Friday Worksheet **Name: …….**

Chemical equilibria worksheet 9

1) Consider the reaction given by the equation below.

$a(aq) + 2b(aq) \rightleftharpoons ab_2\,(aq)$

2.00 mol of and 3.00 m ol of B where placed in in a vessel containing 100.0 mL of distilled water at 50°C and allowed to reach equilibrium. At equilibrium it was found that 1.00 mol of ab_2 was present.

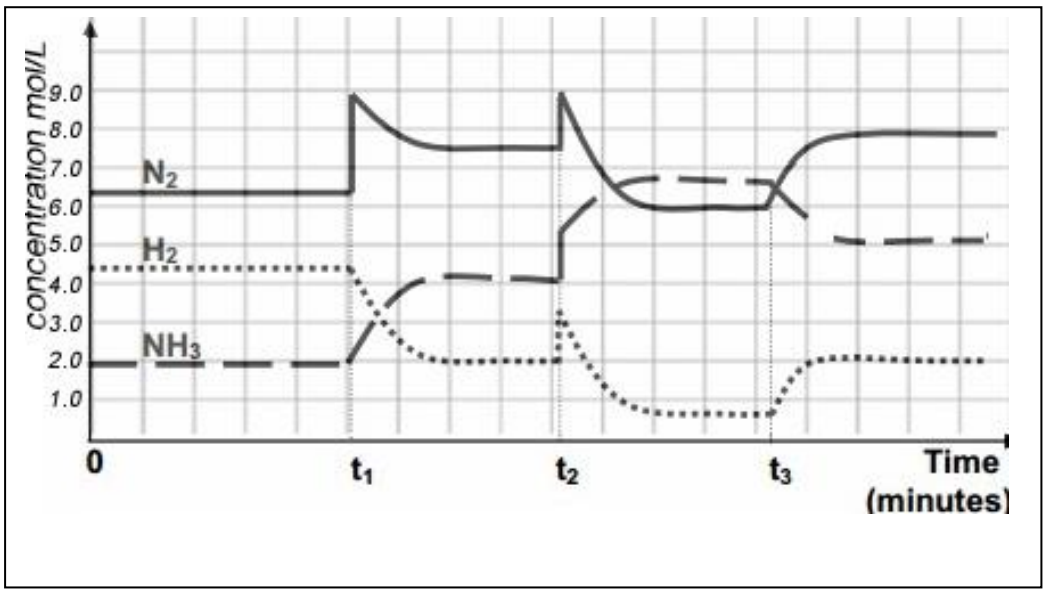
a) What is the value of the equilibrium constant for this reaction?

b) A change to the system took place while at 50°C and the following concentrations were recorded a short time after the change.

[a] = 0.400M, [b] = 0.300M, [ab_2} = 0.200M

Discuss how the system will respond.

The graph below shows the variation in concentration of reactant and products as a function of time for the following system $3H_2(g) + N_2(g) \rightleftharpoons 2HN_3(g)$ ΔH= -ve



a) Discuss what happened at

i. t_1

ii. t_2

iii. t_3

b) What is the equilibrium constant at t_3