



$$k(T) = k_0 + \alpha T$$

$$A_1 = A_3$$

$$A_2 \ll A_1$$

$$L_1 + L_2 + L_3 = L$$

$$L_2 = \text{constant}$$

$$Q = \frac{T_1 - T_4}{\frac{L_1}{k(T) \cdot A_1} + \frac{L_2}{k(T) \cdot A_2} + \frac{L_3}{k(T) \cdot A_3}} \xrightarrow{A_1 = A_3} \frac{T_1 - T_4}{\frac{L_1}{k(T) \cdot A_1} + \frac{L_2}{k(T) \cdot A_2} + \frac{L_3}{k(T) \cdot A_1}}$$

$$Q_{L1 \uparrow \uparrow} = Q_{L1 \downarrow \downarrow}$$

↳ why?