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

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

6) methane OR **CH_2Cl_2**
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