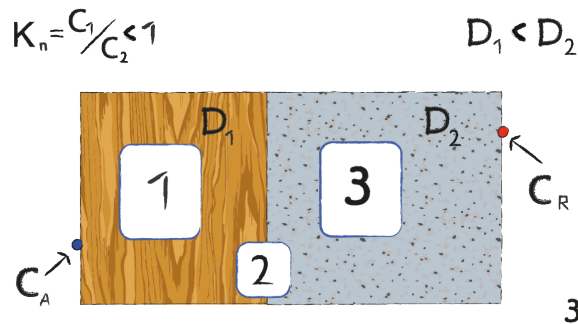


Concentration Profile: Task 3



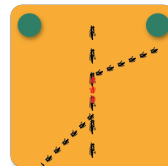
The image describes 2 rectangular bodies with different diffusion coefficients, where $D_2 > D_1$ and on the interface the concentration of 2 is larger than in 1. ($C_1 < C_2$)

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 greater diffusion coefficient in section 2 and a constant mass flux, concentration gradient must be smaller in this section.

3



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