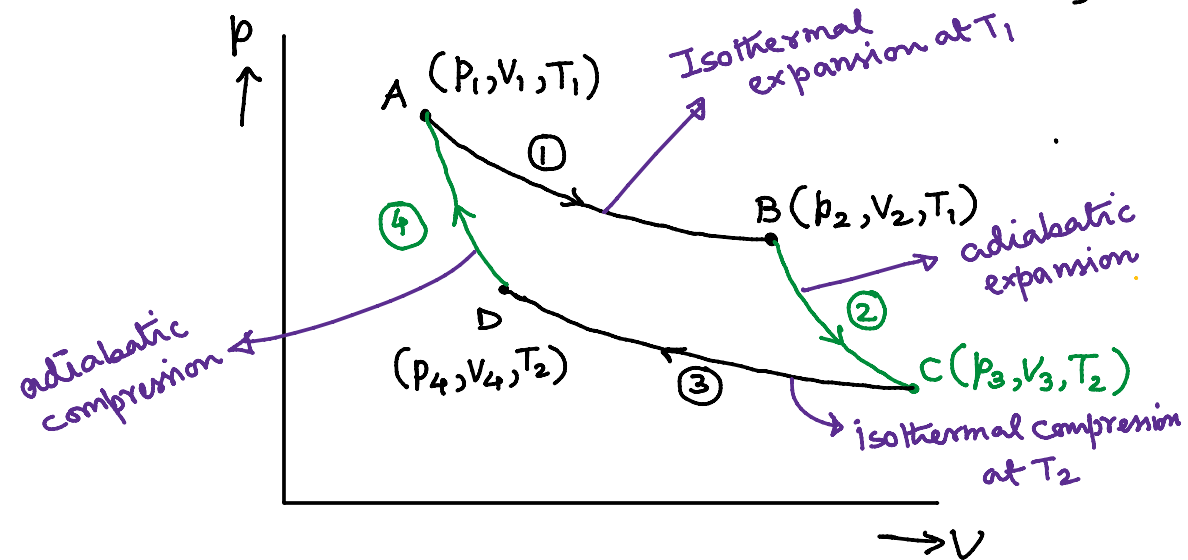


Process I: Isothermal Expansion : (at constant temp T_1)



$$Q_1 = W_{AB} = \mu R T_1 \log_e \frac{V_2}{V_1} \quad \text{--- (1)}$$

Process II: Adiabatic Expansion :

$$W_{BC} = \frac{\mu R}{(\gamma - 1)} (T_1 - T_2) \quad \text{--- (2)}$$

Process III: Isothermal compression : (at temp T_2)

$$Q_2 = W_{CD} = \mu R T_2 \log_e \frac{V_4}{V_3} .$$