

Fall CH301 Worksheet 4a Introduction to Bonding--Ionic

1. For each on the main group families, write down a representative Lewis dot valence electron structure.

Group I	Group II	Group III	Group IV	Group V	Group VI	Group VII	Group VIII

2. Electronegativity. From memory, fill in the table below with an approximate electronegativity for each period 2 main group element. If you can't do this by the first test, FROM MEMORY, you are in trouble.

	Group I	Group II	Group III	Group IV	Group V	Group VI	Group VII	Group VIII
element								
EN								

3. Write down all the nine possible combinations of cations (represented by A) and anions (represented by B) that can be combined to satisfy the octet rule in forming the common formulas for salts. Give a representative example of each form.

4. Write down the annoying and clunky formal Lewis dot structure for Al_2S_3 .

5. Using charge density arguments to rank bond strengths for the following series of salts:

KCl, KF, KI

LiF, NaCl, $CaCl_2$,

MgO, Al_2O_3 , CaF_2

