# TITRATIONS !!!!!

**A TITRATION is** _____

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**The EQUIVALENCE POINT is** _____

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**IN CHEMISTRY 11 we will only deal with titrations of NEUTRALIZATION REACTIONS!!!**

**Example 2. When a 25.0 mL sample of unknown concentration of Sodium hydroxide is titrated with 23.5 mL of 0.100 M Sulfuric Acid, the equivalence point is reached. What is the *concentration of NaOH*?**
**Step 1**. Write out the balanced equation:

**Step 2**. Use the known concentration + volume to solve for moles

**Step 3**. Use the MOLE BRIDGE to calculate the moles of the unknown

**Step 4.** Divide the moles of unknown by volume of unknown to solve for concentration

**Example 3. What *volume of 0.200 M KOH* is required to react with 125 mL of 0.250 M $H_3PO_4$ in order to produce $K_2HPO_4$ according to this balanced equation: $H_3PO_4$ (aq) + 2 KOH (aq) → $K_2HPO_4$ (aq) + 2 $H_2O$ (l)**
**Step 1**. Identify the balanced equation:

**Step 2**. Use the known concentration + volume to solve for moles

**Step 3**. Use the MOLE BRIDGE to calculate the moles of the unknown

**Step 4.** Divide the moles of unknown by molarity of unknown to solve for volume