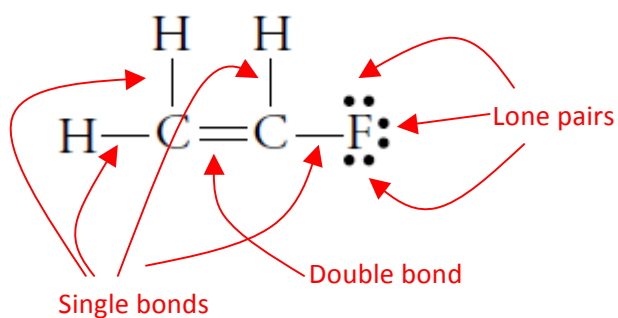


Che 111: Chapter 12 Practice Problems Key

1. Identify the single bonds, the double bond, and the lone pairs.

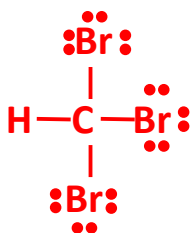


2. How many valence electrons do the atoms of each of the following elements have?

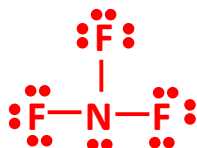
- a. Oxygen, O 6
- b. Boron, B 3
- c. Neon, Ne 8
- d. Phosphorous, P 5
- e. Carbon, C 4

3. Draw a reasonable Lewis structure for each of the following formulas.

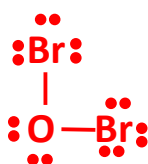
- a. CHBr_3



- b. NF_3



- c. Br_2O

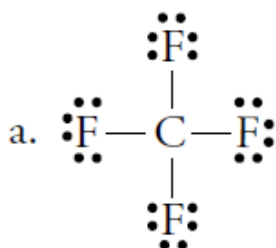


4. For each of the Lewis structures given below,

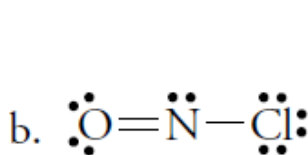
(1) write the name of the electron group geometry around each atom that has two or more atoms attached to it,

(2) draw a geometric sketch of the molecule, including bond angles (or approximate bond angles), and

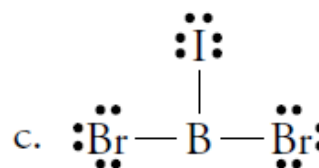
(3) write the name of the molecular geometry around each atom that has two or more atoms attached to it.



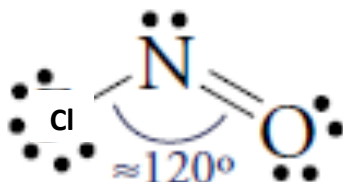
(1) Tetrahedral



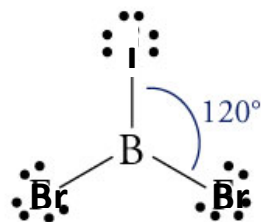
(1) Trigonal Planar



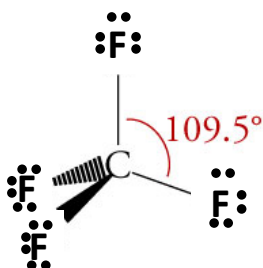
(1) Trigonal Planar



(3) Bent



(3) Trigonal Planar



(3) Tetrahedral