

Drawing Lewis Structures Practice

Name: _____

INSTRUCTIONS: Draw a complete Lewis Structure for the following molecular compounds. **BE SURE TO DRAW ITS RESONANCE STRUCTURE IF IT HAS ONE!**

- **Quick Steps:**

- 1) Count the **TOTAL** number of valence electrons in the molecule
- 2) Draw a skeleton structure for the molecule using single bonds between each terminal (*outside*) atom
 - **Least** electronegative element **usually** goes in the middle (**central atom**)
 - Each single bond = a pair of electrons (*2 electrons*)
- 3) Fill up each terminal atom with an octet of electrons (*8 valence electrons*)
 - **NOTE:** Hydrogen (H) fulfills its octet with only **two (2)** valence electrons
- 4) Count the # of electrons **PLACED** on molecule compared to the **TOTAL** number of valence electrons available
- 5) Use additional bonds (*double or triple*) if there are left-over electrons and place on central atom (**NOTE: CNOPS**)
 - For each additional bond formed, erase a pair of electrons on that terminal atom
- 6) Draw the **FINAL** Lewis Structure **AND** its **Resonance Structure IF** it has one.

1. PCl_3

2. PBr_3

3. CN^-

4. NH_4^+

5. SO_3^{2-}

6. N_2H_2 (*challenge problem*)

7. CO_3^{2-}

8. PCl_5

9. NO_2^-

10. BF_3