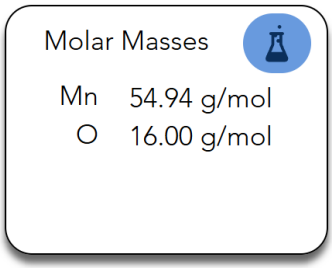
Empirical and Molecular Formulas

Calculating Empirical Formulas

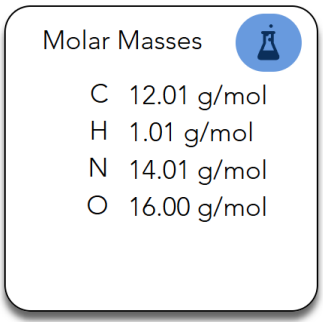
Question One

Find the empirical formula for a compound consisting of 63% Mn and 37% O



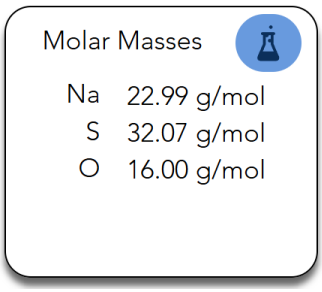
Question Two

Hippuric acid is 60.33 % C, 5.06 % H, and 7.82 % N, the remainder is oxygen. What is the empirical formula of hippuric acid?



Question Three

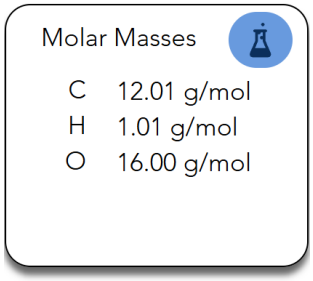
Determine the empirical formula of a compound that is 29.0% sodium, 40.5% sulfur, and 30.4 % oxygen by weight.



Changing Empirical Formulas Into Molecular Formulas

Question Four

The simplest formula for vitamin C is $C_3H_4O_3$. Experimental data indicates that the molecular mass of vitamin C is about 180 g/mol. What is the molecular formula of vitamin C?



Question Five

Caffeine has the following percent composition: carbon 49.48%, hydrogen 5.19%, oxygen 16.48% and nitrogen 28.85%. Its molecular weight is 194.19g/mol. What is its molecular formula?