

#1: [CaseMode := Sensitive, InputMode := Word]

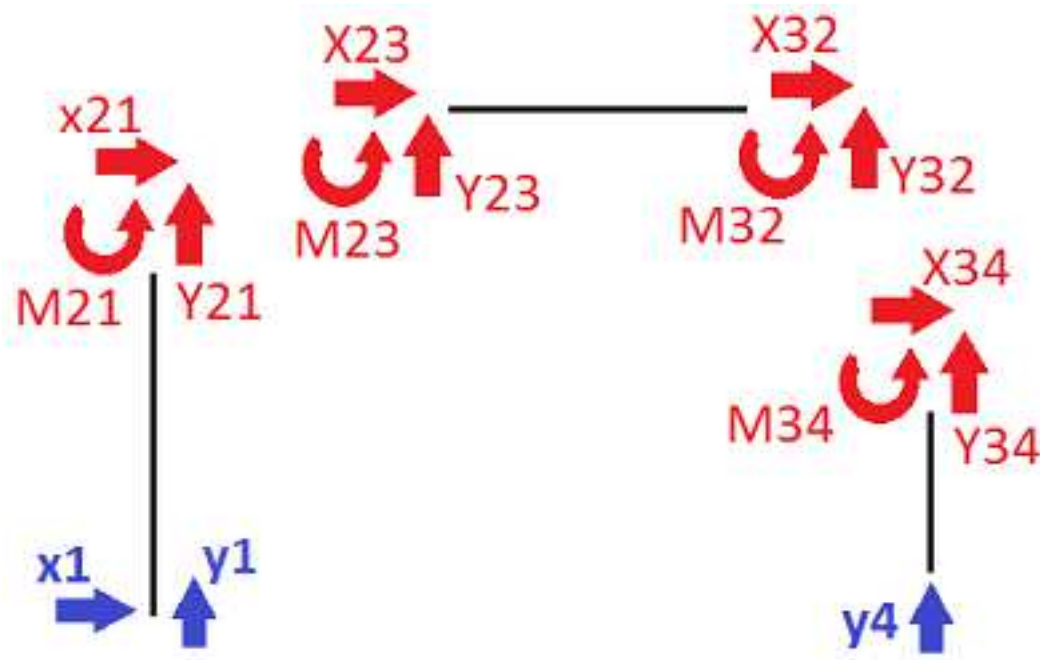
Cálculo de las reacciones:

#2: [x1 :=, y1 :=, y4 :=]

#3: 
$$\begin{bmatrix} x1 + 5 = 0 \\ y1 + y4 - 6 = 0 \\ y4 \cdot 3 - 6 \cdot 3 - 5 \cdot 4 = 0 \end{bmatrix}$$

#4: 
$$\left[ x1 := -5, y1 := -\frac{20}{3}, y4 := \frac{38}{3} \right]$$

Diagramas de cuerpo libre de los elementos completos:



DCL del elemento 1:

#5:  $[x_{21} :=, y_{21} :=, m_{21} :=]$

#6: 
$$\begin{bmatrix} x_1 + x_{21} = 0 \\ y_1 + y_{21} = 0 \\ m_{21} - x_{21} \cdot 4 = 0 \end{bmatrix}$$

#7: 
$$\left[ m_{21} := 20, x_{21} := 5, y_{21} := \frac{20}{3} \right]$$

#8:  $[m_{21} = 20 \wedge x_{21} = 5 \wedge y_{21} = 6.666666666]$

DCL del nudo 2:

#9:  $[x_{23} :=, y_{23} :=, m_{23} :=]$

#10: 
$$\begin{bmatrix} x_{21} + x_{23} = 5 \\ y_{21} + y_{23} = 0 \\ m_{21} + m_{23} = 0 \end{bmatrix}$$

#11: 
$$\left[ m_{23} := -20, x_{23} := 0, y_{23} := -\frac{20}{3} \right]$$

#12:  $[m_{23} = -20 \wedge x_{23} = 0 \wedge y_{23} = -6.666666666]$

DCL del elemento 3:

#13: [x34 :=, y34 :=, m34 :=]

$$\#14: \begin{bmatrix} x34 = 0 \\ y4 + y34 = 0 \\ m34 - x34 \cdot 2 = 0 \end{bmatrix}$$

$$\#15: \left[ m34 := 0, x34 := 0, y34 := -\frac{38}{3} \right]$$

#16: [m34 = 0 ∧ x34 = 0 ∧ y34 = -12.66666666]

DCL del nudo 3:

#17: [x32 :=, y32 :=, m32 :=]

$$\#18: \begin{bmatrix} x34 + x32 = 0 \\ y34 + y32 = -6 \\ m34 + m32 = 0 \end{bmatrix}$$

$$\#19: \left[ m32 := 0, x32 := 0, y32 := \frac{20}{3} \right]$$

#20: [m32 = 0 ∧ x32 = 0 ∧ y32 = 6.66666666]

Chequeo con el elemento 2:

$$\#21: \begin{bmatrix} x23 + x32 = 0 \\ y23 + y32 = 0 \\ m23 + m32 + y32 \cdot 3 = 0 \end{bmatrix}$$

$$\#22: \begin{bmatrix} \text{true} \\ \text{true} \\ \text{true} \end{bmatrix}$$