- According to defination Ln(K2/K1)=(Ea/R){(1/T1)-(1/T2)}
- Rate constant K1 at temperature T1
- Rate constant K2 at temperature T2
- Ea is the activation barrier.R is the Universal gas constant
- Here it is given that K1=0.0132 /s, K2 = 0.684/s,T1 = 400K ,T2 = 450K
- Through Calculation The activation energy will be 118.158 KJ
- Thus rate constant at 425 K we can determine from the same equation.
- Let take K1 = 0.0132/s at T1 = 400K
- Thus rate constant K3 at 425 K(T3)
- K3 = 0.10672/s