

Chem I

Name Key

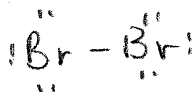
Date \_\_\_\_\_ Per \_\_\_\_\_

## Worksheet # C26: Practicing Lewis Structures

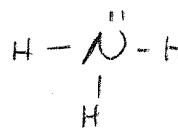
Directions: Draw each of the following Lewis structures. Remember to check that you've used the correct number of valence electrons and that all the atoms (except H, Be, and B) are following the octet rule.

1) Bromine:  $\text{Br}_2$  14 (# of valence electrons) 6) Ammonia:  $\text{NH}_3$  8

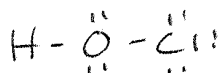
$$2\text{Br} = 14$$



$$\begin{array}{l} \text{N} = 5 \\ 3\text{H} = 3 \\ \hline 8 \end{array}$$

2) Hypochlorous acid:  $\text{HOCl}$  14

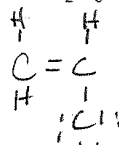
$$\begin{array}{l} \text{H} = 1 \\ \text{O} = 6 \\ \text{Cl} = 7 \\ \hline 14 \end{array}$$

7) Carbon disulfide:  $\text{CS}_2$  16

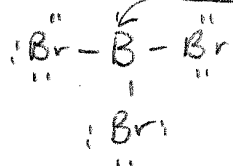
$$\begin{array}{l} \text{C} = 4 \\ 2\text{S} = 12 \\ \hline 16 \end{array}$$

3) Vinyl chloride:  $\text{C}_2\text{H}_3\text{Cl}$  18

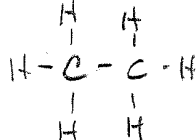
$$\begin{array}{l} 2\text{C} = 8 \\ 3\text{H} = 3 \\ \text{Cl} = 7 \\ \hline 18 \end{array}$$

8) Boron tetrabromide:  $\text{BBr}_3$  24

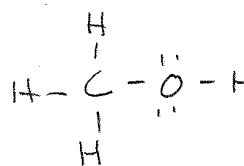
$$\begin{array}{l} \text{B} = 3 \\ 3\text{Br} = 21 \\ \hline 24 \end{array}$$

Notes:  
No lone  
pairs4) Ethane:  $\text{C}_2\text{H}_6$  14

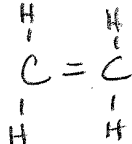
$$\begin{array}{l} 2\text{C} = 8 \\ 6\text{H} = 6 \\ \hline 14 \end{array}$$

9) Methyl alcohol:  $\text{CH}_3\text{OH}$  14

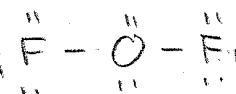
$$\begin{array}{l} \text{C} = 4 \\ 3\text{H} = 3 \\ \text{O} = 6 \\ \text{H} = 1 \\ \hline 14 \end{array}$$

5) Ethene:  $\text{C}_2\text{H}_4$  12

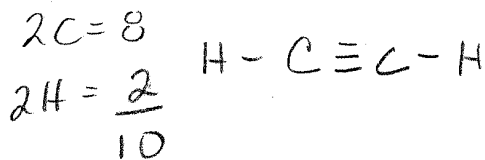
$$\begin{array}{l} 2\text{C} = 8 \\ 4\text{H} = 4 \\ \hline 12 \end{array}$$

10) Difluoride oxide:  $\text{F}_2\text{O}$  20

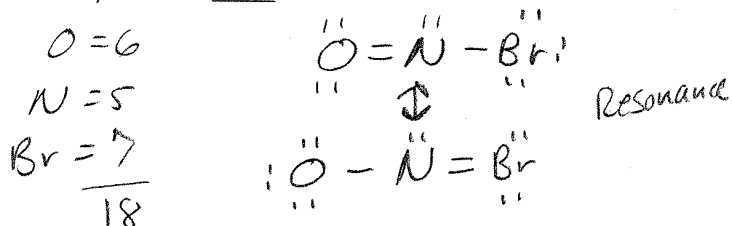
$$\begin{array}{l} 2\text{F} = 14 \\ \text{O} = 6 \\ \hline 20 \end{array}$$



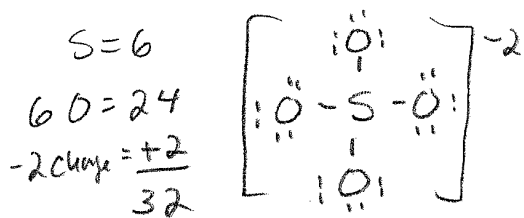
11) Ethyne:  $C_2H_2$  10



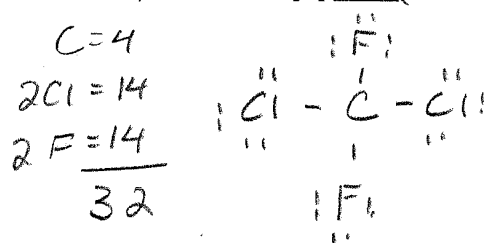
16) ONBr 18



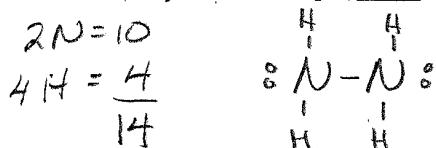
12) Sulfate ion:  $SO_4^{2-}$  32



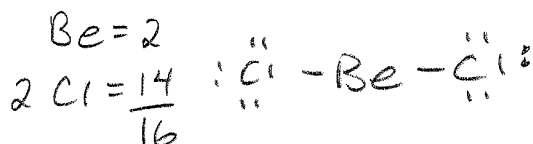
17) Freon:  $CCl_2F_2$  32



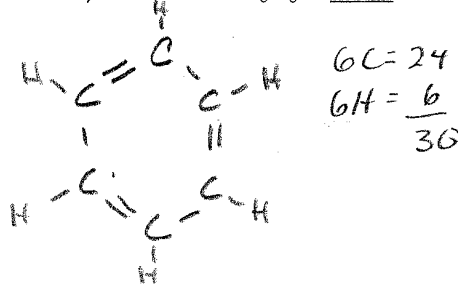
13) Hydrazine:  $N_2H_4$  14



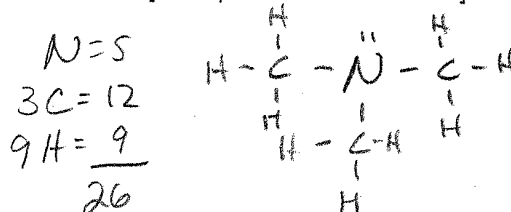
18) Beryllium dichloride:  $BeCl_2$  16



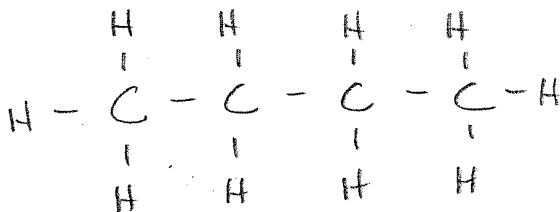
14) Benzene:  $C_6H_6$  30



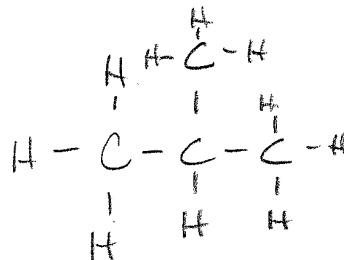
19) Trimethyl amine:  $N(CH_3)_3$  26  
[hint: put N in the middle]



15)  $C_4H_{10}$  \_\_\_\_\_ : This formula has two isomers. Draw the Lewis structures of each.



(butane)



(methyl propane)