

Covalent and Ionic Bonding Worksheet II

A. Compare and Contrast each of the following by citing an example for each:

1. anion and cation _____
2. oxidation and reduction _____
3. IE and EA _____
4. ionic and covalent _____
5. compound and molecule _____

B. Using the Central Atom Method, indicate the shape that can be predicted for an element that is a central atom in these groups.

- | <u>Example</u> | <u>Shape</u> | <u># of bonded pairs</u> | <u># of non-binding pairs</u> |
|----------------|--------------|--------------------------|-------------------------------|
| 7) III A | _____ | _____ | _____ |
| 8) VI A | _____ | _____ | _____ |
| 9) II A | _____ | _____ | _____ |
| 10) IV A | _____ | _____ | _____ |
| 11) I A, VII A | _____ | _____ | _____ |

12) V A _____

C. Draw the Lewis Structures for each of the following compounds or molecules. Circle any Lone Pairs on the Central Atom

13) CCl_4

17) H_2O

14) BF_3

18) NH_3

15) SiBr_4

19) PI_3

16) Te_2O

20) H_2S

D. Using electronegativity differences, predict the type of bond that would be formed in :
(show your work)

21) LiCl _____

22) Mg_3N_2 _____

23) HI _____

24) SeO_3 _____

25) BaF_2 _____

26) H_2Se _____