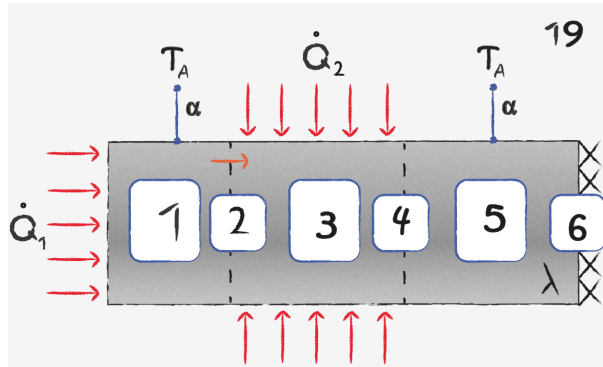


Heat Conduction: Task 19



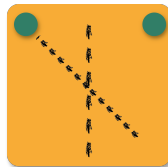
The image describes a rectangular body with a heat flux from left to right, a heat flux in the middle flowing from left to right. The wall on the right side is adiabatic and there is a heat loss through convection in the right and left part.

1



Due to the heat loss through convection, the temperature gradient decreases from left to right.

2



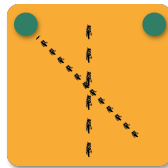
The heat conductivity and area don't change at the interface so the temperature gradient remains the same.

3



Due to the heat supply, the temperature gradient increases from left to right.

4



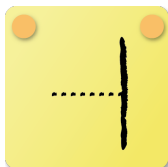
The heat conductivity and area don't change at the interface so the temperature gradient remains the same.

5



Due to the heat loss through convection, the temperature gradient decreases from left to right and to meet the condition on the adiabatic wall (no heat transport), the temperature gradient must be zero there.

6



On an adiabatic wall there is no heat transport so the temperature gradient is zero.