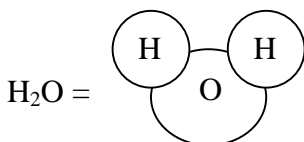


Chemical Formulas

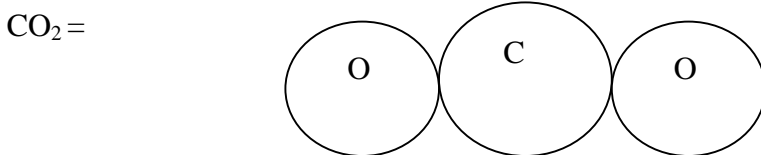
Formulas show the makeup of a compound: how many atoms of each type are bonded together. When atoms bond together, regardless of whether they are those of elements or compounds, we call them molecules

- For water:



Notice that the number applies to the symbol *to the left* of the number. We have drawn one molecule of water.

- For carbon dioxide



Notice that the "2" does *not* apply to the carbon.

More examples:

| Formula | Number of Atoms in each Molecule |
|--------------|--|
| $BeCO_3$ | Be: 1 C: 1 O: 3 |
| $Al(NO_3)_3$ | Al : 1 N: $1 \times 3 = 3$ O: $3 \times 3 = 9$ |
| $(NH_4)_2S$ | N: 2 H: $4 \times 2 = 8$ S: 1 |
| | |

Also notice that for in a single molecule of ammonium sulfide, $[(NH_4)_2S]$, there are 11 atoms in all, of three different types.