

Week 1

07 October 2019

22:20

- A short summary about the conductive heat transfer and solving the same exercise with $L=0.4\text{m}$ $A=20\text{m}^2$ $\Delta t=25$ $k=0.78\text{W/m}$ using both simple method and resistance concept
- Simple method

$$Q = kA \cdot \Delta t / L = 0.75 \times 20 \times 25 / 0.4 = 975\text{W}$$

Resistance method

$$R_{\text{wall}} = L / kA = 0.4 / (0.75 \times 20) = 0.0256\text{K/W}$$

$$Q = \Delta T / R_{\text{wall}} = 25 / 0.0256 = 975\text{W}$$