

## Chemical Bonding Worksheet 2

What is the strongest type of bond, choose amongst single, double or triple.

What is the longest type of bond? (single, double or triple)

Define resonance

Draw the resonance structure for  $\text{NO}_3^-$

What is the equation for formal charge?

Lattice energy is \_\_\_\_\_

- a) Energy required to convert a mole of ionic solid into its constituent ions in the gas phase.
- b) Energy given off when gaseous ions combine to form one mole of an ionic solid.
- c) Energy required to produce one mole of an ionic compound from its constituent elements in their standard states.
- d) Sum of ionization energies of the components in an ionic solid.
- e) Sum of electron affinities of the components in an ionic solid.

Determining the lattice energy from Born-Haber cycle data requires the use of \_\_\_\_\_

- a) The octet rule
- b) Coulomb's law
- c) Periodic law
- d) Hess's law
- e) Avogadro's number

Define a dipole moment.

Assign the dipole moments in Br-F, N-O, and C-F

N-H, S-Se, and Li-O.

Determine if the compound is polar or nonpolar without referencing the table above.

Water:

$$\text{O}_2:$$