SHIELDING

NAME _____ SECTION _____

1. How many electrons, protons, and neutrons in the following atoms?

Atom	Nuclear Charge	Number of Protons	Number of Neutrons	Number of Electrons
H				
He				
Ne				

2. How would we remove an electron from a hydrogen atom? How would we excite an electron in a hydrogen atom?

3. Write a chemical equation that describes the first ionization energy for:

   a. a hydrogen atom.

   b. a helium atom.

   c. a neon atom.

4. For each of the following atoms, what "core" charge are the electrons in the outer shell attracted by?
   a. hydrogen
   b. lithium
   c. beryllium
   d. fluorine
   e. sulfur
5. What does the term "shield" mean when describing the attraction experienced by an electron in an outer shell?

6. Complete the following table:

Element	Nuclear Charge	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					