Question:

A short summary about the conductive heat transfer and solving the same exercise with L= 0.4 m, A= 20 m2, DeltaT= 25, and k=0.78 W/m K using both simple method and using the resistance concept

SUMMARY:
Heat transferring is related to temperature difference, contact area and wall thickness. The greater the contact area and temperature difference, the more heat is transferred.

1. Q=K*A*$\frac{\Delta T}{L}$=0.78*20*$\frac{25}{0.4}$=975(w)
2. R=$\frac{L}{KA}$=$\frac{0.4}{0.78*20}$ $\approx 0.0256(℃/W)$

   Q=$\frac{\Delta T}{R}$=$\frac{25}{0.0256}$ $\approx 976.6(w)$