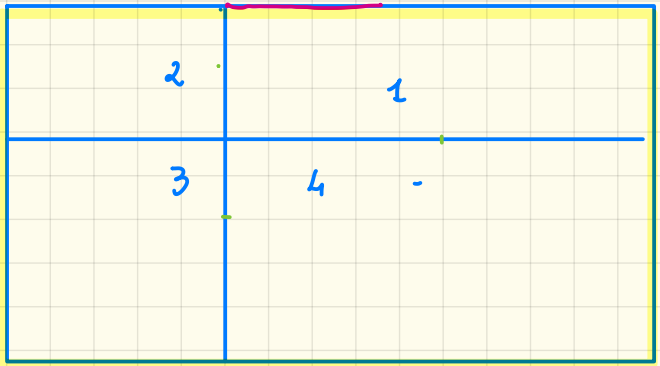
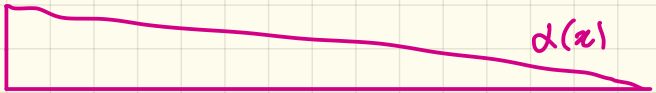
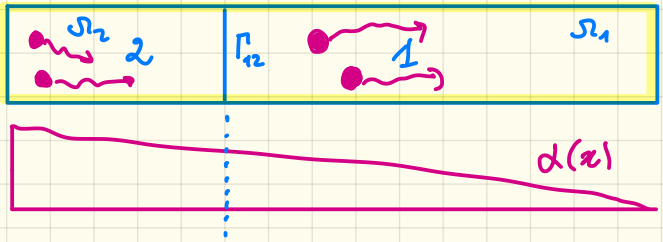
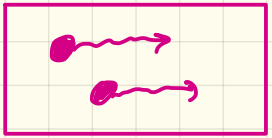




$$\partial_t u_i = L u_i + N(u_i)$$
$$B(u_1, u_2, u_3, u_4) = 0$$





$$\partial_t u = L u + N(u)$$
$$\mathcal{B}(u) = 0$$

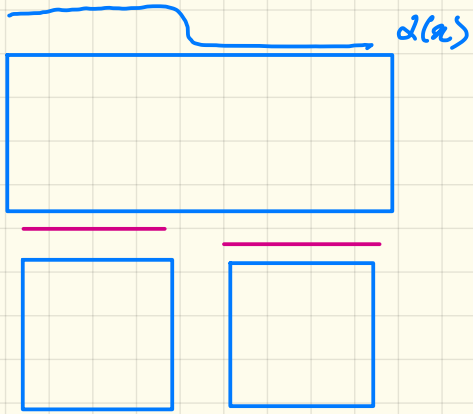
$$\partial_t \mathcal{U} = \mathcal{L}\mathcal{U} + \mathcal{N}(\mathcal{U}, x), \quad x \in \Omega_1 \cup \Omega_2$$

$$\partial_t u_1 = L u_1 + N(u_1, x), \quad x \in \Omega_1$$
$$\partial_t u_2 = L u_2 + N(u_2, x) \quad x \in \Omega_2$$

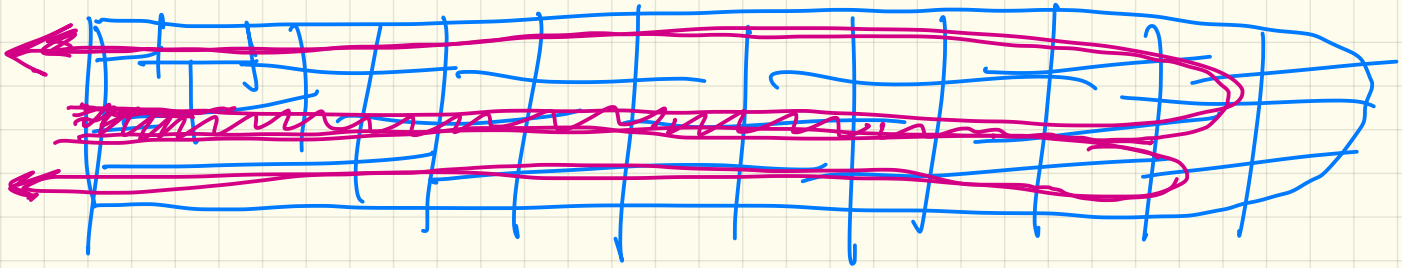
$$\left.\frac{\partial u_1}{\partial x}\right|_{\Gamma_{12}} = -\left.\frac{\partial u_2}{\partial x}\right|_{\Gamma_{12}} \beta(y)$$

channel

$$\nabla u \cdot n \big|_{\partial\Omega \setminus \Gamma_{12}} = 0$$



$$\partial_t v = Lv + N(v) \quad x \in \Omega$$



$\alpha(r,t)$