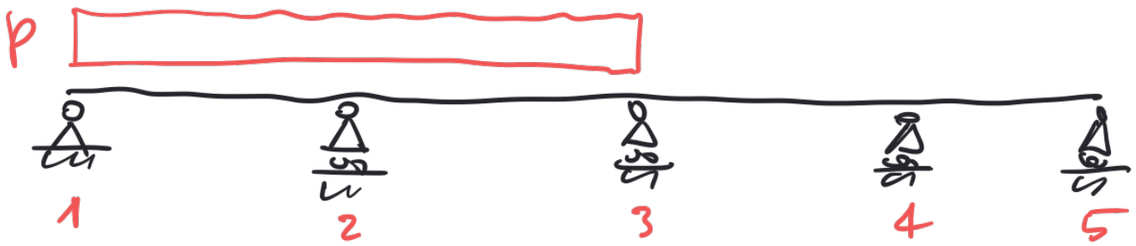
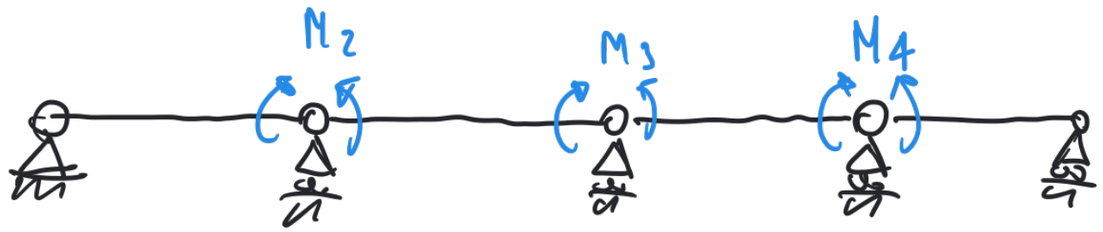
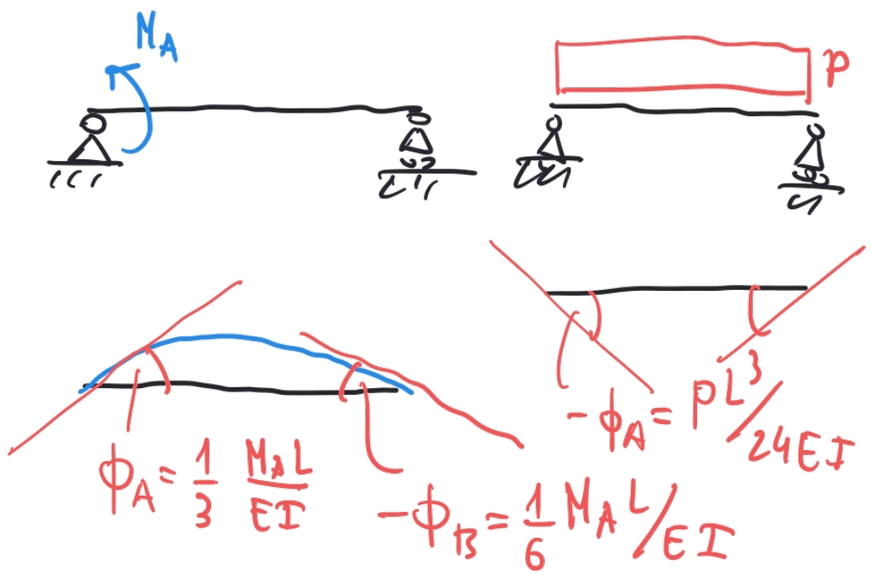
Equazione dei tre momenti (Casini-Vasta Cap. 12) schema notevole







ϕ_{ij} = rotazione dell'estremo i del tratto ij

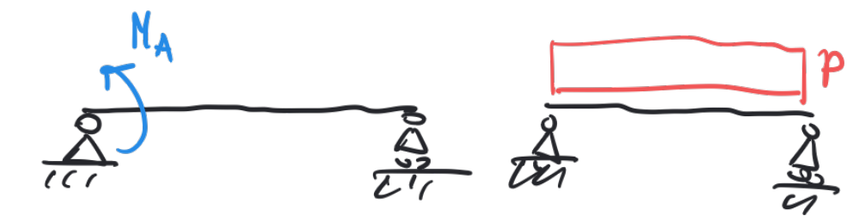
$$\phi_{32} = -\frac{qL_{32}^3}{24EI} - \frac{M_2 L_{23}}{6EI} - \frac{M_3 L_{23}}{3EI}$$

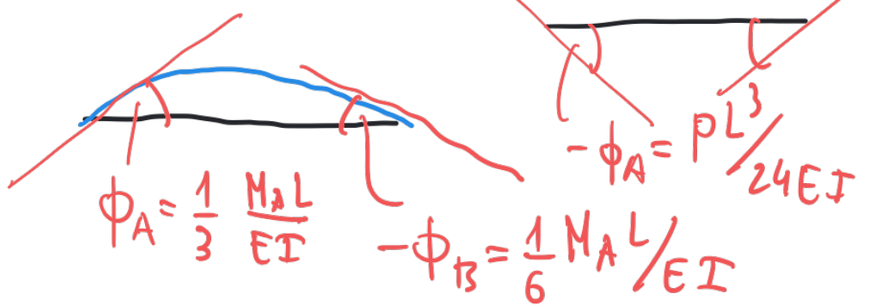
$$\phi_{34} = \frac{M_3 L_{34}}{3EI} + \frac{1}{6}\frac{M_4 L_{34}}{EI}$$

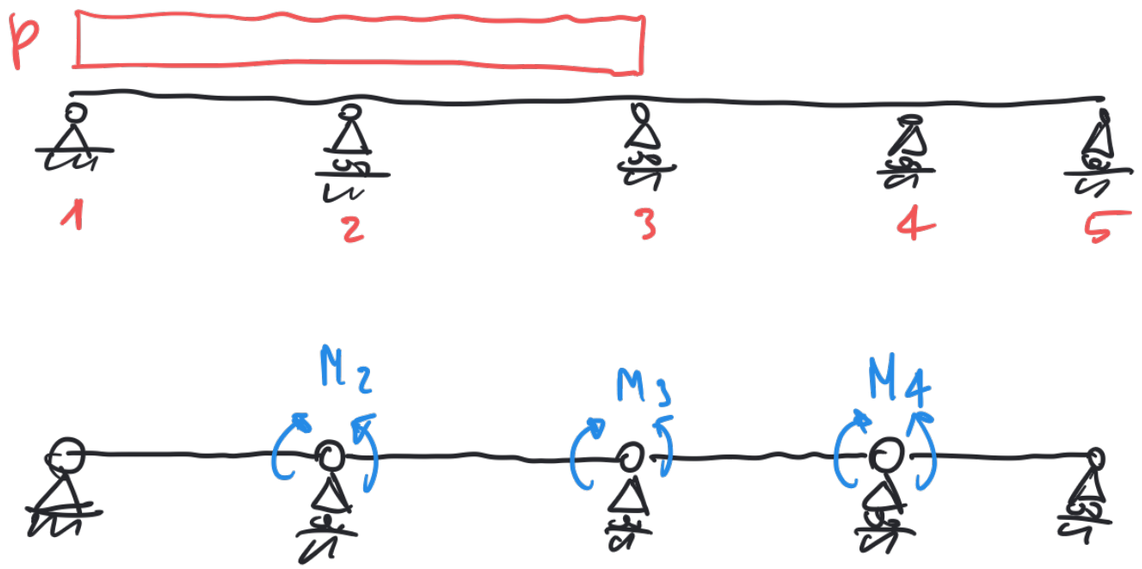
Congruenza: $\phi_{32} = \phi_{34}$

$$\frac{M_2 L_{23}}{6EI} + \left(\frac{L_{23}}{6} + \frac{L_{34}}{3}\right)\frac{M_3}{EI} + \frac{M_4 L_{34}}{6EI} + \frac{pL_{32}^3}{24EI} = 0$$

Equazione dei tre momenti. (Casini-Vasta Cap. 12) schema notevole





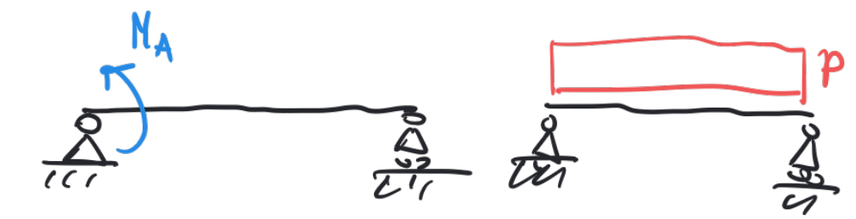


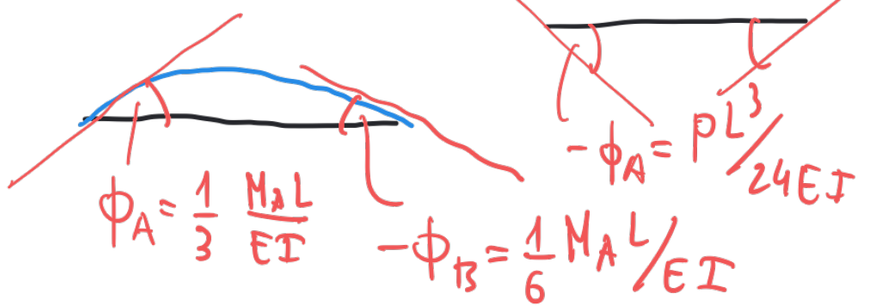
$$\left(\frac{L_{12}}{6} + \frac{L_{23}}{3}\right)\frac{M_2}{EI} + \frac{M_3 L_{23}}{6EI} + \frac{pL_{12}^3}{24EI} + \frac{pL_{23}^3}{24EI} = 0 \quad \text{congr. nodo 2}$$

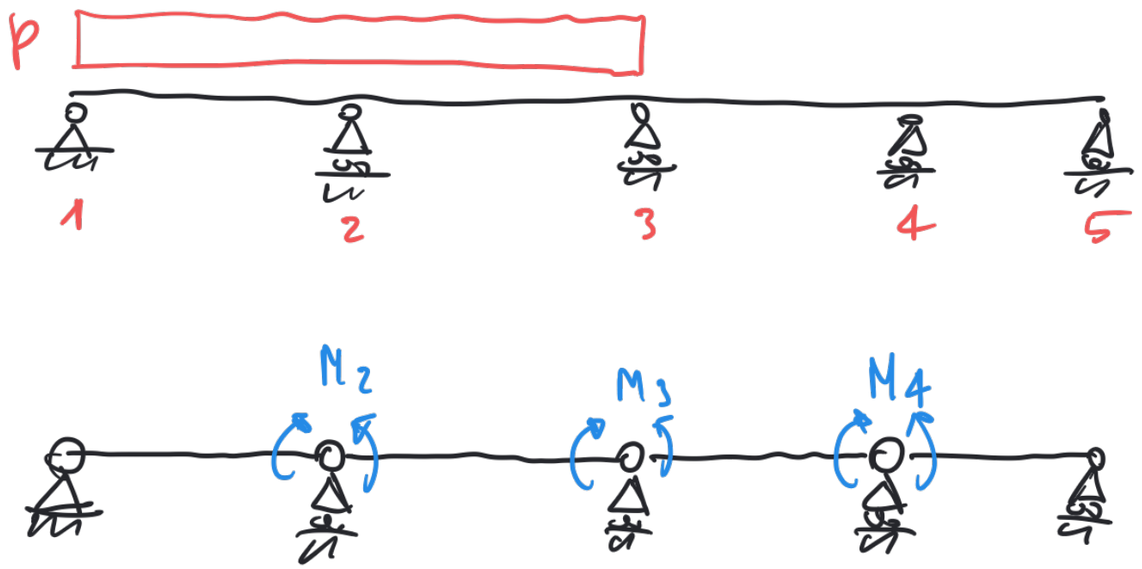
$$\frac{M_2 L_{23}}{6EI} + \left(\frac{L_{23}}{6} + \frac{L_{34}}{3}\right)\frac{M_3}{EI} + \frac{M_4 L_{34}}{6EI} + \frac{pL_{32}^3}{24EI} = 0 \quad \text{congruenza nodo 3}$$

$$\frac{M_3 L_{34}}{6EI} + \left(\frac{L_{34}}{6} + \frac{L_{45}}{3}\right)\frac{M_4}{EI} = 0 \quad \text{congr. nodo 4}$$

Equazione dei tre momenti. (Casini-Vasta Cap. 12) schema notevole





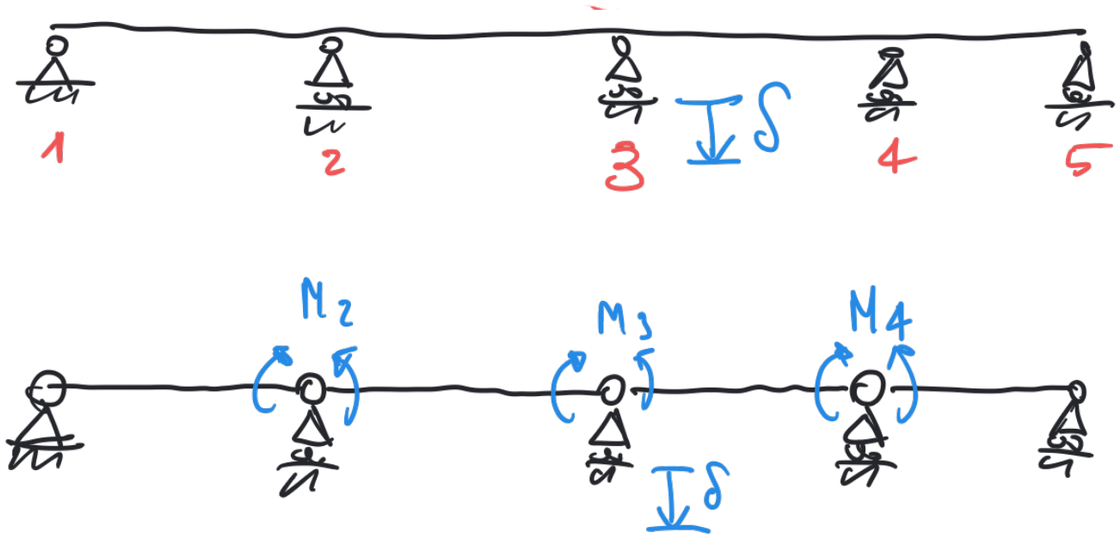


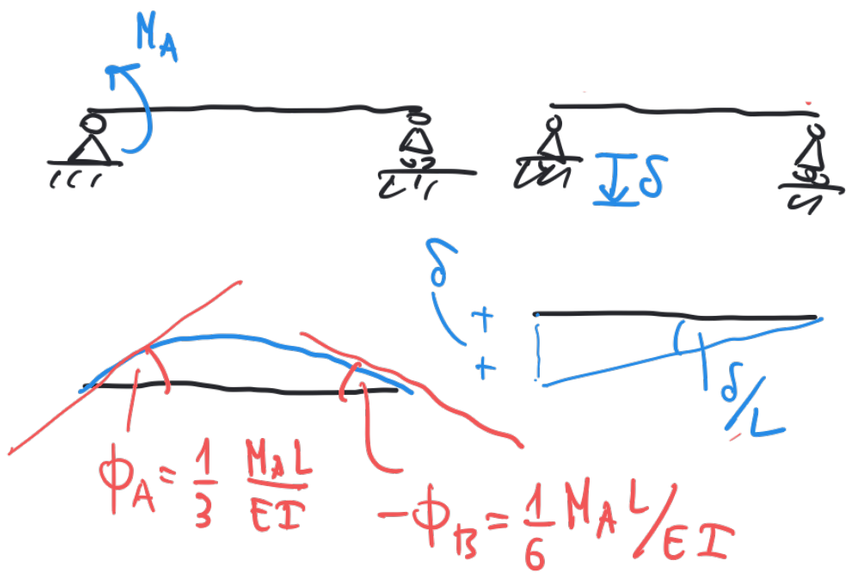
$$\left(\frac{L_{12}}{6} + \frac{L_{23}}{3}\right)\frac{M_2}{EI} + \frac{M_3 L_{23}}{6EI} + \frac{pL_{12}^3}{24EI} + \frac{pL_{23}^3}{24EI} = 0 \quad \text{congr. nodo 2}$$

$$\frac{M_2 L_{23}}{6EI} + \left(\frac{L_{23}}{6} + \frac{L_{34}}{3}\right)\frac{M_3}{EI} + \frac{M_4 L_{34}}{6EI} + \frac{pL_{32}^3}{24EI} = 0 \quad \text{congruenza nodo 3}$$

$$\frac{M_3 L_{34}}{6EI} + \left(\frac{L_{34}}{6} + \frac{L_{45}}{3}\right)\frac{M_4}{EI} = 0 \quad \text{congr. nodo 4}$$

Equazione dei tre momenti (Casini-Vasta Cap. 12) schema notevole





ϕ_{ij} = rotazione dell'estremo i del tratto ij

$$\phi_{32} = -\frac{\delta}{L_{23}} - \frac{M_2 L_{23}}{6EI} - \frac{M_3 L_{23}}{3EI}$$

$$\phi_{34} = \frac{M_3 L_{34}}{3EI} + \frac{1}{6}\frac{M_4 L_{34}}{EI} + \frac{\delta}{L_{34}}$$

Congruenza: $\phi_{32} = \phi_{34}$

$$\frac{M_2 L_{23}}{6EI} + \left(\frac{L_{23}}{6} + \frac{L_{34}}{3}\right)\frac{M_3}{EI} + \frac{M_4 L_{34}}{6EI} + \frac{\delta}{L_{23}} + \frac{\delta}{L_{34}} = 0$$