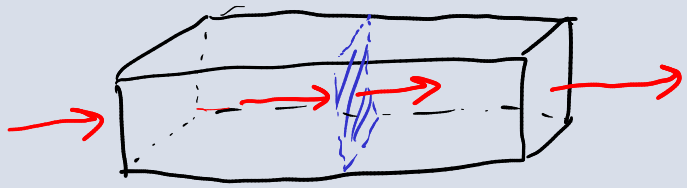
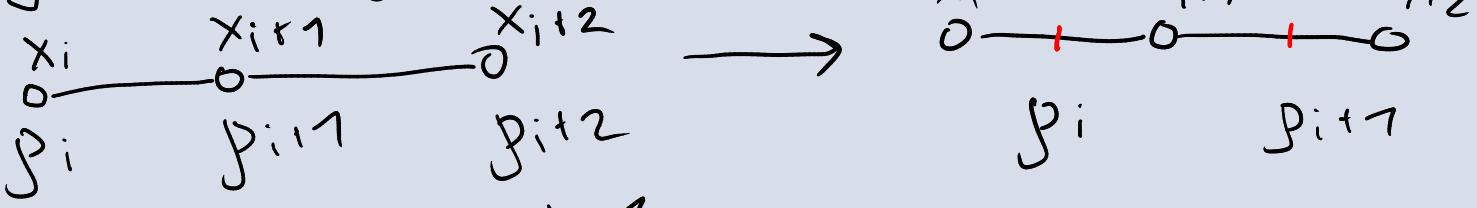
1) Теорема Остроград. — Гаусса

$$\int_V \nabla \cdot \vec{F} \, dV = \int_S \vec{F} \cdot \vec{n} \, dS$$



2) Мат. конец. объемов

$$\rho_t + v \rho_x = 0$$



$$\int_{x_i}^{x_{i+1}} \rho_t \, dx + v \int_{x_i}^{x_{i+1}} \rho_x \, dx = 0$$

$$\Delta x \, \bar{\rho}_t(t, x_i) + v \left(\rho(t, x_{i+1}) - \rho(t, x_i) \right) = 0$$