Name _____ Period _____

Honors Chemistry
Acid/Base Practice Test

Form P

Part I: Titration

1. Complete the following table dealing with the titration of a new household cleaner that contains ammonia (molar mass 17.04 g/mole) to determine the percent composition of the new sample: 20 pts

Mass of empty flask	137.50 grams
Mass of flask and household cleaner	141.50 grams
Initial Buret reading	0.22 mL
Final Buret reading	30.74 mL
mL's of HCl added	
Molarity of HCl	0.2500 Molar
Liters of HCl added	
Moles of HCl added	
Moles of ammonia in cleaner	
Mass of ammonia in cleaner	
Mass of household cleaner	
% Ammonia in cleaner	

Part II: Fill in the following table dealing with pH

H^+	OH^-	pH	pOH	Acid or Base
0.05				
	0.05			
		1.0		
			12.77	
				Neither

Part III: Answer the following questions.

1. What is the pH, pOH and [OH^-] of some 0.50 M HCl?

2. Calculate the Ka for an acid that is 1.25% ionized in a 0.100M solution.

3. What is the pH of a 0.20 M HF solution? The K_a is 6.5×10^{-4}

4. Write the two dissociations for Sulfuric acid H_2SO_4.

5. Describe the three different models of acids and bases. What are the differences between them?

6. Calculate the concentration of some base if it takes 25.00 mL of 0.100M HCl to neutralize 37.5 mL of the base.

7. Show how HNO_2 reacts with water. Identify the conjugate acid base pairs in the reaction.

8. What color will the following chemicals be if tested with phenolphthalein?

HCl NaOH HCN KOH NH_3 $HC_2H_3O_2$