

BONDING AND CHEMICAL FORMULAS

When the chemical formula for a compound is written correctly, it shows the number of each type of atom in the compound. These numbers, called subscripts, are determined by the bonding between the atoms. The table below shows two columns of elements. The elements in the first column usually give up electrons when they form compounds (forming positive ions). The elements in the second column usually gain electrons when they form compounds (forming negative ions). In the columns next to the elements, fill in the correct number of valence electrons for the element, how many electrons will be lost or gained in order to achieve a full octet, and the resulting ionic charge. In the far right column, write the formula for the neutral compound when the two elements combine.

	<i>Element</i>	<i>Valence electrons</i>	<i>No. of electrons lost</i>	<i>Ionic charge</i>	<i>Element</i>	<i>Valence electrons</i>	<i>No. of electrons gained</i>	<i>Ionic charge</i>	<i>Formula</i>
1	Aluminum				Chlorine				
2	Magnesium				Bromine				
3	Sodium				Oxygen				
4	Lithium				Oxygen				
5	Calcium				Phosphorus				
6	Magnesium				Chlorine				
7	Aluminum				Oxygen				
8	Beryllium				Sulfur				
9	Sodium				Fluorine				
10	Boron				Neon				