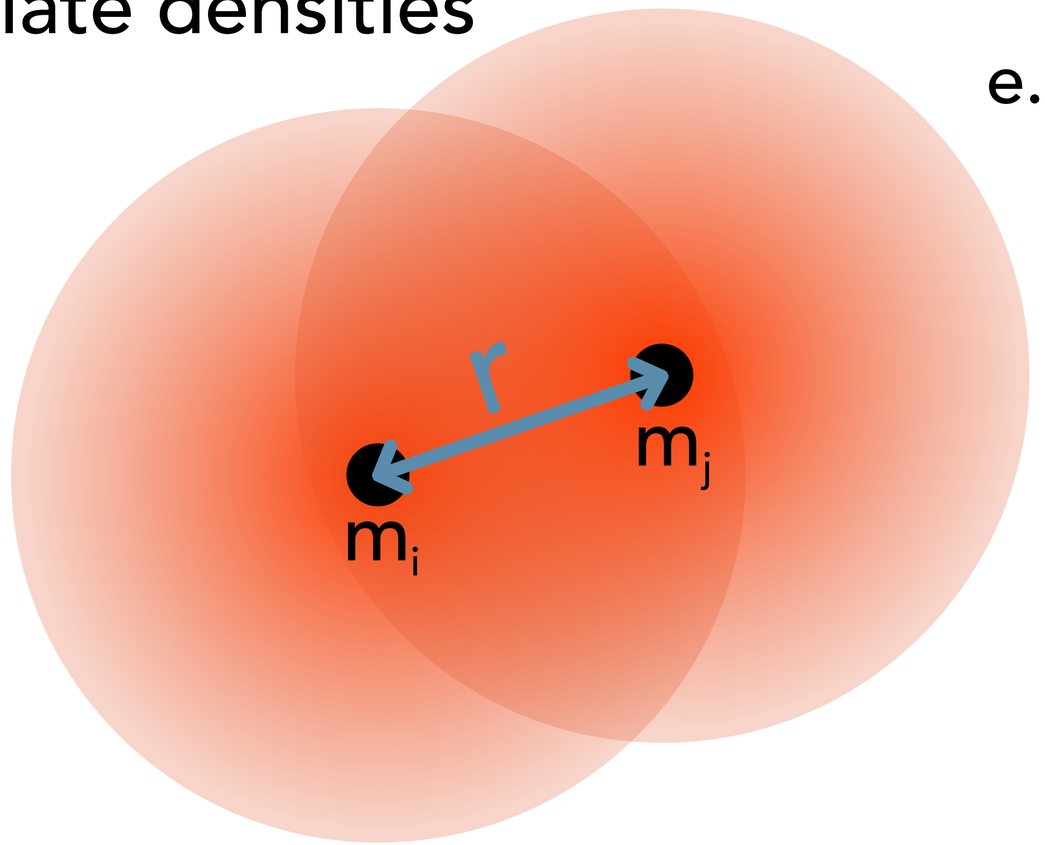
simplified SPH example with h = const. and 2 SPH particles

1. calculate densities



e.g. here for cubic spline kernel

$$\rho_i = 10 / (7\pi h^2) (m_i + 1/4 \cdot (2 - r/h)^3 \cdot m_j)$$

$$\rho_j = 10 / (7\pi h^2) (m_j + 1/4 \cdot (2 - r/h)^3 \cdot m_i)$$

→ P_i , P_j by closure

2. calculate pressure forces

$$\underline{a}_i = - m_j (P_j / \rho_j^2 + P_i / \rho_i^2) \underline{\nabla}_i W_{ij}$$

$$\underline{a}_j = - m_i (P_i / \rho_i^2 + P_j / \rho_j^2) \underline{\nabla}_j W_{ji}$$

(⇒ antisymmetric forces)