

\Rightarrow net loss of heat as radiation

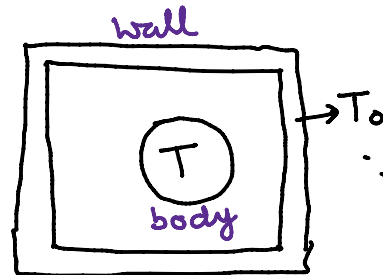
Case II: if $(\Delta Q)_{\text{radiated}} < (\Delta Q)_{\text{absorbed}}$

\Rightarrow net gain of heat as radiation

Case III: if $(\Delta Q)_{\text{radiated}} = (\Delta Q)_{\text{absorbed}}$

\Rightarrow no gain or loss of heat

\Rightarrow A thermal equilibrium
is achieved.



if $T > T_0$, Temp. of the body
will decrease and the
temp. of surroundings will
increase.

- The exchange of heat between the body and the surroundings continues until a dynamic thermal equilibrium is established between them and their temperatures become equal.