ame	AP Cnemistry
HW: Due 11/25/2015. Complete and clearly label all final answer	both free response questions. One will be graded. Show all work. Box is
$HF(aq) + OH(aq) \rightleftharpoons H_2O(l)$) is added to 45 mL of $0.40 M HF(aq)$ solution. Assume that volumes are additive. (aq) remaining in the solution.
2.00 L. The reaction represented below of $3Ba(NO_3)_2(aq) + 2H_3PO_4(aq) \Rightarrow$ (c) Calculate the mass of $Ba_3(PO_4)_2(s)$ for	$\Rightarrow \text{Ba}_3(\text{PO}_4)_2(s) + 6\text{HNO}_3(aq)$
(e) What is the concentration, in mol L^{-1} ,	of the barium ion, $Ba^{2+}(aq)$, after the reaction reaches completion?

Essay #2:

Answer the following questions that relate to the analysis of chemical compounds.

- (a) A compound containing the elements C, H, N, and O is analyzed. When a 1.2359 g sample is burned in excess oxygen, 3.050 g of $CO_2(g)$ is formed. The combustion analysis also showed that the sample contained 0.0862 g of H.
 - (i) Determine the mass, in grams, of C in the 1.2359 g sample of the compound.
 - (ii) When the compound is analyzed for N content only, the mass percent of N is found to be 4.62 percent. Determine the mass, in grams, of N in the original 1.2359 g sample of the compound.
 - (iii) Determine the mass, in grams, of O in the original 1.2359 g sample of the compound.
 - (iv) Determine the empirical formula of the compound.

(V)	The	moleci	ular m	ass of	the co	mpou	nd is (303.3	g/mol	. Dete	rmine	the m	olecul	ar forn	nula o	t the c	ompo	ound.	