

Writing the Formulas of Covalent Compounds

- 1) Write the symbol/formula of the first element in the compound's name, then the symbol/formula of the second element in the compound's name.
- 2) Indicate how many atoms of each element the molecule contains using subscripts after the atomic symbol.
 - The numbers of atoms are given in the molecule's name in Greek prefixes
 - NOTE: If there is no Greek prefix in front of the first element in the name, that means the number is 1.

Example: Write the formula of **dinitrogen tetrafluoride**.

- 1) Write the symbol/formula of the first element in the compound's name, then the symbol/formula of the second element in the compound's name.

N F

- 2) Indicate how many atoms of each element the molecule contains using subscripts after the atomic symbol.

N F

- The numbers of atoms are given in the molecule's name in Greek prefixes.
 - **dinitrogen tetrafluoride**
 - see your chapter 3 notes for a list of the Greek prefixes

N₂F₄

- **NOTE:** If there is no Greek prefix in front of the first element in the name, then the number is 1.
 - Example carbon tetrachloride = CCl₄

Example: Write the formula of **carbon disulfide**.

- 1) Write the symbol/formula of the first element in the compound's name, then the symbol/formula of the second element in the compound's name.

C S

- 2) Indicate how many atoms of each element the molecule contains using subscripts after the atomic symbol.

C S

- The numbers of atoms are given in the molecule's name in Greek prefixes.
 - carbon **disulfide**
 - see your chapter 3 notes for a list of the Greek prefixes

C₁S₂ = CS₂

- **NOTE:** If there is no Greek prefix in front of the first element in the name, then the number is 1.

Write the formulas for the following covalent compounds:

See next page for KEY

a. disulfur tetrafluoride _____

b. carbon trioxide _____

c. nitrogen pentoxide _____

d. nitrogen tribromide _____

e. dinitrogen heptachloride _____

f. carbon tetrachloride _____

g. hydrogen monochloride _____

h. trihydrogen monophosphide _____

i. dihydrogen monoxide _____