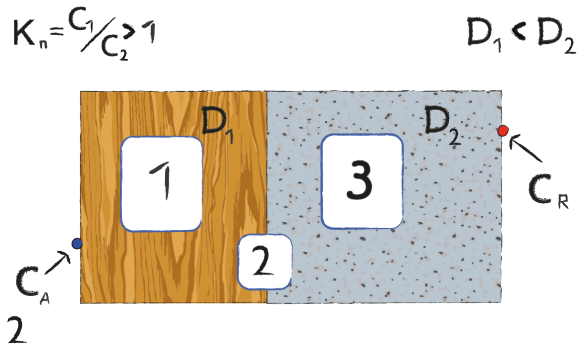
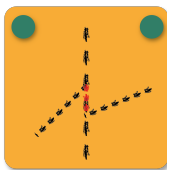
Concentration Profile: Task 2



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

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 greater in section 1, therefore there is a step 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.