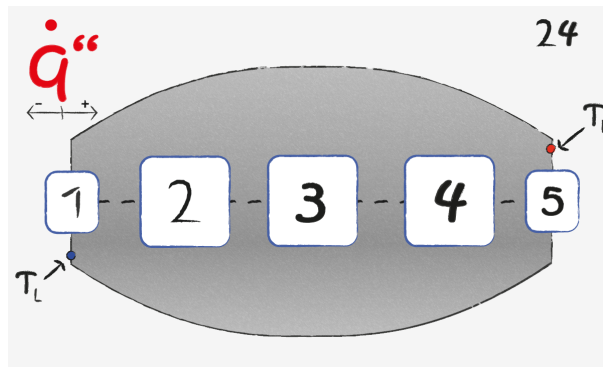


Axial Heat Flux: Task 24



The image describes a body with parabolic area and maximum temperature on the right side.

1



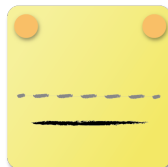
Higher temperature on the body's right side indicates heat flow towards the left, which leads a negative heat flux.

2



Increase in cross section yields a decrease in the absolute value of the specific heat flux. Taken into account the negative sign, specific heat flux increases.

3



The middle section has a constant area, such that the specific heat flux is constant too.

4



Linear decrease of the area causes the absolute value of specific heat flux to increase. The negative sign yields in fact a heat flux with a negative gradient.

5



Since heat is conducted from right to left, the heat flux on the right boundary is still negative.