Name _____ Date _____ Class _____

7 Chapter 7.1 More Practice Problems

1. For each element below, state (i) the number of valence electrons in the atom, (ii) the electron dot structure, and (iii) the chemical symbol(s) for the ion.

	a. S	**b.** Cs	**c.** Al
i)	_____	_____	_____
ii)	_____	_____	_____
iii)	_____	_____	_____

2. How many valence electrons does each of the following atoms have?

a. Carbon	**b**. Bromine	**c.** Strontium	d. Xenon	e. Lithium
_____	_____	_____	_____	_____

3. Write the electron configuration for each of the following atoms and ions.

a. Mg^{2+} _____ **b.** Al^{3+}_____

c. K^{+} _____ **d.** Cl _____

e. Be _____ **f.** S^{2-} _____

4. How many electrons will each element gain or lose in forming an ion? State whether the resulting ion is a cation (C) or an anion (A) or neither.

a. francium _____ **c.** gallium _____ **e.** argon _____

b. aluminum _____ **d.** nitrogen _____ **f.** arsenic _____

5. Give the **name** and **symbol** of the ion formed when

a. a bromine atom gains one electron. _____

b. a sodium atom loses one electron. _____

c. a sulfur atom gains two electrons. _____

d. an aluminum atom loses three electrons. _____

6. How many electrons are lost or gained in forming each of the following ions?

a. Ca^{2+} _____ **b.** I^{-} _____ **c.** K^{+} _____ **d.** Al^{3+} _____

7. Classify each of the following as a cation or an anion.

a. Rb^{+} _____ **c.** F^{-}_____ **e.** Ra^{2+}_____

b. Ba^{2+}_____ **d.** Se^{2-}_____ **f.** Li^{+}_____