

Worksheet-Polarity of Bonds

I. Determine the type of bond (ionic, polar covalent, or non-polar covalent) that will form between atoms of the following elements and show the polarity of the bond if it is polar covalent.

a. Ca and Cl

d. N and O

b. C and S

e. H and O

c. Mg and F

f. S and O

II. The bonds between the following pairs of elements are covalent. Rank them according to polarity, from least to most polar.

a. H—Cl

d. H—O

b. H—C

e. H—H

c. H—F

f. S—C

III. Determine if each of the molecules below is a dipole by completing the table.

<u>Molecule</u>	<u>Δ EN</u>	<u>Type of Bond</u>	<u>Atom with greater EN</u>	<u>Lewis Structure</u>	<u>Geometric structure</u>	<u>Dipole?</u>
PCl ₃						
CCl ₄						
H ₂ S						
CaO						
CO ₃ ⁻²						
HCl						

