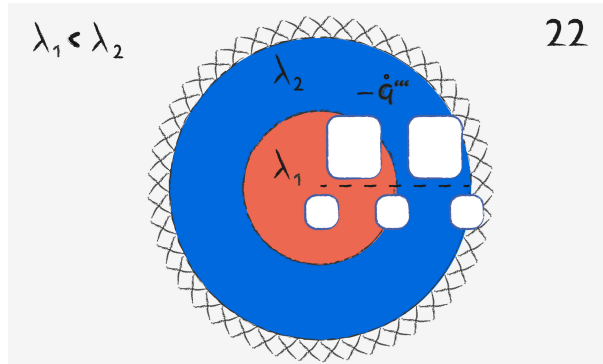


# Axial Heat Flux: Task 22



22

The image describes a cylindrical body consisting of two layers of infinite extension. The inner compartment contains a volumetric heat source while the outer compartment contains a volumetric heat sink.

1



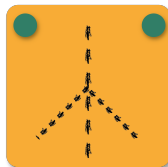
Due to symmetry reasons, the specific heat flux at the center is zero.

2



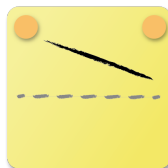
The volumetric heat source causes the specific heat flux to increase linearly.

3



The transition is characterized by a kink in specific heat flux, as it marks the ending of the volumetric heat source and beginning of the volumetric heat sink.

4



The volumetric heat sink forces the specific heat flux to decrease linearly.

5



Since the outer wall is adiabatic, the heat flux approaches zero at the boundary.