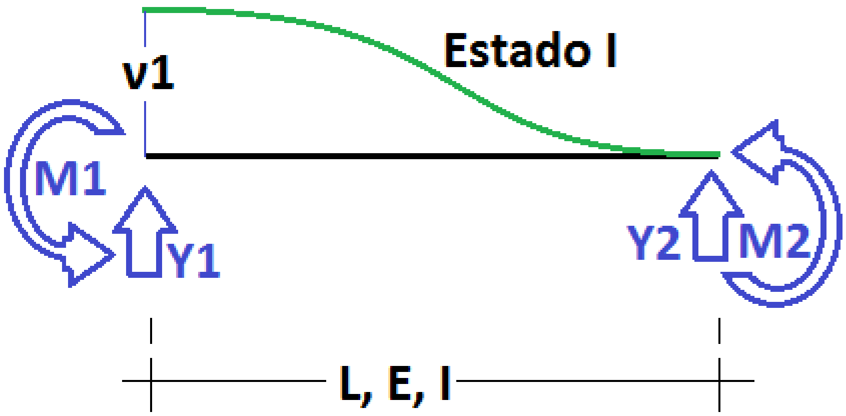
Usando el método "Pendiente-Deflexión" (Slop-Deflexion), calcular las reacciones de fuerza y momento Y1, Y2, M1, M2:

Se plantean las dos ecuaciones del método y las dos de la estática, se tiene en cuenta que debido a que no hay cargas entre los apoyos, no hay reacciones de fuerza o momento para las vigas biempotradas

[CaseMode := Sensitive, InputMode := Word]

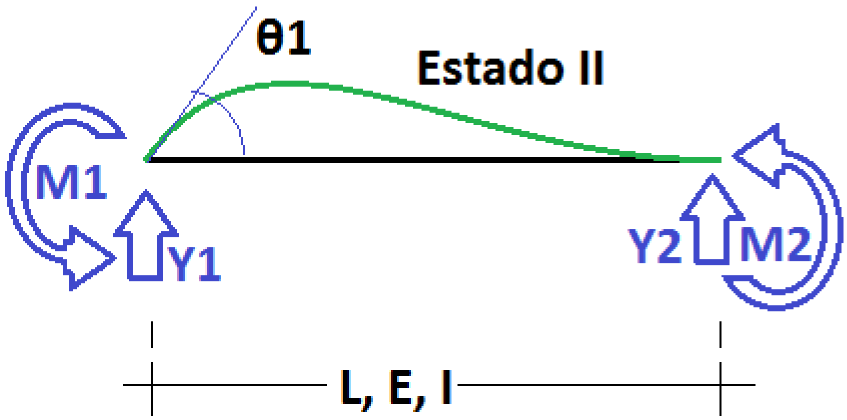


$$\begin{bmatrix} IY1 := & IY2 := & IM1 := & IM2 := & I\theta 1 := 0 & I\theta 2 := 0 \\ Iv1 := & Iv2 := 0 & I\Delta := Iv2 - Iv1 & I\psi := -\dfrac{I\Delta}{L} & Memp1 := 0 & Memp2 := 0 \end{bmatrix}$$

$$\begin{bmatrix} IM1 = \dfrac{2 \cdot E \cdot I}{L} \cdot (2 \cdot I\theta 1 + I\theta 2 + 3 \cdot I\psi) + Memp1 \\ IM2 = \dfrac{2 \cdot E \cdot I}{L} \cdot (I\theta 1 + 2 \cdot I\theta 2 + 3 \cdot I\psi) + Memp2 \\ IY1 + IY2 = 0 \\ IY2 \cdot L + IM1 + IM2 = 0 \end{bmatrix}$$

$$\begin{bmatrix} IM1 = \dfrac{2 \cdot E \cdot I}{L} \cdot \left(2 \cdot 0 + 0 + 3 \cdot \dfrac{Iv1}{L} \right) + 0 \\ IM2 = \dfrac{2 \cdot E \cdot I}{L} \cdot \left(0 + 2 \cdot 0 + 3 \cdot \dfrac{Iv1}{L} \right) + 0 \\ IY1 + IY2 = 0 \\ IY2 \cdot L + IM1 + IM2 = 0 \end{bmatrix}$$

$$\left[IM1 = \frac{6\cdot E\cdot I}{L^2}\cdot Iv1 \wedge IM2 = \frac{6\cdot E\cdot I}{L^2}\cdot Iv1 \wedge IY2 = -\frac{12\cdot E\cdot I}{L^3}\cdot Iv1 \wedge IY1 = \frac{12\cdot E\cdot I}{L^3}\cdot Iv1 \right]$$

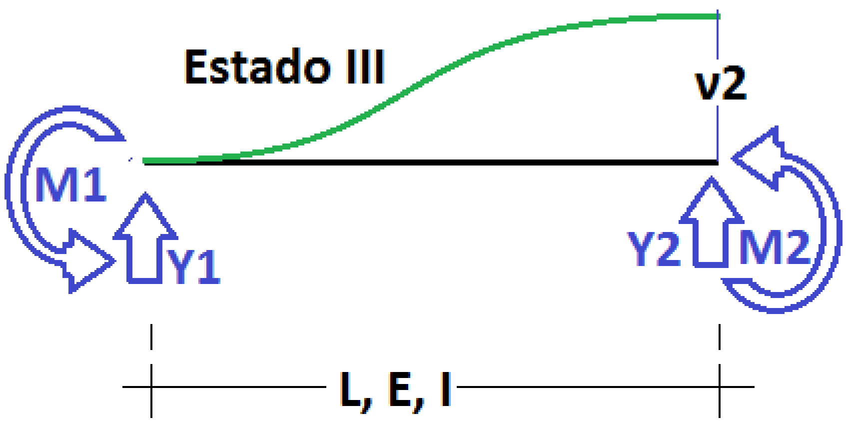


$$\begin{bmatrix} IIY1 := & IIY2 := & IIM1 := & IIM2 := & II\theta 1 := & II\theta 2 := 0 \\ IIv1 := 0 & IIv2 := 0 & II\Delta := IIv2 - IIv1 & II\psi := -\dfrac{II\Delta}{L} & Memp1 := 0 & Memp2 := 0 \end{bmatrix}$$

$$\begin{bmatrix} IIM1 = \dfrac{2\cdot E\cdot I}{L}\cdot(2\cdot II\theta 1 + II\theta 2 + 3\cdot II\psi) + Memp1 \\ IIM2 = \dfrac{2\cdot E\cdot I}{L}\cdot(II\theta 1 + 2\cdot II\theta 2 + 3\cdot II\psi) + Memp2 \\ IIY1 + IIY2 = 0 \\ IIY2\cdot L + IIM1 + IIM2 = 0 \end{bmatrix}$$

$$\begin{bmatrix} IIM1 = \dfrac{2\cdot E\cdot I}{L}\cdot(2\cdot II\theta 1 + 0 + 3\cdot 0) + 0 \\ IIM2 = \dfrac{2\cdot E\cdot I}{L}\cdot(II\theta 1 + 2\cdot 0 + 3\cdot 0) + 0 \\ IIY1 + IIY2 = 0 \\ IIY2\cdot L + IIM1 + IIM2 = 0 \end{bmatrix}$$

$$\left[IIM1 = \frac{4\cdot E\cdot I}{L}\cdot II\theta 1 \wedge IIM2 = \frac{2\cdot E\cdot I}{L}\cdot II\theta 1 \wedge IIY1 = \frac{6\cdot E\cdot I}{L^2}\cdot II\theta 1 \wedge IIY2 = -\frac{6\cdot E\cdot I}{L^2}\cdot II\theta 1 \right]$$



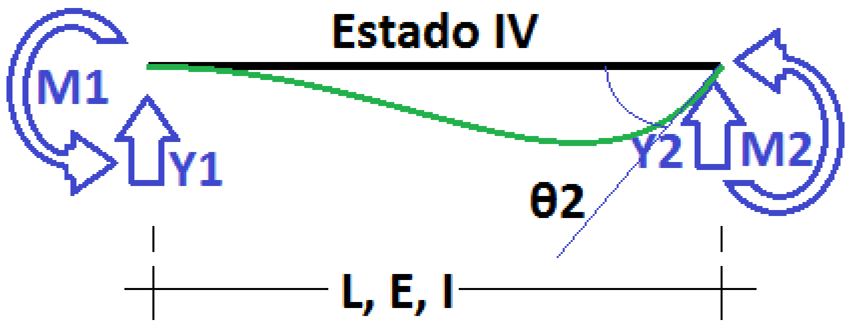
$$\begin{bmatrix} IIIY1 := & IIIY2 := & IIIM1 := & IIIM2 := & III\theta 1 := 0 & III\theta 2 := 0 \\ IIIv1 := 0 & IIIv2 := & III\Delta := IIIv2 - IIIv1 & III\psi := -\dfrac{III\Delta}{L} & Memp1 := 0 & Memp2 := 0 \end{bmatrix}$$

$$\begin{bmatrix} IIIM1 = \dfrac{2 \cdot E \cdot I}{L} \cdot (2 \cdot III\theta 1 + III\theta 2 + 3 \cdot III\psi) + Memp1 \\ IIIM2 = \dfrac{2 \cdot E \cdot I}{L} \cdot (III\theta 1 + 2 \cdot III\theta 2 + 3 \cdot III\psi) + Memp2 \\ IIIY1 + IIIY2 = 0 \\ IIIY2 \cdot L + IIIM1 + IIIM2 = 0 \end{bmatrix}$$

$$\begin{bmatrix} IIIM1 = \dfrac{2 \cdot E \cdot I}{L} \cdot \left(2 \cdot 0 + 0 + 3 \cdot \left(-\dfrac{IIIv2}{L}\right)\right) + 0 \\ IIIM2 = \dfrac{2 \cdot E \cdot I}{L} \cdot \left(0 + 2 \cdot 0 + 3 \cdot \left(-\dfrac{IIIv2}{L}\right)\right) + 0 \\ IIIY1 + IIIY2 = 0 \\ IIIY2 \cdot L + IIIM1 + IIIM2 = 0 \end{bmatrix}$$

$$\left[IIIM1 = -\dfrac{6 \cdot E \cdot I}{L^2} \cdot IIIv2 \wedge IIIM2 = -\dfrac{6 \cdot E \cdot I}{L^2} \cdot IIIv2 \wedge IIIY1 = -\dfrac{12 \cdot E \cdot I}{L^3} \cdot IIIv2 \wedge IIIY2 = \right.$$

$$\left. \frac{12 \cdot E \cdot I}{L^3} \cdot IIIv2 \right]$$



$$\begin{bmatrix} IVY1 := & IVY2 := & IVM1 := & IVM2 := & IV\theta 1 := 0 & IV\theta 2 := \\ IVv1 := 0 & IVv2 := 0 & IV\Delta := IVv2 - IVv1 & IV\psi := -\frac{IV\Delta}{L} & Memp1 := 0 & Memp2 := 0 \end{bmatrix}$$

$$\begin{bmatrix} IVM1 = \frac{2 \cdot E \cdot I}{L} \cdot (2 \cdot IV\theta 1 + IV\theta 2 + 3 \cdot IV\psi) + Memp1 \\ IVM2 = \frac{2 \cdot E \cdot I}{L} \cdot (IV\theta 1 + 2 \cdot IV\theta 2 + 3 \cdot IV\psi) + Memp2 \\ IVY1 + IVY2 = 0 \\ IVY2 \cdot L + IVM1 + IVM2 = 0 \end{bmatrix}$$

$$\begin{bmatrix} IVM1 = \frac{2 \cdot E \cdot I}{L} \cdot (2 \cdot 0 + IV\theta 2 + 3 \cdot 0) + 0 \\ IVM2 = \frac{2 \cdot E \cdot I}{L} \cdot (0 + 2 \cdot IV\theta 2 + 3 \cdot 0) + 0 \\ IVY1 + IVY2 = 0 \\ IVY2 \cdot L + IVM1 + IVM2 = 0 \end{bmatrix}$$

$$\left[IVM1 = \frac{2 \cdot E \cdot I}{L} \cdot IV\theta 2 \wedge IVM2 = \frac{4 \cdot E \cdot I}{L} \cdot IV\theta 2 \wedge IVY1 = \frac{6 \cdot E \cdot I}{L^2} \cdot IV\theta 2 \wedge IVY2 = -\frac{6 \cdot E \cdot I}{L^2} \cdot IV\theta 2 \right]$$