Name_____ Chemistry, Period _____

Ions and Electron Configurations of Ions

1. How many valence electrons are in the following elements?

   a. Li _____
   b. Br _____
   c. N _____
   d. Ba _____
   e. Kr _____
   f. Si _____
   g. Ne _____
   h. O _____
   i. He _____
   j. Sn _____

2. How many core electrons in the following atoms?

   a. O _____
   b. Cl _____
   c. Ca _____

3. What would be the most likely charge on the following atoms if they lost or gained electrons and became ions?

   a. Li _____
   b. Br _____
   c. N _____
   d. Ba _____
   e. I _____
   f. Si _____
   g. Ne _____
   h. O _____
   i. Al _____
   j. Zn _____
   k. Ag _____

4. Provide full electron configurations for the following ions.

   a. Mg^{+2} _____

      Which ***atom*** is it isoelectronic with? _____

      Which ***ions*** could it be isoelectronic with? _____

Name_____ Chemistry, Period _____

b. P^{-3} _____

Which ***atom*** is it isoelectronic with? _____

Which ***ions*** could it be isoelectronic with? _____

c. O^{-2} _____

Which ***atom*** is it isoelectronic with? _____

Which ***ions*** could it be isoelectronic with? _____

d. Ba^{+2} _____

Which ***atom*** is it isoelectronic with? _____

Which ***ions*** could it be isoelectronic with? _____

e. Se^{-2} _____

Which ***atom*** is it isoelectronic with? _____

Which ***ions*** could it be isoelectronic with? _____

5. Provide core notation electron configurations for the following ions.

a. V^{+3} _____

b. Fe^{+3} _____

c. Cu^{+1} _____

d. Mn^{+4} _____