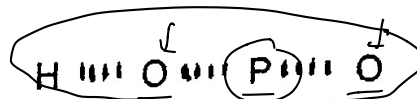


Example 4. Draw the Lewis Structure for HOPO :

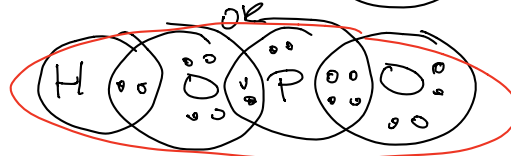
Step 1. 1 H = 1e' 1 P = 5e 2 O = 12e = 18e'



Step 2.



Step 3.



Step 4.



Ex 1 + 2

Step 5.

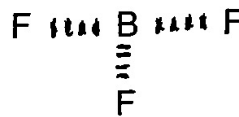
COVALENT compounds that VIOLATE the OCTET RULE

A. In addition to H, the atoms Be, B and Al are exceptions as they have less than a full octet when they form covalent compounds.

→ These atoms tend to gain an electron for every unpaired valence electron

Example 5. Draw the Lewis Structure for BF₃:

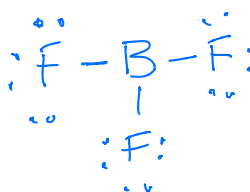
Step 1. 1 B (3) 3 F (21) = 24e'



Step 2.



Step 3.



Step 4.

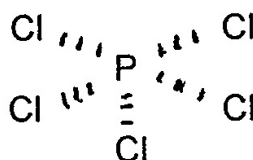
Step 5.

B. Elements in the 3rd and 4th periods of the periodic table frequently attain more than a full octet when they form covalent compounds.

→ Therefore, the central atom will end up with more than eight valence electrons

Example 6. Draw the Lewis Structure for PCl₅:

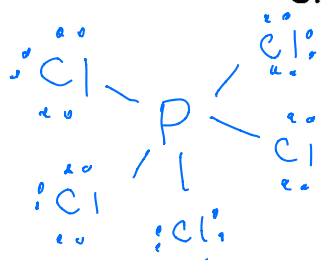
Step 1. 1 P = (5) 5 Cl = 35 = 40e'



Step 2.



Step 3.



Step 4.