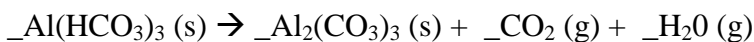


Balancing Equations:

Given a chemical equation, the species themselves may not be changed. The subscripts in the chemical formula of a compound may not be changed in order to balance the equation. Only the number in front of the species is changed to show a difference in number of atoms, number of moles, number of liters, etc.

For example, balance the equation given below:



The order of steps below may be changed – this is only my recommendation:

1) do the cations first – so first balance the Al's

There are two Al's on the right, one on the left, so put a 2 in front of $Al(HCO_3)_3(s)$

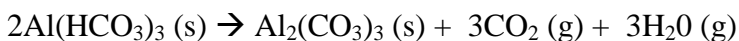
2) do the C's next – there are now 6 on the left and 3 in $Al_2(CO_3)_3 (s)$ – need 3 more, so put a 3 in front of $CO_2(g)$

3) have 6H's on the left side of the equation, so put a 3 in front of $H_2O(g)$

4) do the O's last

5) count all atoms – it balances, so you are done!

Result:



Practice these:

