

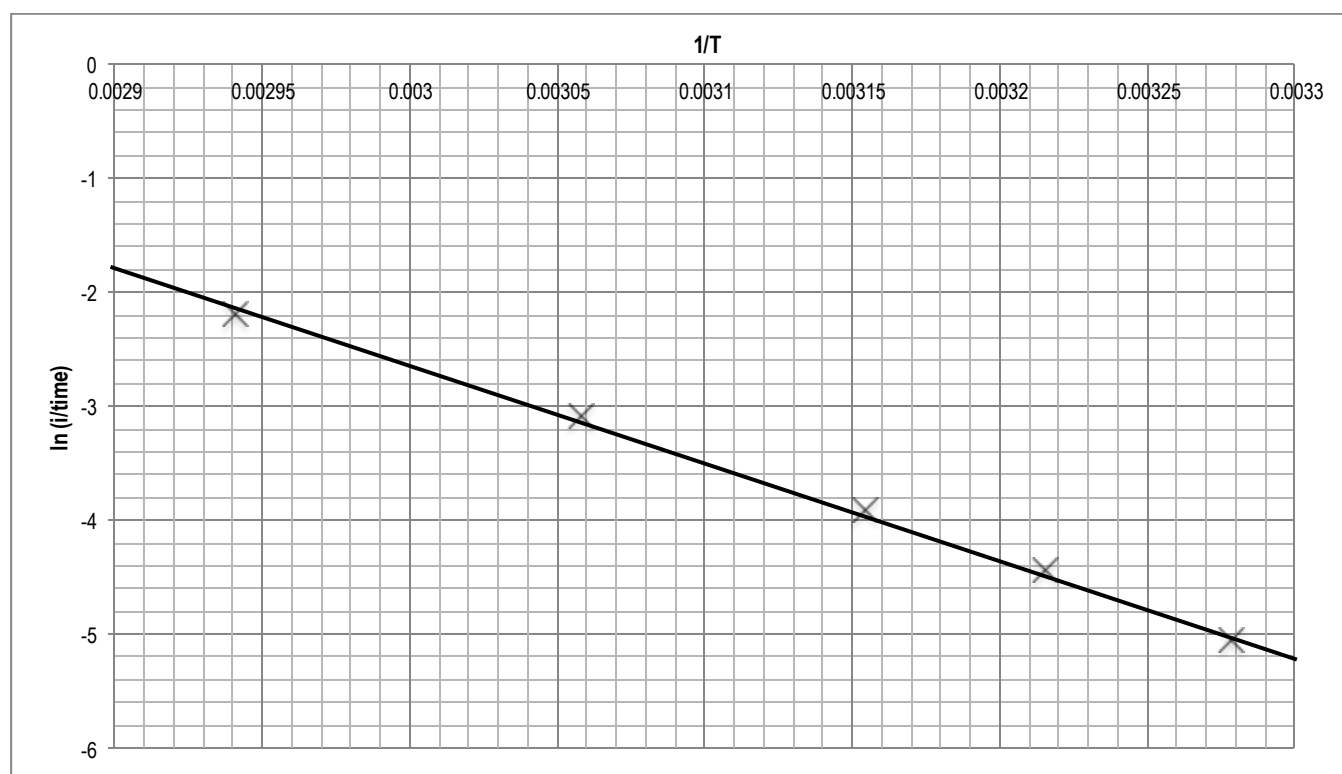


A2 PRACTICAL 1

Finding activation energy (Model)

Results

Temperature (°C)			Time (s)	1/T(K)	ln (1/time)
Start	End	Average			
34	32	32	155	0.00328	-5.04
39	37	38	85	0.00322	-4.44
44	44	44	50	0.00315	-3.91
54	54	54	22	0.00306	-3.09
67	67	67	9	0.00294	-2.18



$$\text{Gradient} = \frac{-3.4}{0.0004} = -8500$$

$$\frac{-E_a}{8.31} = -8500$$

$$\frac{E_a}{8.31} = 8500 \times 8.31 = 70635 \text{ J mol}^{-1} = 70.6 \text{ kJ mol}^{-1}$$