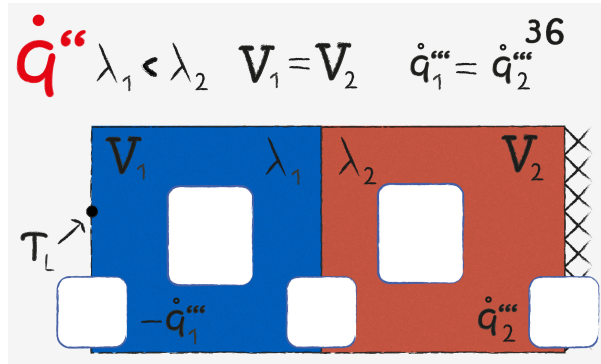


# Axial Heat Flux: Task 36



The image describes a rectangular body with a volumetric heat sink in section 1 and a volumetric heat source in section 2. The section's volumes are identical and the absolute values of volumetric source and sink are equal. Thermal conductivity of section 2 is greater as of section 1.

1



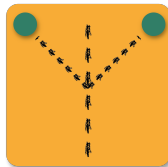
The absolute values of produced and dissipated heat in the system cancel each other, such that the heat flux at the left boundary vanishes.

2



The heat sink causes the absolute value of the specific heat flux to increase linearly. Due to heat flow towards the left, that results in a decrease of the heat flux.

3



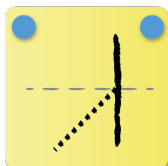
The transition is characterized by a kink from decrease to increase, since it marks the transition from heat sink to heat source.

4



The heat source causes the absolute value of the specific heat flux to decrease linearly. Due to heat flow towards the left, that results in an overall increase of the heat flux.

5



The adiabatic wall forces the heat flux to be zero at the boundary.