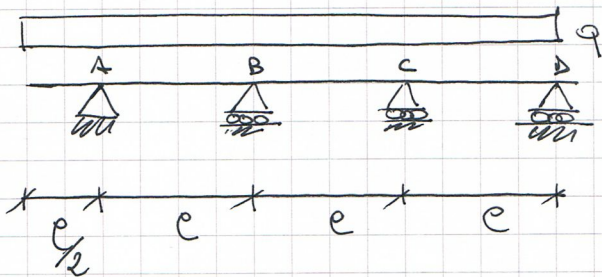
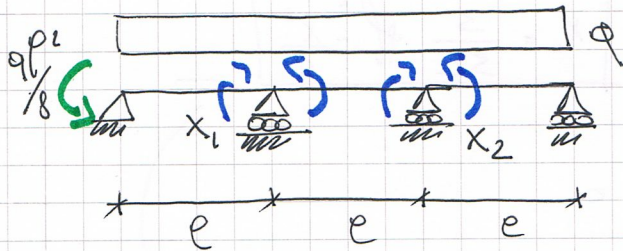


L'ESERCIZIO (4)

2 volte iperstatico



=



① $\Delta \varphi_B = 0$ ② $\Delta \varphi_C = 0$

④ $\Delta \varphi_B = 0 \rightarrow \varphi_B(sx) = \frac{ql^3}{24EI} - \frac{x_1 l}{3EI} - \frac{ql^3}{48EI}$

$\rightarrow \varphi_B(\Delta x) = \frac{-ql^3}{24EI} + \frac{x_1 l}{3EI} + \frac{x_2 l}{6EI}$

$\varphi_B(sx) - \varphi_B(\Delta x) \Rightarrow \frac{ql^3}{24EI} - \frac{x_1 l}{3EI} - \frac{ql^3}{48EI} + \frac{ql^3}{24EI} - \frac{x_1 l}{3EI} - \frac{x_2 l}{6EI} =$

$= \frac{ql^3}{12EI} - \frac{2x_1 l}{3EI} - \frac{x_2 l}{6EI} - \frac{ql^3}{48EI} = 0$

② $\Delta \varphi_C = 0 \rightarrow \varphi_C(sx) = \frac{ql^3}{24EI} - \frac{x_2 l}{3EI} - \frac{x_1 l}{6EI}$

$\rightarrow \varphi_C(\Delta x) = \frac{-ql^3}{24EI} + \frac{x_2 l}{3EI}$

$\varphi_C(sx) - \varphi_C(\Delta x) \Rightarrow \frac{ql^3}{24EI} - \frac{x_2 l}{3EI} - \frac{x_1 l}{6EI} + \frac{ql^3}{24EI} - \frac{x_2 l}{3EI} =$

$= \frac{ql^3}{12EI} - \frac{2x_2 l}{3EI} - \frac{x_1 l}{6EI} = 0$