Molarity

Molar concentration

AKA Molarity

Moles of solute per total liters of solution

1.5M= 1.5 mole solute 6M = 6mo

A soln of 1 mol/L is also read as a "1 molar" soln.

1 mol/L

1 mol/dm³

ImL=1cm³
/L=1dm³

It is important to distinguish moles from molarity.

Molarity is a measurement of concentration of a soln.

Moles are a measure of the amount of substance present at a given time.

Stoichiometry and Molarity



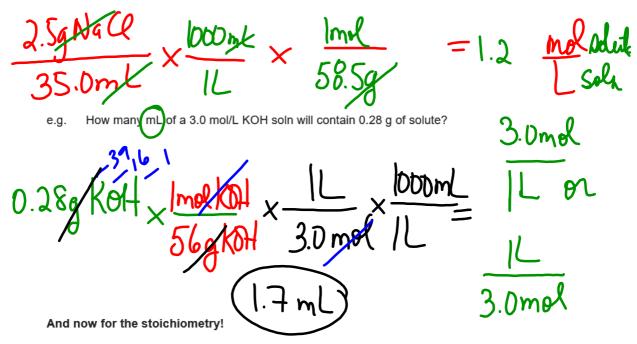
Where

C = concentration in mol/L

V = volume in L

n = moles

e.g. What is the molarity when 2.5 g of NaCl dissolved to make 35.0 mL of soln?



Instead of starting with ${\bf g}$ of ${\bf A}$ or particles of ${\bf A}$ you may have a volume of a concentration of a solution of ${\bf A}$.

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If 40.0 mL of a 6.0 mol/L hydrochloric acid solution reacts with sufficient zinc, how many grams of hydrogen will form?

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To completely react	. 10.00 a oi Zii	. now many mi		Solution will be	reduired?

Remember-all conversion factors can be inversed.

And, of course, we can turn the problem into a limiting reagent one:

If 500. mL of a 1.25 mol/L HCl solution reacts with 5.00 g of Zn:

- i) What mass of hydrogen will form?
- ii) What is the limiting reagent?
- iii) What amount of the excess reagent is left over?