

## % Composition Steps

- 1) Find the molar mass of the molecule
- 2) Divide each element's atomic mass by the molar mass of the molecule
- 3) Multiply by 100 to put answer in terms of an actual %

\*Note\* If you add up the % for each element it should add up to 100%...but rounding answers may make it not quite add up to 100%. That's ok.

## Determining Empirical Formula Steps

- 1) Given: % composition
- 2) Assume you have 100g sample to make #s easier
- 3) Use the poem!
  - *Percent to mass*
  - *Mass to Moles*
  - *Divide by small*
  - *Multiply by whole*

\*Note\* When multiplying by whole, you need to multiply each element by the same number!

## Determining Molecular Formula Steps

- 1) Find molar mass of the empirical formula
- 2) Divide molecular formula mass by empirical formula mass
- 3) Multiply empirical formula subscripts by the multiplier # found in step 2
  - *No cute rhyme this time...sorry! ☺*

\*Note\* When finding the multiplier in step 2, you will usually have to round a little bit until you get a whole number. That is ok.

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