

Chapter 7, Worksheet 2
AP Chem, Periodic Properties of Elements

Name _____
Period _____

- As a general rule, the size of atoms increases as you move to the (left/right) or (up/down) on the periodic table. What part of this generalization is counter-intuitive?
- Predict the atom in each of the following pairs with the larger radius.
 - Be or Mg
 - C or N
 - Se or Cl
 - Ba or Y
 - Mg or Sc
 - Te or I
- As a general rule, metals that are (farther from/closer to) the boundary between metals and nonmetals have more "metallic character", and nonmetals that are (farther from/closer to) the boundary have more "nonmetallic character".
- Predict the element with more metallic character.
 - Cs or Sr
 - Al or Mg
 - Rb or K
 - Rb or Ba
- Predict the element with more nonmetallic character.
 - N or O
 - S or Se
 - As or F
 - B or Si
- As a general rule, (metal/nonmetal) ions are larger than (metal/nonmetal) ions.
- As general rule, metal atoms are (larger/smaller) than their (+) ions, and nonmetal atoms are (larger/smaller) than their (-) ions.
- In general, the size of either positively charged or negatively charged ions increases as you move to the (left/right) or (up/down) on the periodic table.
- Predict the larger of each of these pairs of atoms or ions.
 - Mg or Mg^{+2}
 - Br or Br^-
 - K or K^+
 - Na^+ or Mg^{+2}
 - Na^+ or F^-
 - Sr^{+2} or Ba^{+2}
 - Mg^{+2} or Al^{+3}
 - I or I^-
 - F^- or Cl^-
 - Al^{+3} or P^{-3}
- As a general rule, first ionization energy (the energy needed to remove the first electron from a neutral gaseous atom) increases as you move to the (left/right) and (up/down) on the periodic table.