

Acid Base Titration Practice

Name: _____

1) Write the balanced equation for the reaction of hydrobromic acid and sodium hydroxide:

Look at the data table below:

vol HBr	23.5 mL	L
vol NaOH	10.7 mL	L
M HBr	0.500 M	
M NaOH	? M	

2) Convert the mL of HBr and NaOH to L and fill them into the data table.

3) Calculate the moles of HBr that reacted.

_____ mol HBr

4) Use the mole ratio to find out how many moles of NaOH reacted.

_____ mol NaOH

5) Find the molarity of the NaOH. Show work and units!

_____ M NaOH

6) Write the balanced equation for the reaction of sulfuric acid and potassium hydroxide:

vol H ₂ SO ₄	17.6 mL	L
vol KOH	32.8 mL	L
M H ₂ SO ₄	? M	
M KOH	1.35 M	

7) Look at the data above. Which substance should you begin your calculations with? _____

8) Convert the mL of acid and base above to L and fill them into the data table.

9) Calculate the **moles** of the KOH that reacted, using the data in the table.

_____ mol _____

10) Use the mole ratio in the equation to find out how many moles of H₂SO₄ you reacted against the KOH.

_____ mol _____

11) Find the molarity of the H₂SO₄ by using the formula $M = \text{moles/L}$. Show work.

_____ M H₂SO₄

13) Write the balanced equation for the reaction of acetic acid (CH_3COOH) and potassium hydroxide (KOH).

vol CH_3COOH	10.5 mL	L
vol KOH	9.7 mL	L
M CH_3COOH	? M	
M KOH	1.00 M	

Use the above information and combining all the previous steps into one large problem, find the molarity (M) of the acetic acid solution. Show all your work below.

_____ M

Review: Complete this naming chart:

Name	Formula
sulfuric acid	
	H_3PO_4
nitric acid	
	HNO_2
acetic acid	
	HCOOH
hydrofluoric acid	

Complete and balance these neutralization reactions:

a) barium hydroxide + acetic acid:

b) phosphoric acid + sodium hydroxide:
