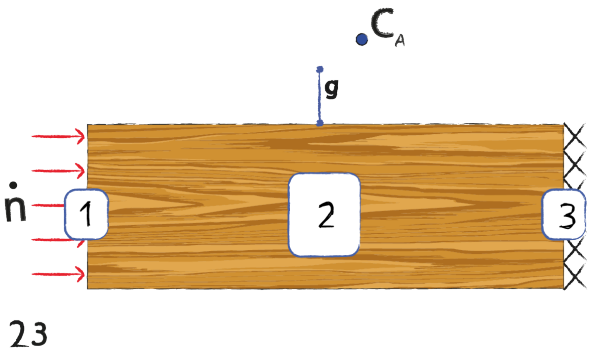
Concentration Profile: Task 23



23

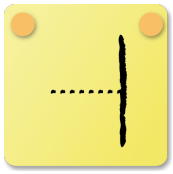
The image describes a body with boundaries specified as an imposed mass flux at the left, convective conditions at bottom and top and an impermeable boundary at the right.

1 

Due to an imposed mass flux, mass is transfered into the body. Fick's law states, that the concentration gradient is negative in this case, since mass will diffuse towards lower concentrations.

2 

The convective boundary yields an ordinary fin problem. It is characterized by a decreasing concentration gradient, due to the convective decrease in mass flux.

3 

Due to an impermeable boundary, mass flux and such the concentration gradient vanish at the right.