



$$PC \frac{dT}{dx} = K \left[\frac{d^2T}{dx^2} + \frac{d^2T}{dy^2} + \frac{d^2T}{dz^2} \right] + q'''$$

$$0 = K \frac{d^2T}{dx^2} + q'''$$

$$\frac{d^2T}{dx^2} = -\frac{q'''}{K}$$

$$\frac{dT}{dx} = -\frac{q'''}{K}x + C_1$$

$$T(x) = -\frac{q'''}{2K}x^2 + C_1x + C_2$$

B.C ①

$$x=0, \frac{dT}{dx} = 0$$

B.C ②

$$x=L, T = \frac{q''' \cdot L}{h} + T_e$$