1. Electronegativity is the tendency of an atom to attract electrons. Basically it measures how badly an atom wants electrons.

2. Draw Bohr models for the atoms in Period 2 (don’t need to show neutrons).

b. What happens to the atomic radius of these atoms as you go across this period (left to right)?

c. Because of this, which of these atoms will have a nucleus better able to attract electrons from another neighboring atom?

d. Of this period, which atom will have the weakest attraction to the electrons of another atom?

3a. Considering your answers in question #2, which atom in this period has the highest electronegativity?

b. Which has the lowest electronegativity in this period?

4a. Draw Bohr models for Group 5, Nitrogen’s family.
b. What do you think is the trend for electronegativity as you go down a column. Explain why this happens.

5. In summary, electronegativity goes ___________ as you move left to right across a row. This is because __________________________________________________________
______________________________________________________.

It goes _____ as you go down a column because __________________________________________
______________________________________________________

6. Circle the atom in each pair that has the greater electronegativity.
   a) Ca Ga
   b) Li O
   c) Cl S
   d) Br As
   e) Ba Sr
   f) O S

7. Metallic character basically is the opposite of electronegativity. It is, in simple terms, how badly an atom wants to LOSE electrons.
For the above question, put a SQUARE around the atoms that have higher metallic character.

8. True or False and explain in each case
Atoms with high electronegativites:
   a. tend to have high ionization energies too ______
      explain

   b. have a large atomic radius _____
      explain

   c. are most likely the noble gases _____
      explain

   d. are most likely not metallic _____
      explain
9. F and Cl are an equal distance from a free electron, which atom will ‘win’ that electron? Explain

10. On the periodic table below, summarize the trends of metallic character, atomic radius, ionization energy, and electronegativity using arrows.