

## 9.c Molecular Compounds: Names & Formulas Worksheet

1. Write the **formulas** for the following compounds.

- a) silicon dioxide: \_\_\_\_\_
- b) water : \_\_\_\_\_
- c) carbon sulfide: \_\_\_\_\_
- d) ammonia (nitrogen trihydride): \_\_\_\_\_
- e) carbon tetrachloride: \_\_\_\_\_
- f) methane (carbon tetrahydride) : \_\_\_\_\_
- g) diphosphorus trioxide: \_\_\_\_\_
- h) oxygen dichloride: \_\_\_\_\_
- i) arsenic tribromide: \_\_\_\_\_
- j) phosphorus tribromide: \_\_\_\_\_
- k) silicon carbide: \_\_\_\_\_
- l) sulfur monoxide: \_\_\_\_\_

2. Write the **names** for the following compounds

- a)  $\text{CF}_4$ : \_\_\_\_\_
- b)  $\text{NH}_3$ : \_\_\_\_\_
- c)  $\text{PBr}_3$ : \_\_\_\_\_
- d)  $\text{F}_2$ : \_\_\_\_\_
- e)  $\text{CS}_2$ : \_\_\_\_\_
- f)  $\text{SiC}$ : \_\_\_\_\_
- g)  $\text{CH}_4$ : \_\_\_\_\_
- h)  $\text{SiO}_2$ : \_\_\_\_\_
- i)  $\text{PCl}_3$ : \_\_\_\_\_
- j)  $\text{I}_2$ : \_\_\_\_\_
- k)  $\text{SF}_2$ : \_\_\_\_\_

## Formula Writing – Molecular Binary Compounds

Write the chemical names of the following molecular binary compounds. Prefixes need to be used.

- |             |              |
|-------------|--------------|
| 1. $N_2O$   | 9. $NO_2$    |
| 2. $ICl_3$  | 10. $CO_2$   |
| 3. $SeCl_6$ | 11. $CF_4$   |
| 4. $N_2O_3$ | 12. $SiO_2$  |
| 5. $CO$     | 13. $PCl_3$  |
| 6. $H_2O$   | 14. $N_2O_5$ |
| 7. $P_4S_3$ | 15. $SF_6$   |
| 8. $PBr_3$  | 16. $SO_2$   |

Write the molecular binary formula for the following molecular binary compounds.

- |                               |                            |
|-------------------------------|----------------------------|
| 1. silicon tetrafluoride      | 8. antimony pentafluoride  |
| 2. dinitrogen monoxide        | 9. carbon sulfide          |
| 3. sulfur trioxide            | 10. carbon tetraiodide     |
| 4. iodine pentafluoride       | 11. boron trichloride      |
| 5. tetraphosphorus trisulfide | 12. diarsenic trisulfide   |
| 6. nitrogen monoxide          | 13. diphosphorus pentoxide |
| 7. disilicon tetraselenide    | 14. nitrogen triphosphide  |

1. Identify each compound as ionic or covalent. Then write the name of each compound.

Formula	Ionic/Covalent	Name
a. $\text{NaNO}_3$		
b. $\text{MgSO}_4$		
c. $\text{K}_2\text{CO}_3$		
d. $\text{NaCl}$		
e. $\text{MgBr}_2$		
f. $\text{CO}_2$		
g. $\text{H}_2\text{O}$		
h. $\text{CH}_4$		

2. Name the following compounds... you might want to write an I or C once you figure out the kind of bond it is and THEN name it.

a.	$\text{MgF}_2$		
b.	$\text{Na}_2\text{CO}_3$		
c.	$\text{K}_2\text{CO}_3$		
d.	$\text{NaCl}$		
e.	$\text{MgBr}_2$		
f.	$\text{KF}$		
g.	$\text{BeF}_2$		
h.	$\text{SO}_2$		

## Ionic and Covalent Bonds

Determine if the compounds are ionic or covalent and then name them accordingly

*Name the following chemical compounds:*

1)  $\text{CaF}_2$  \_\_\_\_\_

2)  $\text{P}_2\text{O}_3$  \_\_\_\_\_

3)  $\text{AgNO}_3$  \_\_\_\_\_

4)  $\text{Al}_2(\text{CO}_3)_3$  \_\_\_\_\_

5)  $\text{NaBr}$  \_\_\_\_\_

6)  $\text{H}_2\text{SO}_4$  \_\_\_\_\_

7)  $\text{NH}_3$  \_\_\_\_\_

8)  $\text{Ti}(\text{SO}_4)_2$  \_\_\_\_\_

9)  $\text{SO}_2$  \_\_\_\_\_

10)  $\text{NaOH}$  \_\_\_\_\_

11)  $\text{N}_2\text{S}_3$  \_\_\_\_\_

12)  $\text{SiF}_4$  \_\_\_\_\_

13)  $\text{Ba}(\text{CO}_3)_2$  \_\_\_\_\_

14)  $\text{Cl}_2\text{O}_5$  \_\_\_\_\_

**Write the formulas of the following compounds:**

1) disilicon tetraselenide \_\_\_\_\_

2) cobalt (II) chloride \_\_\_\_\_

3) methane \_\_\_\_\_

4) copper (I) acetate \_\_\_\_\_

5) hydrosulfuric acid \_\_\_\_\_

6) lithium phosphide \_\_\_\_\_

7) fluorine \_\_\_\_\_

8) manganese (IV) nitride \_\_\_\_\_

9) iron (III) sulfite \_\_\_\_\_

10) boron trichloride \_\_\_\_\_

11) diboron hexahydride \_\_\_\_\_

12) nitrogen tribromide \_\_\_\_\_

13) cobalt (II) oxide \_\_\_\_\_

14) sulfur hexachloride \_\_\_\_\_

15) diphosphorus pentoxide \_\_\_\_\_