

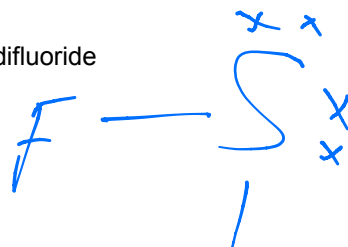
Polarity Worksheet

For each of the following pairs of molecules, determine which is most polar and explain your reason for making this choice:

1) carbon disulfide

OR

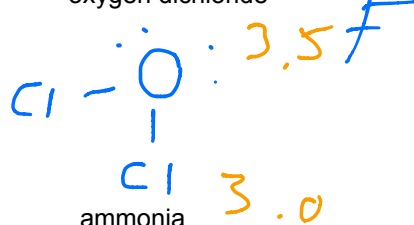
sulfur difluoride



2) nitrogen trichloride

OR

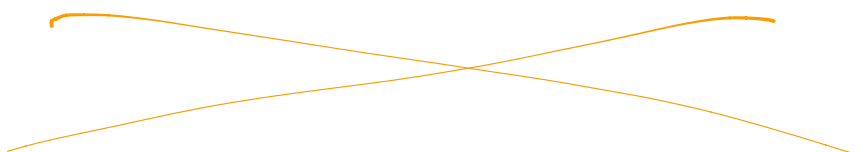
oxygen dichloride



3) boron trihydride

OR

ammonia



4) chlorine

OR

phosphorus trichloride

5) silicon dioxide

OR

carbon dioxide

6) methane

OR

CH_2Cl_2

7) silicon tetrabromide

OR

HCN

8) nitrogen trifluoride

OR

phosphorus trifluoride

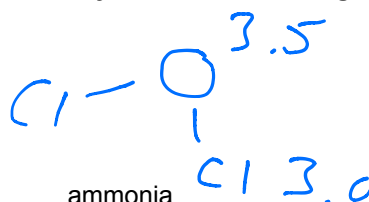
Polarity Worksheet Answers

For each of the following pairs of molecules, determine which is most polar and explain your reason for making this choice:

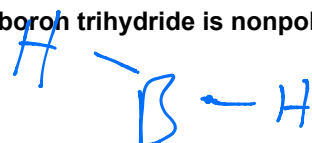
- 1) carbon disulfide OR sulfur difluoride
carbon disulfide is nonpolar



- 2) nitrogen trichloride OR oxygen dichloride
both are polar, but oxygen dichloride is less symmetric than nitrogen trichloride, making it more polar.



- 3) boron trihydride OR ammonia
boron trihydride is nonpolar.



- 4) chlorine OR phosphorus trichloride
chlorine is nonpolar



phosphorus trichloride

- 5) ~~silicon dioxide OR carbon dioxide~~
~~It's a tie, because both are nonpolar~~

- 6) methane OR CH2Cl2
methane is nonpolar



- 7) silicon tetrabromide OR HCN
silicon tetrabromide is nonpolar



- 8) nitrogen trifluoride OR phosphorus trifluoride
Both are polar and equally symmetric, but the difference in electronegativity between N-F is less than that between P-F

