

Bonding – Supplemental Worksheet

1. List some feature of ionic compounds?
2. What are the differences between ionic bonding and covalent bonding?
3. Explain the cations and anions?
4. What is the net effect for forming an ionic bond? (i.e. sum of all “parts”)
5. True or False:
 - a) Ionization of all elements is negative and therefore must be exothermic.
 - b) Electron affinity is exothermic.
 - c) Energy of crystallization and lattice energy have equal energies.
6. Place the following in order of smallest to largest ion?
 - a) Se^{2+} , Sr^{2-} , Br^+ , Rb^-
 - b) Cl^- , I^- , F^- , Br^-
7. What trend do we associate with bond length and strength?

8. Explain electronegativity and describe what trends we find.
9. Predict the order of increasing electronegativity.
- a) S, Se, Cl
 - b) Si, Ge, Sn
 - c) B, Ga, O
10. Rank the following bonds in order of increasing ionic character: N-O, Ca-O, C-F, Br-Br, K-F.
11. What is a dipole moment? Explain polar versus nonpolar.
12. Arrange the following bonds according to decreasing polarity: H-H, O-H, Cl-H, S-H, and F-H.