

Date 2013 07/7

## 熱力学 (1)

$$\Delta Q = C \Delta t \quad C: \text{熱容量 (heat capacity)}$$

$$\Delta Q = mc \Delta t \quad c: \text{比熱 (specific heat)}$$

$$\text{線膨張} \quad L = L_0 (1 + \alpha t)$$

 $\alpha: \text{線膨張率}$ 

$$H = \frac{\Delta Q}{\Delta t} \quad : \text{熱の流れ}$$

$$= kA \frac{T_2 - T_1}{L} \quad k: \text{熱伝導率}$$

$$1 \text{ cal} \doteq 4.2 \text{ J}$$

$$pV = (\text{一定}) \quad : \text{ボイルの法則}$$

$$V = V_0 \left( 1 + \frac{1}{273.15} t \right) \quad : \text{シャルルの法則}$$

$$\frac{V}{T} = \frac{V_0}{T} = c (\text{一定}) \quad :$$

$$\frac{pV}{T} = \frac{p_0 V_0}{T_0} = c (\text{定数}) \quad : \text{ボイル・シャルルの法則}$$

$$pV = nRT \quad : \text{理想気体の状態方程式}$$