

Periodic Table Problem Set

1. Upon what basis did Mendeleev construct his periodic table?
 - a. the electron configuration of atoms as determined by emission spectra
 - b. the atomic radii of the elements as determined by X-ray diffraction studies
 - c. the variation of chemical properties with atomic weight
 - d. the periodic nature of electronegativity
 - e. none of the above
2. Which element is a nonmetal?
 - a. carbon
 - b. boron
 - c. lead
 - d. tellurium
 - e. potassium
3. The lanthanides have which type of electron orbital as the outermost?
 - a. *s*
 - b. *p*
 - c. *d*
 - d. *f*
4. Which has higher ionization energy?
 - a. lithium
 - b. aluminum
 - c. sodium
 - d. boron
 - e. carbon
5. Which of the statements below is true?
 - a. fluorine is less electronegative than chlorine
 - b. oxygen has greater atomic radius than carbon
 - c. nitrogen has a greater electron affinity than phosphorus
 - d. potassium has greater ionization energy than sodium
 - e. none of the above