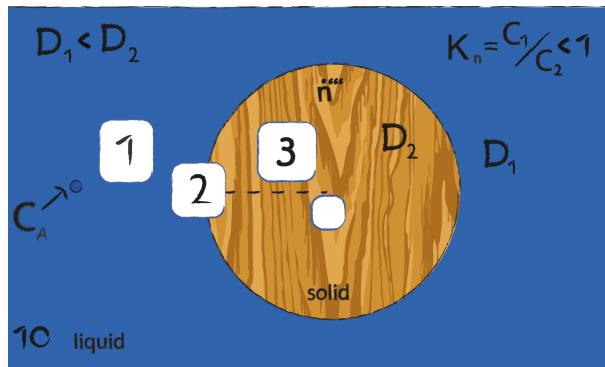


# Diffusion: Task 10



The image describes a circular body surrounded by a liquid phase, whose diffusion coefficient is lower than the solid material and on the interface  $C_2 > C_1$ . Inside the solid body there is a homogeneous material production

There is a fixed concentration with continuous mass production that means continuous flux from equation

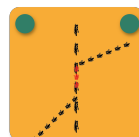
1



$$\dot{n} = A * D * (\delta C / \delta V)$$

Consequently, the line should be positive up.

2



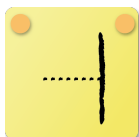
The diffusion coefficient in 1 is smaller than in 2, so the slope in 1 is steeper than in 2. On the interface, the concentration in 2 is larger than in 1

3



Due to the material production. The concentration gradient increases with the radius

4



due to symmetry reasons, the concentration gradient must be zero in the center