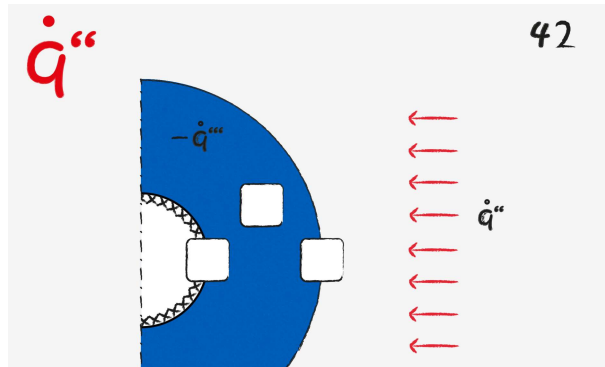


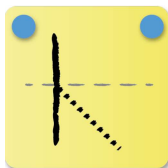


Axial Heat Flux: Task 42



The image describes a hollow cylinder consisting of a volumetric heat sink.

1



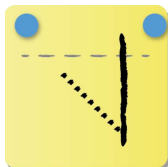
Due to the adiabatic boundary, specific heat flux vanishes.

2



Effects of volumetric heat source and changing cross section area add up to a profile proportional to $r - \frac{r_i^2}{r}$, where r_i describes the radius at the inner boundary.

3



Since heat is dissipated in the body, the specific heat flux at the outer boundary is negative. The slope is caused by the behavior mentioned above.