

Ch9/ PowerPoint Study-3 Formal Charge/Polarity Name:

Answer these questions as you are watching the videos. They are due in class.

These questions are not just for you to answer but also to prepare you for the exam.

Make sure you understand what you are writing and not just copy from the text book. Show all work.

1) What is meant by electronegativity?

2) Circle the element in the pairs below with higher electronegativity.

Li or Be

N or O

P or N

I or F

3) Which of the following bonds will be polar covalent? (If you want to take the next step, write δ^+ and δ^- on the elements. Remember – δ^- is on the element of higher electronegativity)

N-F

O=O

N-O

4) Calculate the formal charges on all the atoms of the ions given below. Use the strategy given:

a) Write the Lewis structure of the compounds/ions.

b) Make sure you have the right number of electrons on each atom – all the bonding and non bonding. (Use the worksheet from class to make sure you can draw the structures).

c) Use the formula given below to calculate the formal charge on each atom.

Valence electrons – non bonding electrons – number of bonds on the atom = formal charge

(Formal charge will range from -1 to + 1)

1) Carbonate Ion	2) ICl_4^-
3) PS_3^{-1}	4) P_2H_4