

**Example 4.** Draw the Lewis Structure for HOPO :  $\text{H} \text{ : : : } \text{O} \text{ : : : } \text{P} \text{ : : : } \text{O}$   
 Step 1.

Step 2.

Step 3.

Step 4.

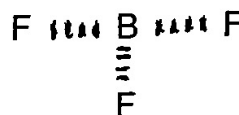
Step 5.

**COVALENT compounds that VIOLATE the OCTET RULE**

A. In addition to \_\_\_\_\_, the atoms \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ are exceptions as they have \_\_\_\_\_ than a full octet when they form covalent compounds.

→ These atoms tend to \_\_\_\_\_

**Example 5.** Draw the Lewis Structure for  $\text{BF}_3$ :  
 Step 1.



Step 2.

Step 3.

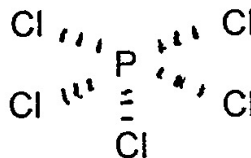
Step 4.

Step 5.

B. Elements in the \_\_\_\_\_ and \_\_\_\_\_ periods of the periodic table frequently attain \_\_\_\_\_ than a full octet when they form covalent compounds.

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

**Example 6.** Draw the Lewis Structure for  $\text{PCl}_5$ :  
 Step 1.



Step 2.

Step 3.

Step 4.