | f. SiO_2 _____ |
| b. CCl_4 _____ | g. CO _____ |
| c. NO_2 _____ | h. CO_2 _____ |
| d. N_2F_2 _____ | i. H_2O _____ |
| e. P_4O_6 _____ | j. Cl_2 _____ |

2. Write formulas for the following molecular compounds

- | | |
|------------------------------|-----------------------------------|
| a. Water _____ | f. Sulfur dioxide _____ |
| b. Carbon dioxide _____ | g. Sulfur hexafluoride _____ |
| c. Silicon dioxide _____ | h. Nitrogen tribromide _____ |
| d. Dichlorine monoxide _____ | i. Dinitrogen tetrafluoride _____ |
| e. Nitrogen dioxide _____ | j. Diphosphorus pentoxide _____ |

3. Write the formulas for the following acids

- | | |
|----------------------------|--------------------------|
| a. Acetic acid _____ | d. Phosphoric acid _____ |
| b. Hydrochloric acid _____ | e. Carbonic acid _____ |
| c. Sulfuric acid _____ | f. Nitric acid _____ |

4. Name the following ionic compounds

- | | |
|-----------------------------------|-------------------------------|
| a. KBr _____ | e. CuI _____ |
| b. FeCl_3 _____ | f. K_2S _____ |
| c. NiCl_2 _____ | g. CaCO_3 _____ |
| d. Na_3PO_4 _____ | h. LiNO_3 _____ |

5. Name and indicate whether the compounds are ionic or molecular

- | |
|---------------------------------------|
| a. SeF_4 _____ |
| b. KBr _____ |
| c. H_2 _____ |
| d. CO_2 _____ |
| e. H_2CO_3 _____ |
| f. $\text{Cu}(\text{OH})_2$ _____ |
| g. NaHSO_4 _____ |
| h. $(\text{NH}_4)_2\text{SO}_4$ _____ |

6. Write the ions that form from the following compounds

- | | |
|--------------------|---------------------|
| a. Lithium _____ | h. Nitrogen _____ |
| b. Strontium _____ | i. Oxygen _____ |
| c. Barium _____ | j. Hydrogen _____ |
| d. Calcium _____ | k. Phosphorus _____ |
| e. Potassium _____ | l. Tellurium _____ |
| f. Cesium _____ | m. Iodine _____ |
| g. Fluorine _____ | n. Sulfur _____ |

7. Write formulas for the following compounds and indicate whether the compounds are ionic or molecular

- a. Potassium sulfide _____
- b. Tin IV chloride _____
- c. Dihydrogen sulfide _____
- d. Calcium oxide _____
- e. Hydrobromic acid _____
- f. Aluminum fluoride _____
- g. Dinitrogen pentoxide _____
- h. Iron III carbonate _____
- i. Sulfur hexafluoride _____
- j. Magnesium chloride _____
- k. Phosphoric acid _____
- l. Water _____
- m. Potassium cyanide _____
- n. Carbon monoxide _____
- o. Sodium cyanide _____
- p. Sodium hydroxide _____

8. Identify the number and kinds of atoms found in the following compounds

- a. Citric acid: $C_6H_8O_7$ _____
- b. Caffeine: $C_8H_{10}N_4O_2$ _____
- c. Estrogen: $C_{18}H_{24}O_2$ _____
- d. Sodium lauryl sulfate: $NaCH_3(CH_2)_{10}CH_2OSO_4$
