Name _____ Period _____

Titration Problems
Honors Chemistry

The following data tables represent titration experiments. Perform the necessary calculations to finish the data tables. The first experiment deals with the titration of some new Vinegar that contains acetic acid(molecular mass = 60.05 g/mole) to determine the percent composition of the new sample.

Mass of empty flask	127.5300 grams
Mass of flask and vinegar	135.0700 grams
Initial buret reading	1.14 mL
Final buret reading	34.47 mL
mLs of NaOH added	
Molarity of NaOH	0.3322 moles per liter
Liters of NaOH added	
Moles of NaOH added	
Moles of acetic acid in vinegar	
Mass of acetic acid in vinegar	
Mass of vinegar	
% acetic acid in vinegar	

This titration deals with a new household cleaner that contains ammonia (molar mass 17.03 g/mole) to determine the percent composition of the new sample.

Mass of empty flask	127.5300 grams
Mass of flask and household cleaner	135.0300 grams
Initial buret reading	1.14 mL
Final buret reading	150.53 mL
mLs of HCl added	
Molarity of HCl	0.2211 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	

This final experiment has three trials where we are trying to find the average molarity of a vinegar sample that was titrated three separate times.

Mass of empty flask g	125.0000	125.0000	125.0000
Flask and vinegar g	135.0000	132.5000	130.0000
Initial buret reading mL	0.12	3.22	4.15
Final buret reading mL	36.16	30.20	22.10
mLs of NaOH added			
Molarity of NaOH	0.2315	0.2315	0.2315
Liters of NaOH added			
Moles of NaOH added			
Moles of acetic acid in vinegar			
Mass of acetic acid in vinegar			
Mass of vinegar			
% acetic acid in vinegar			
Average % acetic acid in vinegar	xxxxxxxxxxxxx		xxxxxxxxxxxxxxxx