**SI WORKSHEET 11**

1. ((at this stage) What makes something an acid? What makes something a base?

At this stage, an acid gives off H+ ions when dissolved into solution and a base gives off OH-

1. What are the two products of an acid-base reaction?
	1. H2SO4 + 2KOH 🡪 K2SO4 + 2H2O
	2. What is the net ionic equation? 2H+ + 2OH- 🡪 2H2O
2. What is the equivalence point? What is the difference between this and the end point?

ON NEXT SI SHEET

1. What volume is needed to make a .75M NaOH if you have 50 grams of it $\frac{50 g NaOH}{}x\frac{1 mole}{40 g NaOH}x\frac{1 L NaOH}{.75 moles NaOH}$🡪1.67 L NaOH
2. You have a stock solution of 18 M Sulfuric acid however for the reaction you need to perform at this time, 18M is too concentrated. However, you find out that you can perform the reaction with 100ml of 3M Sulfuric acid. What volumetric amount do you need of 18M Sulfuric acid to make 100ml of 3M? \*Use M1V1=M2V2🡪(18)(X)=(3)(.1)🡪X=16.7 mL
3. What amount of .1M NaOH would it take to neutralize 100 ml of .25M HCl? \*Make a balanced equation\*$\frac{100 ml}{}x\frac{1 L}{1000 mL}x\frac{.25 mol HCl}{1 L}x\frac{1 mole NaOH}{1 mole HCl}x\frac{1 L}{.1 mole NaOH}$= .25L
	1. What is the concentration of NaOH if .150L of .3M HCL was neutralized by 100 ml of NaOH? $\frac{150 ml}{}x\frac{1 L}{1000 mL}x\frac{.30 mol HCl}{1 L}x\frac{1 mole NaOH}{1 mole HCl}÷.1 L$= .45M NaOH
4. A 95% ethanol solution has a density of .839 g/ml. What is the molarity of the solution?

$\frac{95 g C2H6O }{}x\frac{1 mole of ethanol}{46 g EtoH}$=moles of ethanol=

$\frac{100 g solution}{}x\frac{1 ml solution}{.839 g}x\frac{1 L}{1000 mL}$= Liters of solution

$\frac{Moles of ethanol}{liters of solution}$=$\frac{2.07 mol}{.12 L}$= 17.4 M solution