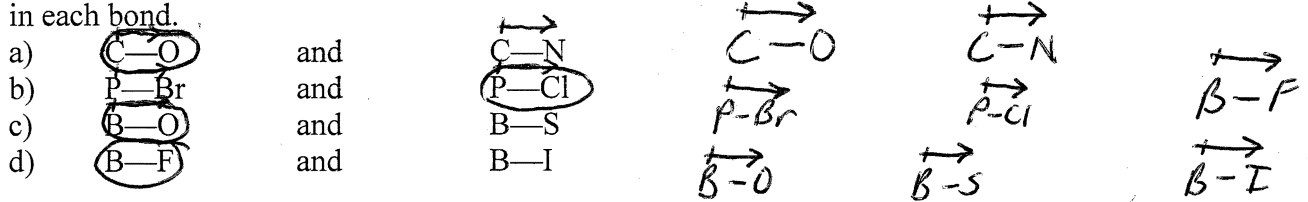


6 • Bonding & Molecular Structure

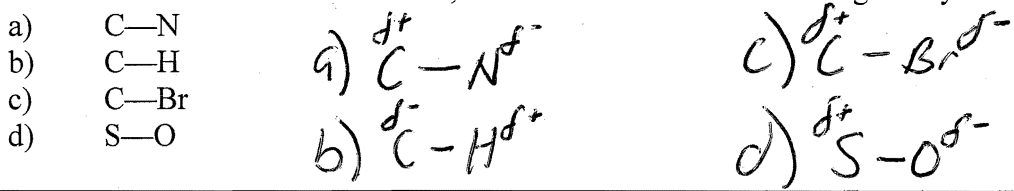
ELECTRONEGATIVITY

1 H 2.1											5 B 2.0	6 C 2.5	7 N 3.0	8 O 3.5	9 F 4.0			
3 Li 1.0	4 Be 1.5											13 Al 1.5	14 Si 1.8	15 P 2.1	16 S 2.5	17 Cl 3.0		
11 Na 1.0	12 Mg 1.2	19 K 0.9	20 Ca 1.0	21 Sc 1.3	22 Ti 1.4	23 V 1.5	24 Cr 1.6	25 Mn 1.6	26 Fe 1.7	27 Co 1.7	28 Ni 1.8	29 Cu 1.8	30 Zn 1.6	31 Ga 1.7	32 Ge 1.9	33 As 2.1	34 Se 2.4	35 Br 2.8
37 Rb 0.9	38 Sr 1.0	39 Y 1.2	40 Zr 1.3	41 Nb 1.5	42 Mo 1.6	43 Tc 1.7	44 Ru 1.8	45 Rh 1.8	46 Pd 1.8	47 Ag 1.6	48 Cd 1.6	49 In 1.6	50 Sn 1.8	51 Sb 1.9	52 Te 2.1	53 I 2.5		
55 Cs 0.8	56 Ba 1.0	57 La 1.1	72 Hf 1.3	73 Ta 1.4	74 W 1.5	75 Re 1.7	76 Os 1.9	77 Ir 1.9	78 Pt 1.8	79 Au 1.9	80 Hg 1.7	81 Tl 1.6	82 Pb 1.7	83 Bi 1.8	84 Po 1.9	85 At 2.1		
87 Fr 0.8	88 Ra 1.0	89 Ac 1.1																

1. In each pair of bonds, indicate the more polar bond and use an arrow to show the direction of polarity in each bond.



2. For each of the bonds listed below, tell which atom is the more negatively charged.



It is somewhat artificial to classify bonds based on the differences in the electronegativities (Δ_X) of the two atoms. However, we will use these ranges to do so:

Ionic	$\Delta_X > 1.7$	(symbolized as A^+ and Z^-)
Polar Covalent	$1.7 \geq \Delta_X \geq .5$	(symbolized as $A^{\delta+}$ and $Z^{\delta-}$)
Pure Covalent	$\Delta_X < .5$	(no charges)

3. For each of the bonds listed below, classify each bond and indicate full or partial charges, if any.

