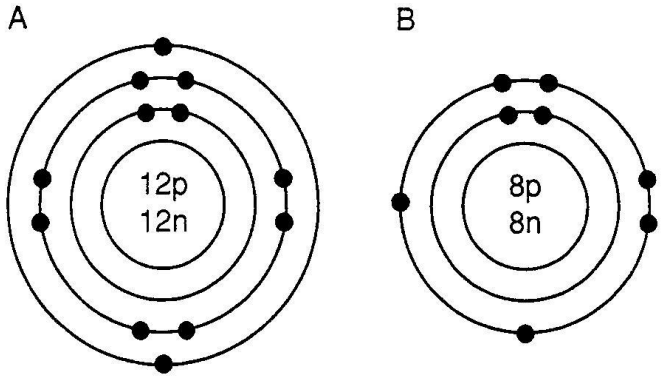
Kinds of Chemical Bonds Name _____ Per. ___

Answer the questions about the diagram shown below. Write answers in the spaces provided.



1. How many electrons will atom A lose to atom B? _____
2. What kind of chemical bond will be formed between atom A and atom B if atom A loses electrons and atom B gains those electrons? _____
3. If atom A gives up electrons to atom B, what will the electrical charge of atom A be? _____
4. If atom B gains electrons from atom A, what will the electrical charge of atom B be? Why?

   _____

   _____
5. What is an atom with an electrical charge called? _____
6. If atom A and atom B unite to form a compound, what will the total charge of the compound be? Why?

   _____

   _____

Complete the table comparing ionic compounds and covalent compounds.

Characteristic	Ionic	Covalent
How is it formed		
Smallest particles		
Properties (3 of each)		

In the blank, write the letter of the term that is defined by each phrase.

_____ 1. force that holds together the atoms in a compound

a. chemical formula b. chemical bond

_____ 2. an atom that has an electrical charge

a. element b. ion

_____ 3. molecule that does not have oppositely charged ends

a. nonpolar molecule b. ion

_____ 4. molecule that has oppositely charged ends

a. covalent molecule b. polar molecule

_____ 5. number and sign written by the symbol of an ion to indicate its charge

a. subscript b. superscript

_____ 6. force of attraction between the opposite charges of the ions in an ionic compound

a. ionic bond b. polar bond

_____ 7. bond that forms between atoms when they share electrons

a. covalent bond b. polar bond

_____ 8. In the symbol Na^{+}, the + sign is a

a. subscript b. superscript

_____ 9. A chloride ion, Cl^{-}, has

a. a negative charge b. no charge

_____ 10. The compound NACl is an example of

a. an ionic compound b. a polar compound

_____ 11. When Na^{+} and Cl^{-} unite to form the compound sodium chloride, the compound that forms is

a. positively charged b. neutral

_____ 12. Neutral particles formed as a result of the sharing of electrons are called

a. molecules b. ions

_____ 13. Covalent compounds tend to have

a. high melting points b. low melting points

_____ 14. Ionic compounds tend to have high melting points due to

a. weak bonds b. strong bonds