



EXAMPLE K_c CALCULATIONS - HOMOGENOUS

1. Methanol can be manufactured using the following process.



0.242 moles of CO were mixed with 0.360 moles of H₂ in sealed container with a volume of 400cm³ at a temperature of 550K and left to reach equilibrium.

a) It was found that 0.100 moles of CH₃OH was present at equilibrium.

Calculate K_c, including its units.

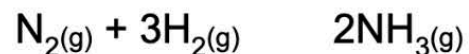
K_c = Units

What would happen to value of K_c, if the temperature was decreased?



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2. A dynamic equilibrium is set up when Nitrogen reacts with Hydrogen to form Ammonia.



A 2.0dm³ vessel was found to contain 0.05 moles of Nitrogen and 0.08 moles of Ammonia once equilibrium was reached at 300K. The value of K_c for this equilibrium at this temperature is 9.6.

a) Calculate the number of moles of Hydrogen present at equilibrium.

b) Deduce the units for K_c for this equilibrium