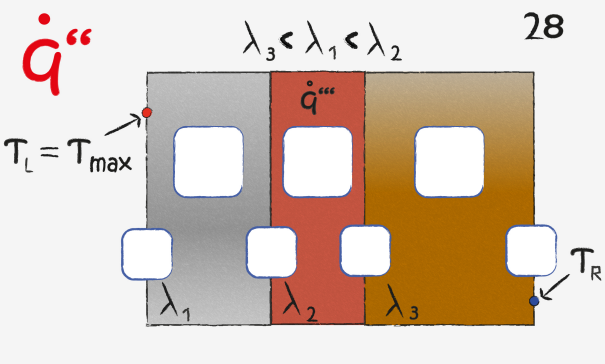
Axial Heat Flux: Task 28



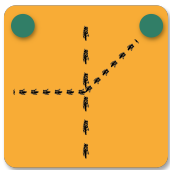
The image describes a rectangular body consisting of three sections with different thermal conductivities. The central section contains a volumetric heat source. The maximum temperature is located at the left boundary.

1 

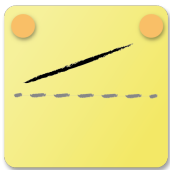
The maximum temperature is at the left boundary, hence heat is conducted to the right and therefore positive.

2 

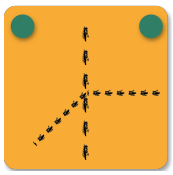
Since the area is constant the specific heat heat flux is so too.

3 

The transition is characterized by a kink from constant to increase, since it marks the beginning of the heat source.

4 

The volumetric heat source yields a linearly increasing specific heat flux.

5 

The transition is characterized by a kink from increase to constant, since it marks the end of the heat source.

6 

As in the first section, the heat flux remains constant.

7 

Heat flux remains at a constant level to the right boundary.