

Chemistry 1 a Week Activity		Higher	33 rd Week
Name:		Class: 	
Nitric acid can be titrated with a solution of ammonia. i. State the type of reaction occurring when nitric acid reacts with ammonia. ii. What salt is formed in this reaction? 	Calculate the atom economy for the formation of calcium oxide in this reaction. $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$ 		
The equation below shows a reaction to produce ammonia at equilibrium. $\text{N}_2 + 3\text{H}_2 \rightleftharpoons 2\text{NH}_3$ i. State the name of the industrial process to manufacture ammonia. ii. Predict the effect that increasing the pressure will have on the position of equilibrium. iii. Predict the effect that adding the catalyst has on the rate of attainment of equilibrium. iv. Predict the effect that adding the catalyst has on the equilibrium yield of ammonia. 			
A solution for KNO_3 has a concentration of 26 g/dm^3 what is this in mol/dm^3? 	Ethanoic acid is a weak acid. Why is ethanoic acid a weak acid? 		
A sample of calcium carbonate is strongly heated in a crucible until there is no further loss in mass. The mass of calcium oxide remaining in the crucible is 5.450 g. The theoretical yield of calcium oxide in this experiment is 5.600 g. Calculate the percentage yield of calcium oxide. Give your answer to 3 significant figures. 			