Electron Configuration Practice – Level 2

Please write the electron configuration for the following elements:

He - _____

Be - _____

F - _____

Mg - _____

P - _____

K - _____

Cu - _____

Kr - _____

Electron Configurations of Ions

Now we will look at the electron configurations of the of elements that have gained or lost electrons, or become ions. The electrons will be added into or removed from the outermost energy level (Valence electrons!).

For example: Neutral Sodium atom: Na – $1s^2\ 2s^2\ 2p^6\ 3s^1$ Sodium +1 ion: Na^{+1} - $1s^2\ 2s^2\ 2p^6$

Notice the ion lost its valence electrons in the outermost energy level!

Please write the electron configurations for the following ions. Remember positive ions lose electrons and negative ions gain electrons!:

Li^{+1} - _____

Be^{+2} - _____

F^{-1} - _____

Mg^{+2} - _____

P^{-3} - _____

K^{+1} - _____

Ca^{+2} - _____

Br^{-1} - _____

Noble gas electron configurations:

Now we are going to practice the shortcut. Rather than expressing the whole electron configuration we can use the noble gasses to summarize. The noble gas that is closest to the element BUT DOES NOT HAVE A LARGER ATOMIC NUMBER is the Noble gas we will use. After the Noble gas abbreviation is put in brackets you will only need to write remaining electron configuration in the current period.

For example: Neutral Sodium atom: Na – $1s^2\ 2s^2\ 2p^6\ 3s^1$ Noble gas configuration: [Ne] $3s^1$

Please write the noble gas configurations for the following elements. Remember the Noble gas CAN NOT have an atomic number larger than the element!

Li - _____

Be - _____

F - _____

Mg - _____

P - _____

K - _____

Cu - _____

Kr - _____