

## NAMING BINARY COMPOUNDS IV

Nonmetal-nonmetal binary compounds are named using Greek prefixes to specify the number of atoms of each element in the molecule.

Rule 1 Give a **prefix** indicating the subscript on the first element, then the first **element name**, then the **prefix** indicating the subscript on the second element, then the second **element name with "ide" ending**.

Rule 2 Use no prefix for a subscript of one (1) except use "mono" in special cases, especially to avoid ambiguity or confusion.

Rule 3 Use common names for **water**,  $\text{H}_2\text{O}$ , **ammonia**,  $\text{NH}_3$ , **methane**,  $\text{CH}_4$ , etc.

The prefixes are:

1 mono	5 penta	9 nona
2 di	6 hexa	10 deca
3 tri	7 hepta	
4 tetra	8 octa	

Note: The "a" in a prefix before "oxide" may be dropped.

Examples:  $\text{CO}_2$  is named **carbon dioxide**.  
 $\text{N}_2\text{O}$  is named **dinitrogen oxide**  
 $\text{N}_2\text{O}_5$  is named **dinitrogen pentoxide** or **dinitrogen pentaoxide**

You should be able to name the following compounds:

- |                            |                              |
|----------------------------|------------------------------|
| a. $\text{NF}_3$           | i. $\text{P}_4\text{O}_{10}$ |
| b. $\text{CCl}_4$          | j. $\text{IF}_7$             |
| c. $\text{OF}_2$           | k. $\text{SF}_6$             |
| d. $\text{S}_4\text{N}_2$  | l. $\text{P}_4\text{S}_7$    |
| e. $\text{ClO}_2$          | m. $\text{B}_2\text{O}_3$    |
| f. $\text{ClF}$            | n. $\text{PCl}_5$            |
| g. $\text{N}_2\text{S}_2$  | o. $\text{I}_4\text{O}_9$    |
| h. $\text{S}_3\text{Br}_2$ | p. $\text{SiO}_2$            |

Names are on the other side.