

Name \_\_\_\_\_

## Observations

Key Lab  
22

DATA TABLE Structure and Polarity of Covalent Molecules

Formula	Electron Dot Structure (Lewis)	Structural Formula	Shape of Molecule	Molecular Polarity
H <sub>2</sub>	H:H	H—H	Linear	Nonpolar
HBr	H—Br	H—Br	Linear	Polar
H <sub>2</sub> O	H—O—H	H—O—H	Bent	Polar
PH <sub>3</sub>	H—P—H	H—P—H	trig. Pyramidal	polar
CH <sub>4</sub>	H—C—H	H—C—H	tetrahedral	non polar
HClO	H—O—Cl	H—O—Cl	Bent	polar
N <sub>2</sub>	≡N—N≡	≡N—N≡	Linear	nonpolar
CH <sub>3</sub> NH <sub>2</sub>	H—C—N—H	H—C—N—H	tetrahedral trig. pyramidal	polar
SO <sub>2</sub>	O=S=O	O=S=O	bent	polar
H <sub>2</sub> CO	H—C=O	H—C=O	trigonal planar	polar
C <sub>2</sub> H <sub>2</sub>	H—C≡C—H	H—C≡C—H	Linear	nonpolar
CH <sub>3</sub> Cl	H—C—Cl	H—C—Cl	tetrahedral	polar
HCOOH	H—C(=O)—OH	H—C(=O)—OH	TRIGONAL Planar Bent	polar
HCN	H—C≡N	H—C≡N	Linear	Polar
H <sub>2</sub> O <sub>2</sub>	H—O—O—H	H—O—O—H	Bent	polar

If polar bonds are symmetrically arranged around central atom, charges cancel out, nonpolar.

50.2 18

