Thermal conduction is te trasfer of heat internal energy from particles with an higher temperature to one with a lower temperature.
The rate of heat conduction trough a plane wall, under steady conditions: is **constant** and **proportional** to the average thermal condictivity, the wall area and the temperature difference; but is **inverserly porporsional** to the wall thickness.

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

$$R_{wall} = \frac{L}{kA} = \frac{0.4}{0.78 * 20} = 0.0256\ °C/W$$

$$\dot{Q} = \frac{\Delta T}{R_{Wall}} = \frac{25}{0.0256} = \mathbf{975\ W}$$