

Name: _____

Instructions: Answer each of the following questions to the best of your ability. Use the proper number of significant figures and units wherever necessary. You will have 10 minutes to complete this quiz.

1. (2 points) The energy of formation of NaCl is -788 kJ/mole. Would the energy of formation of LiCl be larger or smaller? Why?
2. (6 points) Draw the best possible Lewis Structure for the perchlorate anion, and justify with formal charges. (HINT: perchlorate is ClO_4^-). If there is resonance, you should include it.
3. (2 points) Arrange the following atoms in terms of increasing ionization energy (highest on the right, lowest on the left).

Nitrogen

Oxygen

Boron

Beryllium

