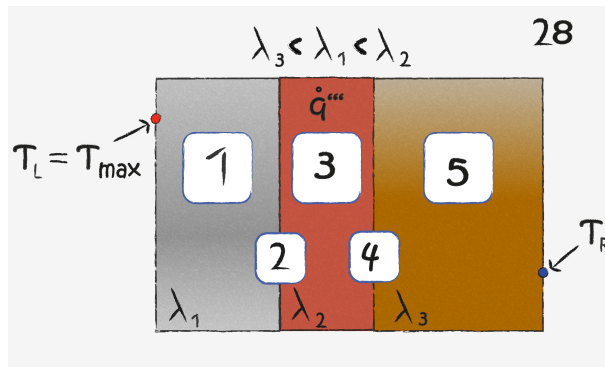


Heat Conduction: Task 28



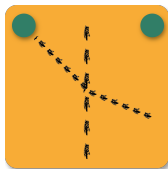
The image describes a rectangular body with three different heat conductivities and homogeneous heat production in the middle part. The maximum temperature is on the left side.

1



According to Fourier's law. At constant area and heat conductivity the temperature gradient decreases linearly from left to right.

2



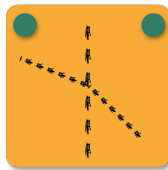
λ_1 is smaller than λ_2 which means the Temperature gradient in 1 is steeper than in 2.

3



Due to the constantly increasing heatflux (heat source), the temperature gradient increases constantly from left to right.

4



λ_3 is smaller than λ_2 which means the Temperature gradient in 3 is steeper than in 2.

5



According to Fourier's law. At constant area and heat conductivity the temperature gradient decreases linearly from left to right.