

Name: \_\_\_\_\_  
Period: \_\_\_\_\_

### Chemical Bonds: Practice with Covalent Bonding

1. What is the difference between a covalent bond and an ionic bond?
2. What are the four main properties of covalent bonds?
  - 1.
  - 2.
  - 3.
  - 4.
3. Up to how many bonds can occur between two atoms? \_\_\_\_\_
4. How many valence electrons does each of the following atoms have?  
H \_\_\_\_\_ C \_\_\_\_\_ N \_\_\_\_\_ O \_\_\_\_\_ Si \_\_\_\_\_ Cl \_\_\_\_\_
5. How many bonds do each of the following elements make (think of required electrons)?  
H \_\_\_\_\_ C \_\_\_\_\_ N \_\_\_\_\_ O \_\_\_\_\_ Si \_\_\_\_\_ Cl \_\_\_\_\_

Draw a Lewis dot diagram for each AND a bond diagram for each of the following Compounds:

6. $H_2$ (Hydrogen)	7. $F_2$ (Fluorine)
8. $Cl_2$ (Chlorine)	9. $PH_3$ (Phosphine)
10. $PH_5$ (Phosphorus Pentachloride)	11. $SiH_4$ (Silicon Hydroxide)
12. $CO_2$ (Carbon Dioxide)	13. $N_2$ (Nitrogen)