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The conductive heat transfer is basically the amount of heat that goes through either gas, liquid or solid. In wall which is a solid substance many factors affect heat transfer. These factors are firstly temperature difference between two sides of the wall, thickness of the wall, material and the area. As an example: with more temperature difference between two sides of the wall the more heat will transfer. The thicker the wall the less heat goes through it and using some material such as wood causes less heat transfer. Finally, the heat transfer through wall is proportional to its area.

### Simple method

$$Q = KA \frac{\Delta T}{L} = 0.78 \times 20 \times \frac{25}{0.4} = 975 \text{ (w)}$$

### Resistance concept

$$R_{WALL} = \frac{L}{KA} = \frac{0.4}{0.78 \times 20} \approx 0.02564 \text{ (}^{\circ}\text{C/W)}$$

$$Q = \frac{\Delta T}{R_{WALL}} = \frac{25}{0.02564} \approx 975.04 \text{ (w)}$$