

TASK1

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Question: 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.

Conductive heat transfer is a kind of heat transfer in which heat is transferred through different modes of materials like gas and solids.

Simple Method:

$$Q = KA\Delta T/L$$

$$Q = (0.78)(20)(25)/.4 = 975 \text{ W}$$

Resistance Concept:

$$R_{\text{wall}} = L/KA$$

$$R_{\text{wall}} = .4/(0.78)(20) = .0256$$

$$Q = \Delta T/R_{\text{wall}}$$

$$Q = 25/.0256 = 976 \text{ W}$$