

Chem I

Name \_\_\_\_\_

Date \_\_\_\_\_ Per \_\_\_\_\_

Worksheet #C19: Valence Electrons and Electron Configurations and Atomic Sizes

1. Draw the arrow diagram yet again in the space below if you use it instead of the colored chart:

2. What is the full electron configuration of Cu? \_\_\_\_\_

3. Use either the arrow chart or your colored chart to write out the noble gas shortcut for these:

a. Se \_\_\_\_\_ f. Ce \_\_\_\_\_

b. Rh \_\_\_\_\_ g. C \_\_\_\_\_

c. U \_\_\_\_\_ h. Pb \_\_\_\_\_

d. Mg \_\_\_\_\_ i. Br \_\_\_\_\_

e. Sb \_\_\_\_\_ j. Na \_\_\_\_\_

4. What are valence electrons? \_\_\_\_\_

5. What two kinds of orbitals contribute to the valence electrons? \_\_\_\_\_ and \_\_\_\_\_

6. How many valence electrons do each of the elements in the d and f blocks have? \_\_\_\_\_

a. When might there be an exception to this? \_\_\_\_\_

7. Why are valence electrons important? \_\_\_\_\_

8. How many valence electrons do each of the following have?

a. Li \_\_\_\_\_ d. As \_\_\_\_\_ g. Se \_\_\_\_\_ j. Ca \_\_\_\_\_ m. Na \_\_\_\_\_

b. P \_\_\_\_\_ e. C \_\_\_\_\_ h. In \_\_\_\_\_ k. Rb \_\_\_\_\_ n. O \_\_\_\_\_

c. S \_\_\_\_\_ f. K \_\_\_\_\_ i. Sr \_\_\_\_\_ l. Po \_\_\_\_\_ o. Bi \_\_\_\_\_