Chemical Bonding slotted notes

Name:

3 Types of Bonding:

\_\_\_\_\_\_\_\_ Bonding

\_\_\_\_\_\_\_\_ Bonding

\_\_\_\_\_\_\_\_ Bonding

Bonding is the \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_ . Bonding is \_\_\_\_\_\_\_\_\_ with the \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_.

Ionic Bonding:

\_\_\_\_\_\_\_\_ bonding is an \_\_\_\_\_\_\_\_ attraction between two \_\_\_\_\_\_\_\_\_\_ charged atoms.

Lose an electron-atom is \_\_\_\_\_\_\_\_\_\_

Gain an electron-atom is \_\_\_\_\_\_\_\_\_\_

Characteristics of Ionic Compounds:

1. \_\_\_\_\_\_\_\_\_\_\_ solid at room temperature
2. Have \_\_\_\_\_\_\_\_\_\_ melting and \_\_\_\_\_\_\_\_\_ points compared to \_\_\_\_\_\_\_\_ bonds
3. Conduct \_\_\_\_\_\_\_\_\_\_ current in \_\_\_\_\_\_\_\_\_\_ state
4. \_\_\_\_\_\_\_\_\_\_\_ polar bonds
5. Most are \_\_\_\_\_\_\_\_\_ in water

Magic #

The magic number is \_\_\_\_\_\_\_\_. Every atom wants to gain \_\_\_\_\_\_\_\_\_ up to \_\_\_\_, or lose electrons to equal \_\_\_\_\_\_\_\_\_, in order to be \_\_\_\_\_\_\_\_.

Exception = \_\_\_\_\_\_\_\_\_= only needs \_\_\_\_\_\_ electrons.

Lewis Dot Structure: Make a Lewis Structure for Na below:

Helpful Hint:

What is an easy way to check if a bond is Ionic?

Oxidation number (charge)

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Covalent Bonds:

\_\_\_\_\_\_\_\_ bonds are formed as a result of the \_\_\_\_\_\_\_\_\_\_ of one or more pairs of bonding electrons. Each atom \_\_\_\_\_\_\_\_\_ half of the \_\_\_\_\_\_\_\_\_\_\_\_ to be shared.

2 Forms of covalent bonds:

1. \_\_\_\_\_\_\_\_\_ covalent- \_\_\_\_\_\_\_\_\_ sharing of \_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_ covalent- \_\_\_\_\_\_\_\_ sharing of \_\_\_\_\_\_\_\_\_\_ between atoms.

Single Covalent Bond:

A single covalent bond would be the sharing of \_\_\_\_\_\_\_\_ electrons between the \_\_\_\_\_\_\_ bonded atoms.

Examples=

The \_\_\_\_\_\_ line is symbolic of the bonding pair

One \_\_\_\_\_\_ equals 2 electrons.

Double covalent bond:

A \_\_\_\_\_\_\_\_\_ covalent bond is \_\_\_\_\_ pairs of \_\_\_\_\_\_\_\_\_ being shared.

Example=

Triple covalent bond:

A \_\_\_\_\_ covalent bond is the sharing of \_\_\_\_\_\_ pairs of \_\_\_\_\_\_\_\_\_.

Example=

Metallic Bond:

The \_\_\_\_\_\_\_\_\_\_\_\_ bond occurs only between 2 \_\_\_\_\_\_\_\_ atoms. In this type of bond the \_\_\_\_\_\_\_\_ electrons are free to move about the \_\_\_\_\_\_\_\_\_\_ clouds of all \_\_\_\_\_\_\_\_\_\_\_ participating in the bond.