

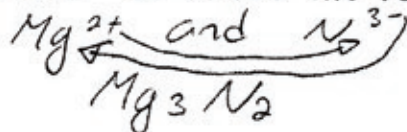
Exercise B: Complete the table by determining the chemical formula for each compound.

Ion	$\text{Cl}^-$	$\text{S}^{2-}$	$\text{P}^{3-}$	$\text{OH}^-$
$\text{Na}^+$				
$\text{Mg}^{2+}$				
$\text{Fe}^{3+}$				

A Short Cut for Formula Writing  
"Criss-Cross Method"

In "criss-cross", the O.N. for the first element in the formula becomes the subscript for the second element in the formula and vice versa.

Ex. Use "criss-cross" to write the formula for  $\text{Mg}^{2+}$  combining with  $\text{N}^{3-}$



Things to look out for:

1. The subscripts must be REDUCED to lowest terms.

Ex.  $\text{Pb}^{4+}$  and  $\text{O}^{2-}$

2. The subscript which is part of a radical is never reduced.

Ex.  $\text{Na}^+$  and  $\text{CrO}_4^{2-}$

Ex.  $\text{Pb}^{4+}$  and  $\text{CrO}_4^{2-}$

Exercise C: Write the formula for each of the following using both the "Zero Sum Rule" and "Criss-Cross" for each.

- $\text{Mn}^{6+}$  and  $\text{P}^{3-}$
- $\text{Fe}^{2+}$  and  $\text{S}^{2-}$
- $\text{Fe}^{3+}$  and  $\text{Cl}^-$
- $\text{Sn}^{4+}$  and  $\text{Cr}_2\text{O}_7^{2-}$