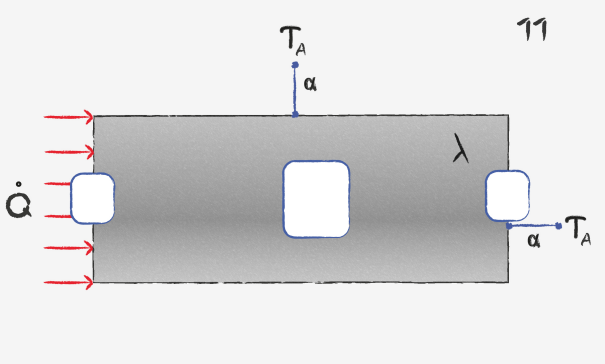
# Heat Loss: Task 11




The image describes a rectangular body with an imposed heat flux on the left and heat loss through convection on remaining surfaces.

1 

The imposed heat flux yields a negative temperature gradient, which results in a decreasing convective heat loss.

2 

Convective heat loss is positive, since heat is brought into the system via conduction. Decreasing temperature difference of fin and environment causes a decrease of convective heat loss.

3 

Heat loss is still present at the end of the fin, since the temperature approaches but never equals the ambient temperature. Due to the convective boundary, temperature gradient is still negative at the fin's end.