

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## CHEMISTRY

### Covalent Compounds and Electrons

In the first column type the number of atoms in the covalent compound. In the second column, type the total number of VALENCE electrons in the compound (all electrons: shared and unshared electrons). In the third column, determine the total number of possible chemical bonds in the compound.

| Compound                      | Number of Atoms | Total Valence Electrons | Total possible of chemical bonds |
|-------------------------------|-----------------|-------------------------|----------------------------------|
| H <sub>2</sub>                |                 |                         |                                  |
| Cl <sub>2</sub>               |                 |                         |                                  |
| O <sub>2</sub>                |                 |                         |                                  |
| N <sub>2</sub>                |                 |                         |                                  |
| H <sub>2</sub> O              |                 |                         |                                  |
| SF <sub>2</sub>               |                 |                         |                                  |
| CH <sub>4</sub>               |                 |                         |                                  |
| NH <sub>3</sub>               |                 |                         |                                  |
| PF <sub>3</sub>               |                 |                         |                                  |
| CCl <sub>4</sub>              |                 |                         |                                  |
| C <sub>2</sub> H <sub>6</sub> |                 |                         |                                  |

| Compound                             | Number of Atoms | Total Valence Electrons | Total possible of chemical bonds |
|--------------------------------------|-----------------|-------------------------|----------------------------------|
| <b>C<sub>2</sub>H<sub>4</sub></b>    |                 |                         |                                  |
| <b>C<sub>2</sub>H<sub>2</sub></b>    |                 |                         |                                  |
| <b>CH<sub>3</sub>OH</b>              |                 |                         |                                  |
| <b>CH<sub>2</sub>O</b>               |                 |                         |                                  |
| <b>CH<sub>3</sub>CO<sub>2</sub>H</b> |                 |                         |                                  |

Total possible chemical bonds: Total number of unpaired valence electrons of the individual atoms divided by 2.