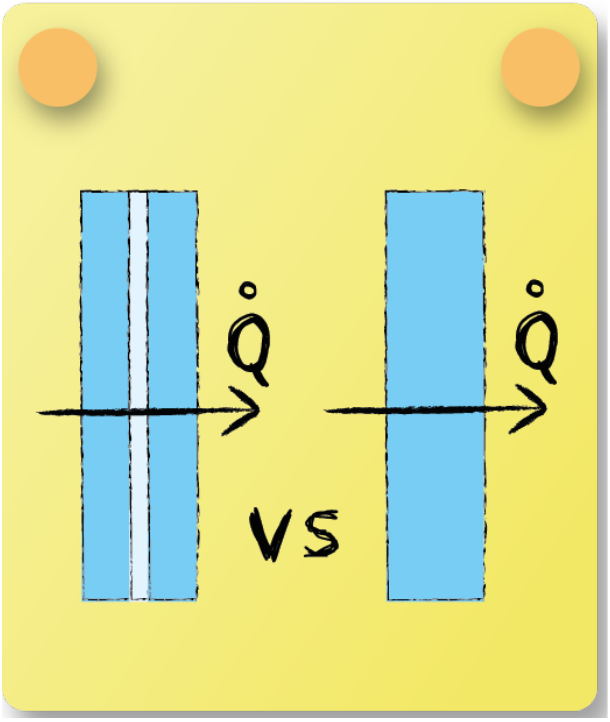
Lecture 7 - Question 7



Consider a window glass consisting of two 4mm thick glass sheets with a stagnant gas in between. Compare the heat transfer rate to another window consisting of a single 8mm thick glass sheet under identical conditions.

To compare heat transfer rates under identical conditions it is suitable to compare thermal resistances of the windows. The difference comes down to an additional thermal resistance at the double glassed window due to the gas, as the conductive thermal resistances within the glass sheets add up to be equal in both windows. Hence, heat flux through the double glassed window is less compared to the single glass under identical conditions.