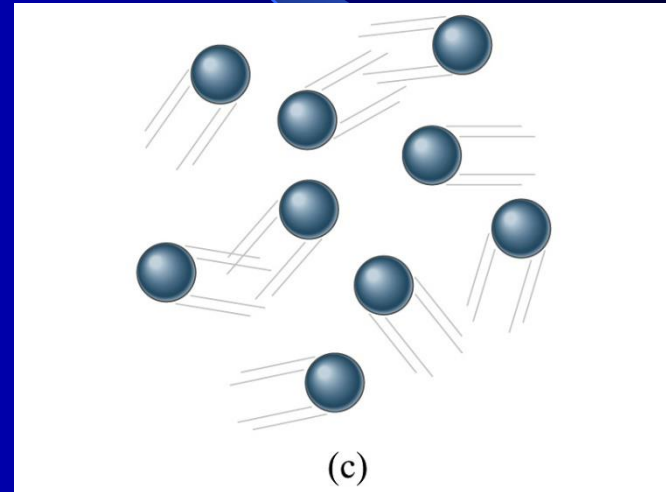


Avogadro's Number

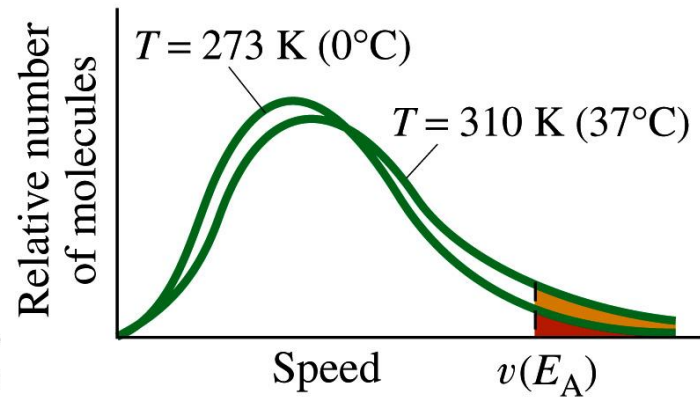
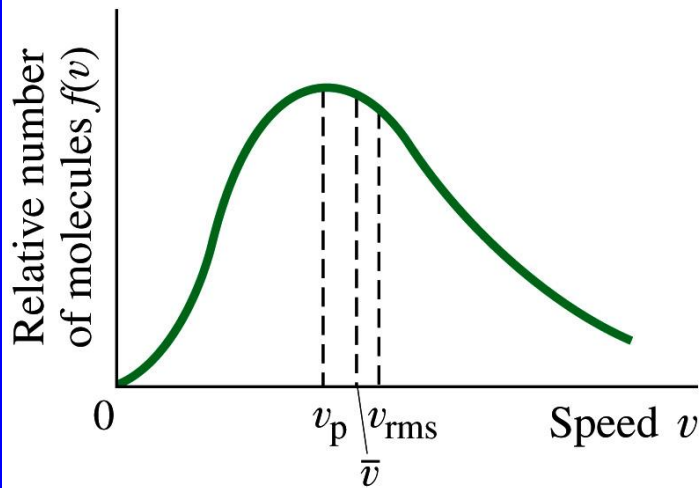
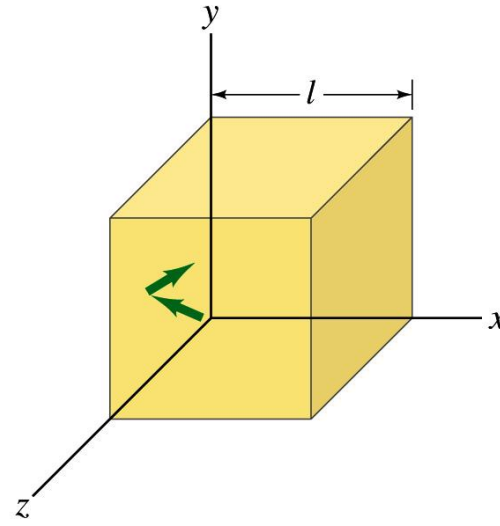
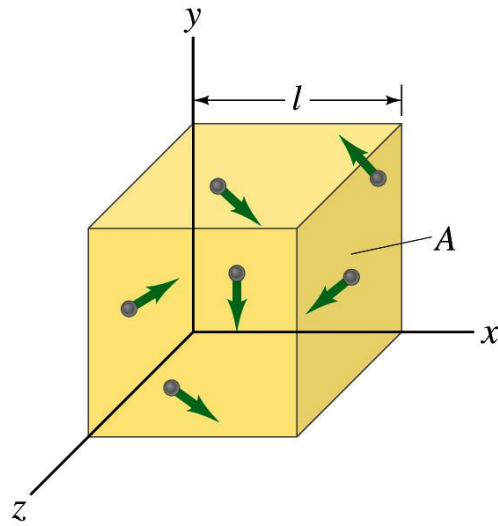
$$M = N_A m$$

$$N_A = 6.022 \times 10^{23} \text{ molecules/mol}$$

$$m_{\text{total}} = nM$$



An Ideal Gas



The Ideal Gas Law

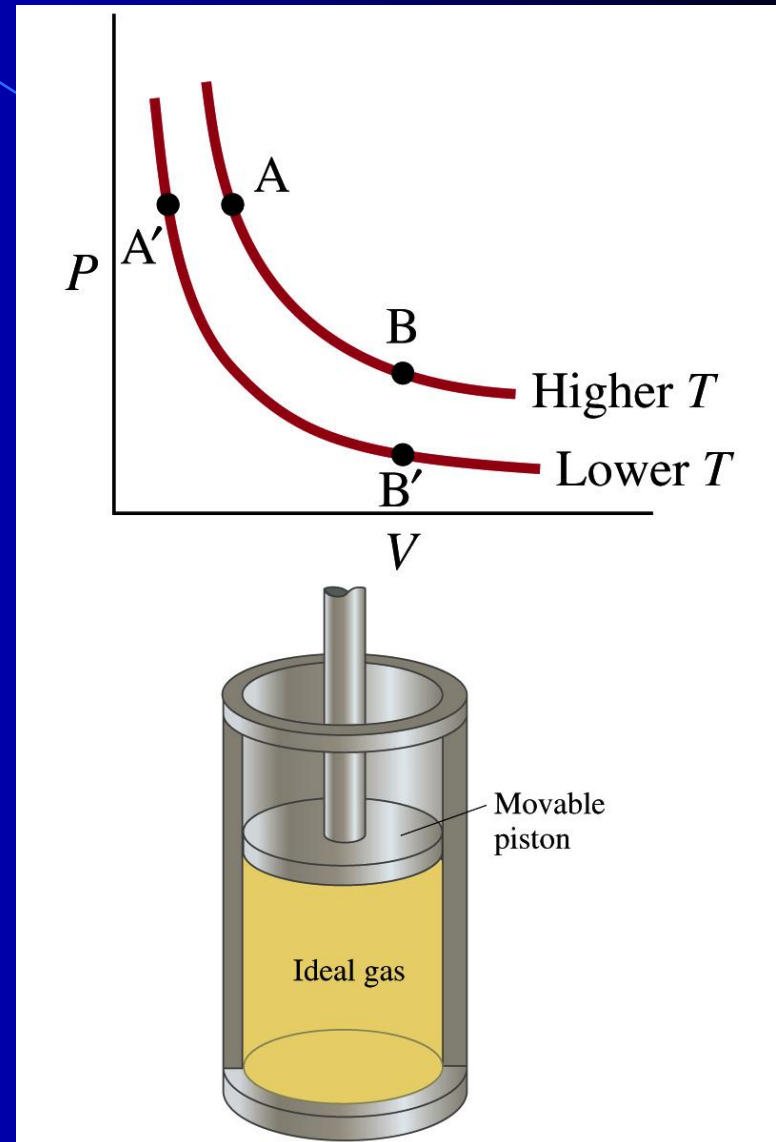
$$pV=nRT$$

$$R=8.3145 \text{ J/(mol K)}$$

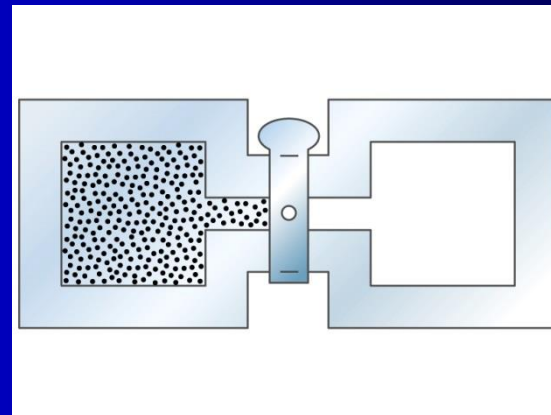
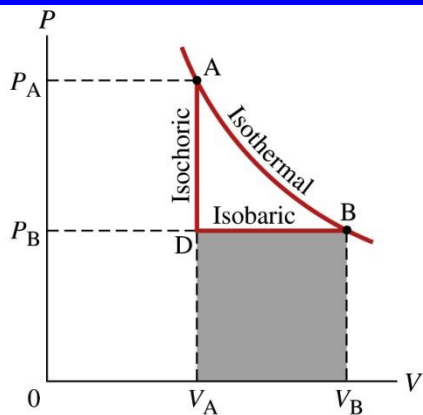
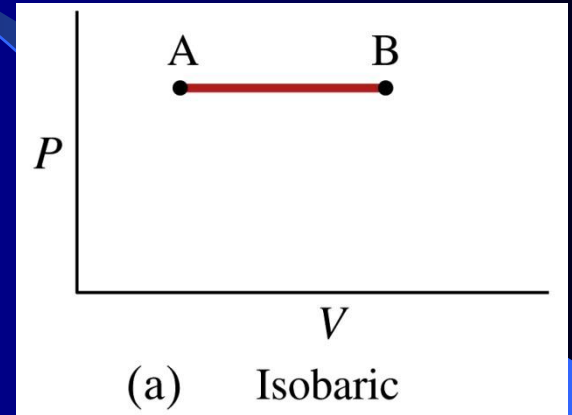
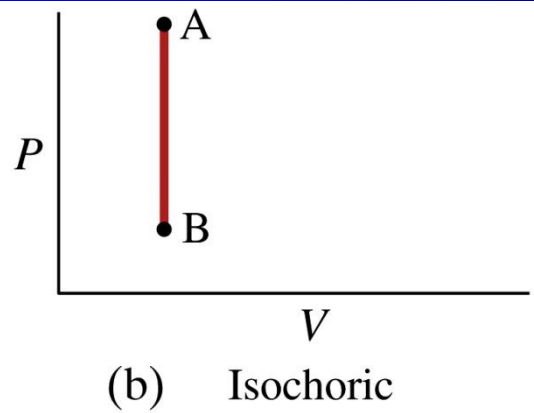
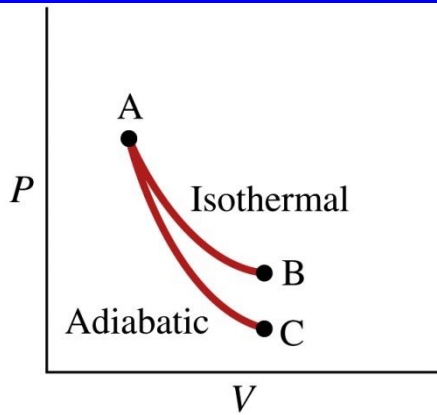
$$pV/T=\text{const.}$$

$$\rho=pM/(RT)$$

Partial pressure of gas mixture



Various Processes



Phase Diagram

Water

