

Bonding and Ionic Bonds

(Chapter 5, section 1 and 2)

Name _____

Period _____

1. What are valence electrons?

2. Complete this sentence:

The number of _____ in an atom of an element _____ many _____ of that element, including the ways in which the atom can _____ with other atoms.

3. Explain what an electron dot diagram is?

4. What is a chemical bond?

5. Complete this sentence:

The elements within a _____ have _____ because they all have the _____ of _____ in their atoms.

6. What is an ion?

7. Complete these sentences:

When an atom loses an electron, it _____ a _____ charge and becomes a _____. When an atom gains an electron, it _____ a _____ charge and becomes a _____.

8. What is a polyatomic ion? Give two examples of polyatomic ions (name and symbol).

9. What is an ionic bond?

10. What is an ionic compound? What is an example of an ionic compound? Which is the positive ion and which is the negative ion? How did this happen?

11. What is a chemical formula? What is the chemical formula for magnesium chloride? What does the formula tell you about the ratio of the two elements? Why must the formula be in this ratio? (Discuss the charges of the ions)

12. Complete these sentences:

When _____ form, the ions come together in a way that _____ out the _____ on the ions. The _____ for the compound _____ this _____.

13. Describe how ionic compounds are named. Discuss the order of the name and the ending of the negative ion name. What is the name of K_2S ? CaF_2 ?

14. What are general properties of ionic compounds?

15. What is a crystal?