

Name _____

Chapter 9 Homework 1

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

- a) sodium _____
- b) iron _____
- c) bromine _____
- d) selenium _____
- e) nickel _____

2. In the space below, write the electron configurations of the following element using the noble gas shorthand:

- a) phosphorus _____
- b) barium _____
- c) iron _____
- d) bromine _____
- e) silver _____

3. Determine what elements are denoted by the following electron configurations:

- a) $1s^2 2s^2 2p^6 3s^2 3p^4$ _____
- b) $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^6 5s^1$ _____
- c) $[\text{Kr}] 5s^2 4d^{10} 5p^3$ _____
- d) $[\text{Xe}] 6s^1$ _____
- e) $[\text{Ar}] 4s^2 3d^3$ _____

4. Arrange the following in order of increasing atomic radii (1 = smallest, 4 = largest):

_____ Fluorine

_____ Rhodium (Rh)

_____ Barium (Ba)

_____ Copper

5. For **each** pair, choose the element with the higher ionization energy,

	Choice 1		Choice 2
a.	K	OR	Br
b.	Na	OR	B
c.	Fr	OR	F
d.	Fe	OR	F
e.	I	OR	Br

6. Circle the atom ***in each pair*** that has the greater metallic character.

a) Li *or* Be

b) Na *or* K

c) Cl *or* Si

d) Ca *or* Si

e) P *or* Tc

f) Li *or* O