

**Homework #7**  
**(Periodic Table Trends; Naming Ionic Compounds)**  
**CHEM 11 (S 2016, LAC)**  
(Due Wednesday, March 23)

1. Of the following, which has the largest radius: O, O<sup>2-</sup>, or O<sup>+</sup>? Why?
2. Identify the element with the largest ionization energy in each of the following pairs: {Al, Cl}, {Al, Tl}, and {Al<sup>+</sup>, Al<sup>3+</sup>}. Why?
3. Which member of these pairs has the largest electronegativity {Na, Cl} and {Li, Cs}? Why?
4. Which element has the lowest electron affinity, Ra or Mg? Why?
5. Which group of elements has nearly zero electron affinity?
6. Ca<sup>2+</sup> has the same number of electrons as Cl<sup>-</sup> (they are said to be isoelectric). Which ion is larger and why?
7. Write the names for the following compounds.

MgO<sub>2</sub> --

Tl(NO<sub>3</sub>)<sub>3</sub> --

NH<sub>4</sub>C<sub>2</sub>H<sub>3</sub>O<sub>2</sub> (or NH<sub>4</sub>CH<sub>3</sub>COO) --

8. Write the formulas for the following compounds.

Sodium hydrogen carbonate (usually called bicarbonate) --

Cobalt(II) fluoride --

9. Write the formulas for the following compounds, whether existing or not.

	Cu <sup>2+</sup>	Pb <sup>4+</sup>	NH <sub>4</sub> <sup>+</sup>
OH <sup>-</sup>			
CO <sub>3</sub> <sup>2-</sup>			
PO <sub>4</sub> <sup>3-</sup>			