NAME _____ Block _____

Counting Valence Electrons

1. **Define** valence electrons.

_____

2. Indicate the **symbol** and **number of valence electrons** for each of the following elements.
3. Write **M** for metal or **N** for nonmetal.

Element Name	Element Symbol	# of Valence Electrons	Metal or Nonmetal
Sodium			
Oxygen			
Chlorine			
Barium			
Argon			

Element Name	Element Symbol	# of Valence Electrons	Metal or Nonmetal
Aluminum			
Silicon			
Sulfur			
Neon			
Phosphorus			

Oxidation Number (Oxidation State)

1. **Define** oxidation number (oxidation state).

_____

2. Indicate whether valence electrons are **lost** or **gained**.
3. Indicate the **oxidation number** (oxidation state) for each of the following elements.

Element Name	Element Symbol	Lost or Gained	Oxidation State
Sodium			
Oxygen			
Chlorine			
Barium			
Argon			

Element Name	Element Symbol	Lost or Gained	Oxidation State
Aluminum			
Silicon			
Sulfur			
Neon			
Phosphorus			

Fill-in-the-blanks using the Word Bank:

metal	**cations**	**gain**	**transferred**
nonmetal	**anions**	**lose**	**shared**

In ionic bonding, metals _____ electrons to become _____**,** and nonmetals _____ electrons to become _____. Valence electrons are _____ from the _____ atom to the _____ atom.