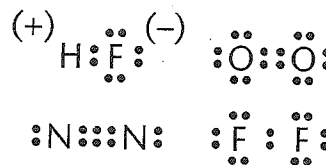


**SECTION 2-4**

**REVIEW AND REINFORCE**

**Covalent Bonds**

**◆ Understanding Main Ideas**



Answer the following questions in the spaces provided.

1. Circle all the covalent bonds in the electron dot diagrams above.
2. Which bond(s) shown are double bonds? \_\_\_\_\_
3. Which bond(s) shown are triple bonds? \_\_\_\_\_
4. What makes the bond in HF a polar bond? \_\_\_\_\_  
 \_\_\_\_\_
5. Which molecule(s) shown have nonpolar bonds? \_\_\_\_\_
6. How do the melting points, boiling points, and conductivity of molecular compounds compare to those of ionic compounds?  
 \_\_\_\_\_  
 \_\_\_\_\_

**2**

**◆ Building Vocabulary**

From the list below, choose the term that best completes each sentence. Each term may be used more than once.

nonpolar                      polar

7. A covalent bond is considered \_\_\_\_\_ if the two atoms share the electrons equally.
8. A water molecule is a \_\_\_\_\_ molecule because the oxygen atom pulls electrons closer to it than the hydrogen atoms do, forming a molecule that is slightly more positive at one end than at the other.
9. A covalent bond is considered \_\_\_\_\_ if the electrons are shared unequally.
10. A carbon dioxide molecule is a \_\_\_\_\_ molecule because the oxygen atoms are pulling with equal strength in opposite directions and cancel each other out.

## SECTION 2-4

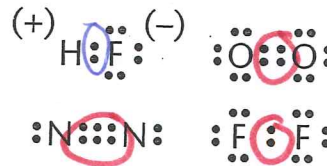
## REVIEW AND REINFORCE

## Covalent Bonds

## ◆ Understanding Main Ideas

Answer the following questions in the spaces provided.

1. Circle all the covalent bonds in the electron dot diagrams above.



2. Which bond(s) shown are double bonds? Oxygen  
 3. Which bond(s) shown are triple bonds? Nitrogen  
 4. What makes the bond in HF a polar bond? F is bigger than H

5. Which molecule(s) shown have nonpolar bonds? N-N, F-F, O-O (3pts)  
 6. How do the melting points, boiling points, and conductivity of molecular compounds compare to those of ionic compounds?

They are lower b/c they have less charge (2pts)

## ◆ Building Vocabulary

From the list below, choose the term that best completes each sentence. Each term may be used more than once.

nonpolar

polar

7. A covalent bond is considered nonpolar if the two atoms share the electrons equally.  
 8. A water molecule is a polar molecule because the oxygen atom pulls electrons closer to it than the hydrogen atoms do, forming a molecule that is slightly more positive at one end than at the other.  
 9. A covalent bond is considered polar if the electrons are shared unequally.  
 10. A carbon dioxide molecule is a nonpolar molecule because the oxygen atoms are pulling with equal strength in opposite directions and cancel each other out.