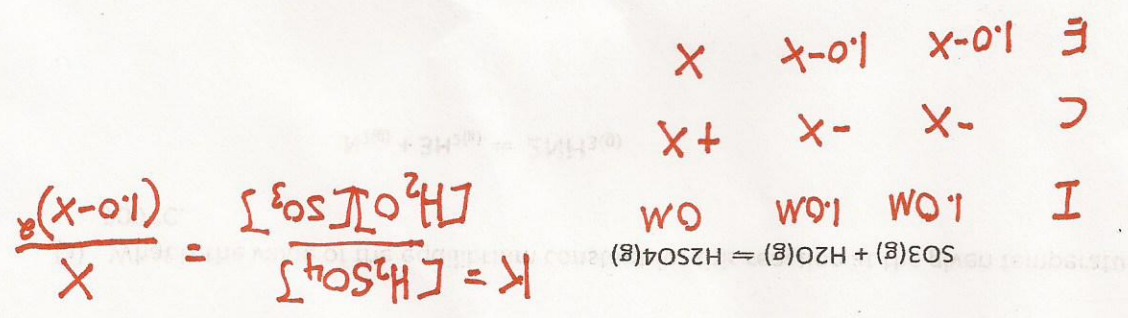
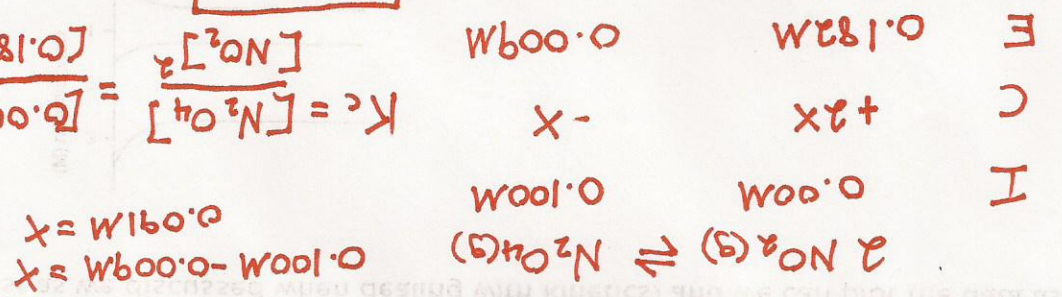


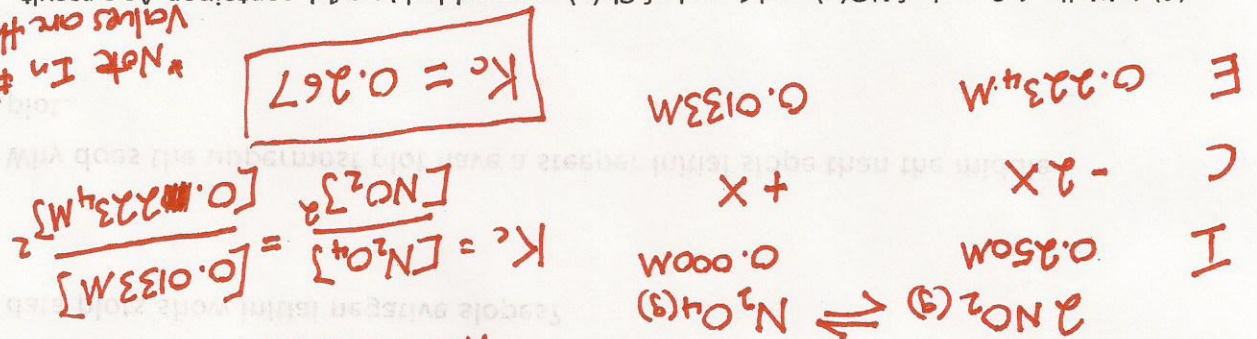
(1) Write an ICE table (but don't solve it) for 1.0 M SO3 reacting with 2.0 M H2O according to the equation



(2) In the reaction $2 NO_2(g) \rightleftharpoons N_2O_4(g)$ the initial concentration of N_2O_4 was 0.100 M and NO_2 was 0.000 M. At equilibrium, the concentration of N_2O_4 was measured as 0.009 M. Calculate K_c .



(3) In the reaction $2 NO_2(g) \rightleftharpoons N_2O_4(g)$ the initial concentration of NO_2 was 0.250 M and N_2O_4 was 0.000 M. At equilibrium, the concentration of N_2O_4 was measured as 0.0133M. (a) Calculate the equilibrium concentration of NO_2 . (b) Calculate K_c .



(4) Initially, 1.0 mol of $NO(g)$ and 1 mol of $Cl_2(g)$ were added to a 1 L container. As a result of the reaction the equilibrium concentration of $NOCl(g)$ became 0.96 M. Using the ICE table methodology determine the value of the equilibrium constant K_c for this reaction.

