Honors Chemistry Hour\_\_\_\_\_ Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dr. Wexler
Electron Configuration Worksheet 2
Date assigned\_\_\_\_\_\_\_

*In the space below, write the* ***unabbreviated*** *electron configurations of the following elements:*

1. iron\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) krypton \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) xenon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) barium \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5) radon \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the space below, write the **abbreviated** electron configurations of the following elements:

6) cobalt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7) silver \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8) tellurium \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9) radium \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Determine what elements are denoted by the following electron configurations:

10) 1s22s22p63s23p4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. 1s22s22p63s23p64s23d104p65s1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. [Kr] 5s24d105p3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. [Xe] 6s24f145d6 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. [Rn] 7s25f11 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the space below, write the abbreviated Bohr models for the following elements:

1. Iron

2. Krypton
3. Xenon
4. Barium

5. Radon

Electron Configurations - Solutions

*Note: The electron configurations in this worksheet assume that lanthanum (La) is the first element in the 4f block and that actinium (Ac) is the first element in the 5f block. If your periodic table doesn’t agree with this, your answers for elements near the f-orbitals may be slightly different.*

1) sodium **1s22s22p63s1**

2) iron **1s22s22p63s23p64s23d6**

3) bromine **1s22s22p63s23p64s23d104p5**

4) barium **1s22s22p63s23p64s23d104p65s24d105p66s2**

5) neptunium **1s22s22p63s23p64s23d104p65s24d105p66s24f145d106p67s25f5**

6) cobalt **[Ar] 4s23d7**

7) silver **[Kr] 5s24d9**

8) tellurium **[Kr] 5s24d105p4**

9) radium **[Rn] 7s2**

10) lawrencium **[Rn] 7s25f146d1**

1. 1s22s22p63s23p4 **sulfur**
2. 1s22s22p63s23p64s23d104p65s1 **rubidium**
3. [Kr] 5s24d105p3 **antimony**
4. [Xe] 6s24f145d6 **osmium**
5. [Rn] 7s25f11 **einsteinium**