ICE Table Steps

1. Make a chart with rows for: **Rxn, I, C, E, 5%, Ans.**
2. Draw your ICE table with enough columns for each substance

* *Put dashes in the table for solids/liquids since they will   
  not have [ ]’s*

1. **Rxn -** Write the balanced eq. for your reaction.
2. **I -** Write in any initial [ ]’s you are given.
3. **C -** Use the generic value of “x” to list the changes to   
   the concentrations

* *Make sure to include the coefficients from the balanced equation. Example: 2H2 would be 2x.*
* *Use ( - ) for anything being used up, and ( + ) for anything being made. If the 2H2 is being used up then it would be -2x.*

1. **E -** Add the initial and change columns together and list as   
   the equilibrium [ ]s for each substance.
2. **5% -** Determine if the 5% rule can be applied*.* If 5% rule is   
   a possibility adjust your E values and write them in the   
   5% row of your chart.

* *Required: K < 1*
* *K being at least 1000x smaller than initial [ ]’s is a better guess of when it might be a valid rule, but it’s just a guess.*
* *Remember you must check to see if the 5% rule was valid or not when you are finished! If it wasn’t valid then you need to start over without it and do the math with the original “E” values.*

1. Write the Equilibrium Expression (Law of Mass Action) so you can plug in your values to solve for X.

* *You may have to use the quadratic equation to solve! If you are lucky it will just be regular old algebra. Remember the “F.O.I.L” method and the quadratic equation where your equation is ax2 + bx +c*

1. **Ans. –** Use your answer for X to determine your final concentrations at equilibrium. List in the answer row of your ICE table.

* *Don’t forget that X is not necessarily your equilibrium concentration! You must go back and use X to solve for your equilibrium concentrations.*

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