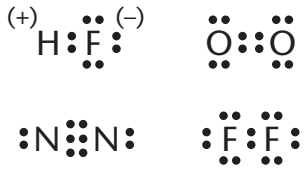
Covalent Bonds

Understanding Main Ideas



Answer the following questions in the spaces provided.

1. Circle all the covalent bonds in the electron dot diagrams.
2. Which bond(s) shown are double bonds?

_____

3. Which bond(s) shown are triple bonds?

_____

4. Which molecule(s) shown have nonpolar bonds?

_____

5. What makes the bond in HF a polar bond?

_____

_____

_____

6. How do the melting points, boiling points, and conductivity of molecular compounds compare to those of ionic compounds?

_____

_____

_____

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(n) _____ 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(n) _____ molecule because the oxygen atoms are pulling on the shared electrons with equal strength in opposite directions and cancel each other out.

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