ANSWER KEY

Extra Practice: Periodic Trends Name: _____

1. **ATOMIC RADIUS:** For each of the following sets of atoms, rank the atoms from ***smallest to largest*** atomic radius.

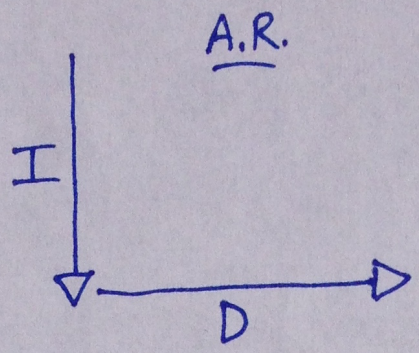
a. Li, C, F → F, C, Li

b. Li, Na, K → Li, Na, K

c. Ge, P, O → O, P, Ge

d. C, N, Al → N, C, Al

e. Al, Cl, Ga → Cl, Al, Ga



2. **IONIC RADIUS:** For each of the following sets of ions, rank them from ***smallest to largest*** ionic radius.

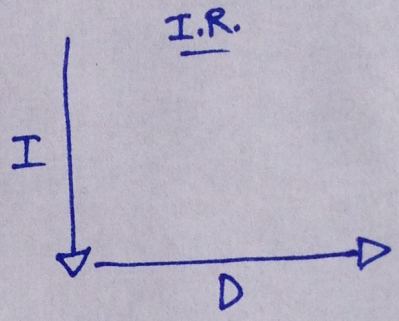
a. Mg^{2+}, Si^{4-}, S^{2-} → Mg^{2+}, S^{2-}, Si^{4-}

b. Mg^{2+}, Ca^{2+}, Ba^{2+} → Mg^{2+}, Ca^{2+}, Ba^{2+}

c. F^-, Cl^-, Br^- → F^-, Cl^-, Br^-

d. Ba^{2+}, Cu^{2+}, Zn^{2+} → Zn^{2+}, Cu^{2+}, Ba^{2+}

e. Si^{4-}, P^{3-}, O^{2-} → O^{2-}, P^{3-}, Si^{4-}



3. **IONIZATION ENERGY:** For each of the following sets of atoms, rank them from ***lowest to highest*** ionization energy.

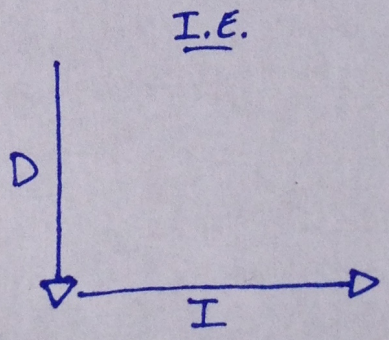
a. Mg, Si, S → Mg, Si, S

b. Mg, Ca, Ba → Ba, Ca, Mg

c. F, Cl, Br → Br, Cl, F

d. Ba, Cu, Ne → Ba, Cu, Ne

e. Si, P, He → Si, P, He



4. **ELECTRONEGATIVITY:** For each of the following sets of atoms, rank them from ***lowest to highest*** electronegativity.

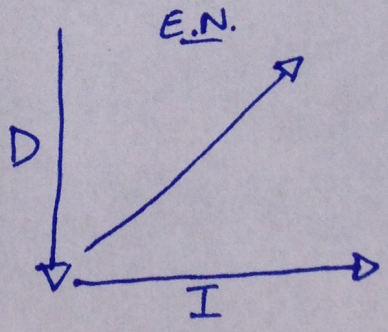
a. Li, C, N → Li, C, N

* b. C, O, Ne → Ne, C, O

c. Si, P, O → Si, P, O

d. K, Mg, P → K, Mg, P

* e. S, F, He → He, S, F



* Noble Gas have lowest E.N. because they already have 8 valence e^- and does not generally want to attract more electrons. Exception is Kr & Xe.