K	C	A	T
	10	25	12

/47 = %

Name:_____

SCH 4C Bonding Quiz

1. For each of the following pairs of elements:

a) determine if each pair of elements will form ionic or covalent bonds (consider whether that atoms are metallic or ionic)

b) if ionic:
- draw in extra atoms if necessary
- add electrons to show the neutral atoms electron configuration
- add arrows to show how the electron will move
- draw the resulting ions, complete with empty or full valence shell, brackets and charge
- chemical formula
- be sure to use different symbols for the electrons of different elements

a) covalent:
- draw a good diagram with extra atoms as needed to show how sharing in covalent bonds works
- add circles to show the satisfied octets or duets in the case of helium like elements
- state the type of covalent bonds (i.e. single, double and how many)
- show the chemical formula

H with S

Cs with O

K	C	A	T
	4	6	

N with Br

Ga with O

C with O

K	C	A	T
	6	9	

2. For each of the following pairs of atoms, write the electronegativity values below each atom and the draw in the correct bond polarization

C ⟶ F
ΔEN = 3.98-2.55
= 1.43

O F

O H

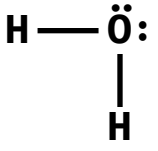
N N

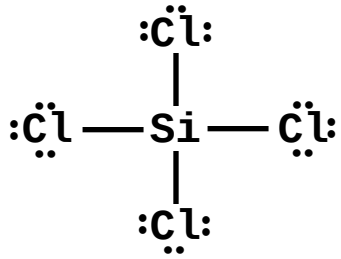
H H

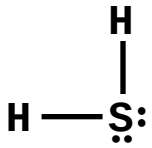
P S

/10A

3. For each of the following stick structures, add the correct bond polarizations, determine the net molecular polarization and add δ^+ and δ^- an appropriate. If the bond polarizations cancel out, simply write "no net molecular polarization, therefore non-polar"







/6T

4. Draw a lewis dot diagram for the covalent bonding you would expect between nitrogen and fluorine. Then draw the corresponding stick structure and complete as in question #3.

/6T

K	C	A	T
		10	**12**