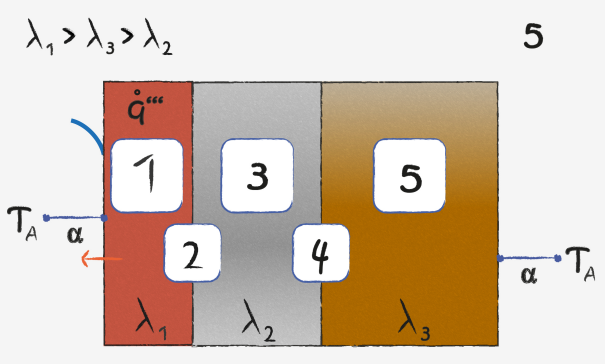
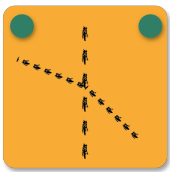
Heat Conduction: Task 5



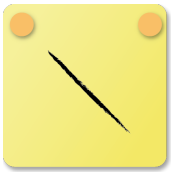
The image describes a rectangular body with a heat source on the left side. The temperatures on the right and left side are the same.

1 

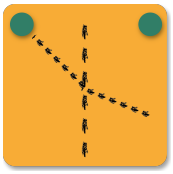
Due to the Heat production and heat flux in both directions, there must be a maximum in the area 1 and since the thermal resistance to the left is smaller than to the right, then the temperature gradient to the left must be steeper

2 

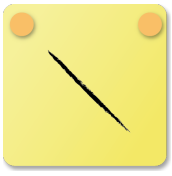
λ_2 is smaller than λ_1 which means the Temperature gradient in 2 is steeper than in 1

3 

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

4 

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

5 

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