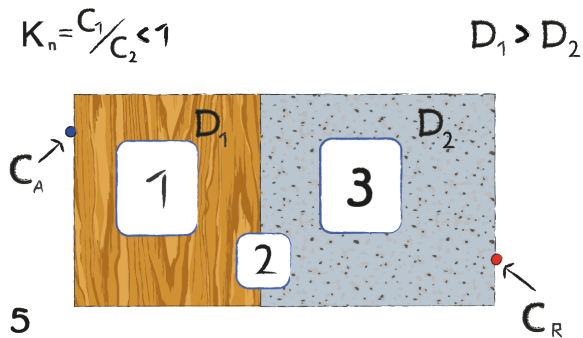


## Concentration Profile: Task 5



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



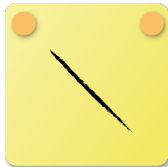
According to fick's law, at constant area and diffusion coefficient the concentration profile decreases linearly from area of high concentration to low concentration

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



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