Name _____ Period _____

Acid/Base Neutralization

The majority of all neutralization problems can be solved using the formula $C_1V_1=C_2V_2$.

It used to be written $C_aV_a=C_bV_b$ with a and b representing acid and base.

1) How many mL's of 0.10M HCl are needed to completely react with 25.0 mL's of 0.10 M NaOH?

2) What is the concentration of HCl necessary for 15.0 mL's to neutralize 25.0 mL's of 0.20 M NaOH?

3) How many mL's of 0.50M HBr are needed to completely react with 37.5 mL's of 0.10 M KOH?

4) How many mL's of 0.250M HF are needed to completely react with 25.0 mL's of 1.0 M NaOH?

5) It takes 55.0 mL of 0.25 M NaOH to neutralize 25.0 mL of unknown acid. What is the concentration of the acid?

6) Some $HClO_4$ is 0.75M. It takes 50.0 mL to neutralize 37.8 mL of NaOH. What is the concentration of the base?

7) It takes 25.0 mL of 0.10 M HBr to neutralize 22.3 mL of KOH. What is the concentration of the base?

8) You have 25.0 mL of 0.10M H_2SO_4. What volume of 0.10 M $Mg(OH)_2$ is needed to neutralize it?

9) You have 25.0 mL of 0.10M H_2SO_4. What volume of 0.10 M NaOH is needed to neutralize it?

10) You have 25.0 mL of 0.10M HCl. What volume of 0.10 M $Ca(OH)_2$ is needed to neutralize it?