

Covalent Bonds

(Chapter 5, section 3)

Name _____
Period _____

1. What is a covalent bond?

2. Between what kinds of atoms do covalent and ionic bonds usually form?

3. Complete this sentence:

The _____ that _____ atoms together in a _____
_____ is the _____ of each atom's _____ for
the _____ of _____.

4. What is a molecule?

5. How can you tell how many covalent bonds a nonmetal atom can form? Why is hydrogen an exception? Draw a water molecule, showing the valence electrons and circle the covalent bonds.

6. What is a double bond? Draw an oxygen molecule and a carbon dioxide molecule, showing the valence electrons and circle the covalent bonds.

7. What is a triple bond? Draw a nitrogen molecule, showing the valence electrons and circle the covalent bonds.

8. What is a molecular compound?

9. Complete this sentence:

Compared to ionic compounds, _____
generally have _____ points and _____
points, and they _____ when
dissolved in water.

10. Complete these sentences:

Atoms of _____ elements _____
_____ on _____ than do atoms
of other elements. As a result, the _____ are _____
_____ atom, _____
the bonded atoms to have slight _____.

11. What is a polar bond? Draw a hydrogen fluoride molecule showing, the unequal pull on the atoms and the resulting charges.

12. What is a nonpolar bond? Draw a fluorine molecule, showing the equal pull of the atoms.