

7-2 Review and Reinforcement

Covalent Bonding

If the statement is true, write "true." If it is false, change the underlined word or words to make it true. Write your answer on the line provided.

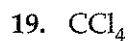
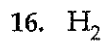
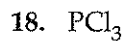
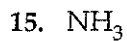
- _____ 1. A group of atoms united by ionic bonds is called a molecule.
- _____ 2. A covalent bond is formed by a shared pair of electrons.
- _____ 3. A double covalent bond consists of two shared electrons.
- _____ 4. A molecular formula tells you how many atoms are in a single molecule of the compound.
- _____ 5. The empirical formula for a molecule specifies which atoms are bonded to each other in the molecule.
- _____ 6. A pair of electrons not involved in bonding is called a shared electron pair.
- _____ 7. In nonpolar covalent bonds, the electrons are shared unequally between two atoms.
- _____ 8. Lewis structures use a triple dash to represent a double bond.

Use the information in Figure 7-19 of the textbook to calculate the electronegativity differences between each pair of elements listed in the chart below. Then indicate whether the bond would be nonpolar covalent, polar covalent, or ionic. Write your answers in the chart.

		Electronegativity Difference	Type of Bond
9.	H—O		
10.	C—H		
11.	K—F		
12.	N—H		
13.	Na—F		
14.	O—Cl		

7-2 Review and Reinforcement (continued)

Write Lewis structures for each of the following molecules. Indicate the bonds with either dots or dashes.



Answer the following questions as directed.

21. Explain why the molecule SF_4 is an exception to the octet rule.

22. Explain the relationship between electronegativity and polarity.

23. Compare and contrast single, double, and triple covalent bonds.
