

## Chemical Bonding 2

Name \_\_\_\_\_

1. Describe two ways in which atoms can bond together.
2. When magnesium bonds with chlorine, how many chlorine atoms bond with a magnesium atom? \_\_\_\_\_ Is this bond covalent or ionic? \_\_\_\_\_
3. Tell whether the compounds below are ionic or covalent:  
SODIUM FLUORIDE \_\_\_\_\_  
CARBON MONOXIDE \_\_\_\_\_  
SULFUR DIOXIDE \_\_\_\_\_  
IRON BROMIDE \_\_\_\_\_
4. When lithium bonds with chlorine, what is the charge on the lithium ion? \_\_\_\_\_  
What is the charge on the chloride ion? \_\_\_\_\_
5. When a bromine atom becomes an ion by gaining an electron, what is its charge?  
\_\_\_\_\_ What is the name of the ion? \_\_\_\_\_
6. The reason atoms bond is so that they can have \_\_\_\_\_ electrons in their outer energy level (except hydrogen which only needs 2).
7. What is an octet?
8. Why do hydrogen, oxygen, chlorine, and many other non-metals always come as pairs of atoms instead of single atoms?
9. How do metal atoms bond with each other?
10. How many total atoms are there in one molecule of carbon dioxide (CO<sub>2</sub>)? \_\_\_\_\_
11. Why isn't water listed on the periodic table of elements?