

## WEEK 1

Find the rate of the heat through the wall.

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

①

$$\dot{Q} = kA * \Delta T / L = 0.78 * 20 * 25 / 0.4 = 975 \text{ W}$$

②

$$R_{\text{wall}} = L / kA = 0.4 / 0.78 * 20 \approx 0.0256$$

$$\dot{Q} = \Delta T / R_{\text{wall}} = 25 / 0.0256 \approx 976.56 \text{ W}$$