

IONIZATION ENERGY

NAME _____

SECTION _____

1. Complete the following table:

Element	Nuclear Charge	Complete Electron Configuration	Total Number of Electrons	Number of Inner Core Electrons	Number of Valence Electrons	Effective Nuclear Charge
Hydrogen						
Lithium						
Beryllium						
Boron						
Carbon						
Nitrogen						
Oxygen						
Fluorine						
Sulfur						
Potassium						
Bromine						

2. What does the term “shield” mean when describing the attraction experienced by an electron in an outer shell?

3. Why is the first ionization energy for nitrogen greater than the first ionization energy for lithium?

4. Calculate the effective nuclear charge experienced by an electron in the 2nd shell in a bromine atom.
5. Why is the third ionization energy for magnesium so much greater than the second ionization energy?
6. Explain the basis for the rule “the atomic radius decreases going across a period.”