

First name: Last name:

Homework n°01

Exercise

The bottom of a pan is made of a **4-mm-thick aluminium layer**. In order to increase the rate of heat transfer through the bottom of the pan, someone proposes a design for the bottom that consists of a **3-mm-thick copper layer sandwiched between two 2-mm-thick aluminium layers**.

Will the new design **conduct** heat better? Explain.

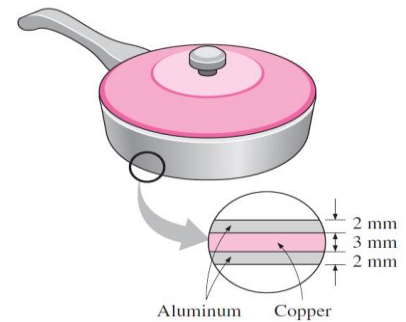


Figure 01

Given:

$$k_{\text{copper}} = 398 \text{ W/m.K}$$

$$k_{\text{aluminium}} = 237 \text{ W/m.K}$$