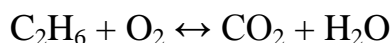


Balancing Equations



- Count the number of times each element appears, making separate columns for reactants and products. You can assemble this in any kind of table you would like.

examples:

Reactants	2 C	6 H	2 O
Products	1 C	2 H	3 O

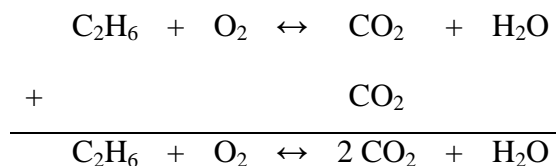
	C	H	O
Reactants	2	6	2
Products	1	2	3

- Should you change the amount of product or reactant?
You are unlikely, if ever, to remove any amount of product or reactant. You will always be adding, generally in atoms or moles. Never worry about adding too much. Your main goal is to balance; you can get the lowest coefficient by simplifying when you're done.

Tip!

Monoatomic compounds, often diatomic or pure solids, change the amount of their element without affecting the other elements. Handle these last.

- Does order matter?
The order at which you alter the amount of your compounds can affect your other compounds. If there is more than one element in your compound, you will probably only be able to balance one at a time. So, try to alter your compounds in a cascading fashion—figure out which is easiest to fix, and do that last.
- We'll balance the carbon first. There are 2 in the reactants, but only 1 in the product. So, let's add another mole of the carbon containing compound to the product.



- Now, let's rewrite our list:

Reactants:	2 C	6 H	2 O
Products:	2 C	2 H	5 O

- Looking at hydrogen, there are 4 less hydrogen in the product than in the reactants. We want to add 4 hydrogen overall, but we can only do this by adding water molecules. A water molecule has 2 hydrogen. So, we only need to add two.

