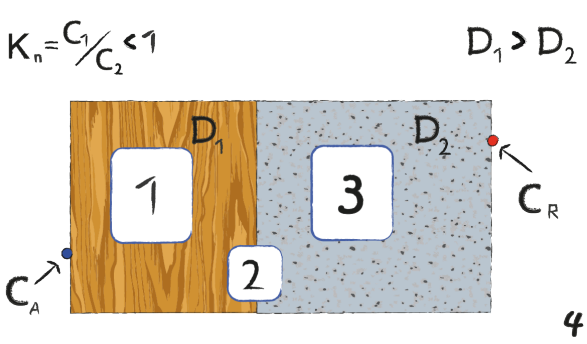
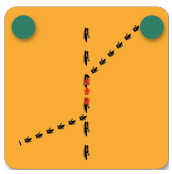
Concentration Profile: Task 4



The image describes 2 rectangular bodies with different diffusion coefficients, where $D_1 > D_2$ and on the interface the concentration of 2 is larger than in 1. $(C_1 < C_2)$

1 

According to fick's law, at constant area and diffusion coefficient the concentration profile increases linearly from area of low concentration to high concentration

2 

Concentration at the interface is given to be smaller in section 1, therefore there is a jump in concentration profile towards section 2. Due to a smaller diffusion coefficient in section 2 and a constant mass flux, concentration gradient must be greater in this section.

3 

For the same reasons as in section 1, concentration is increasing linearly towards the right.