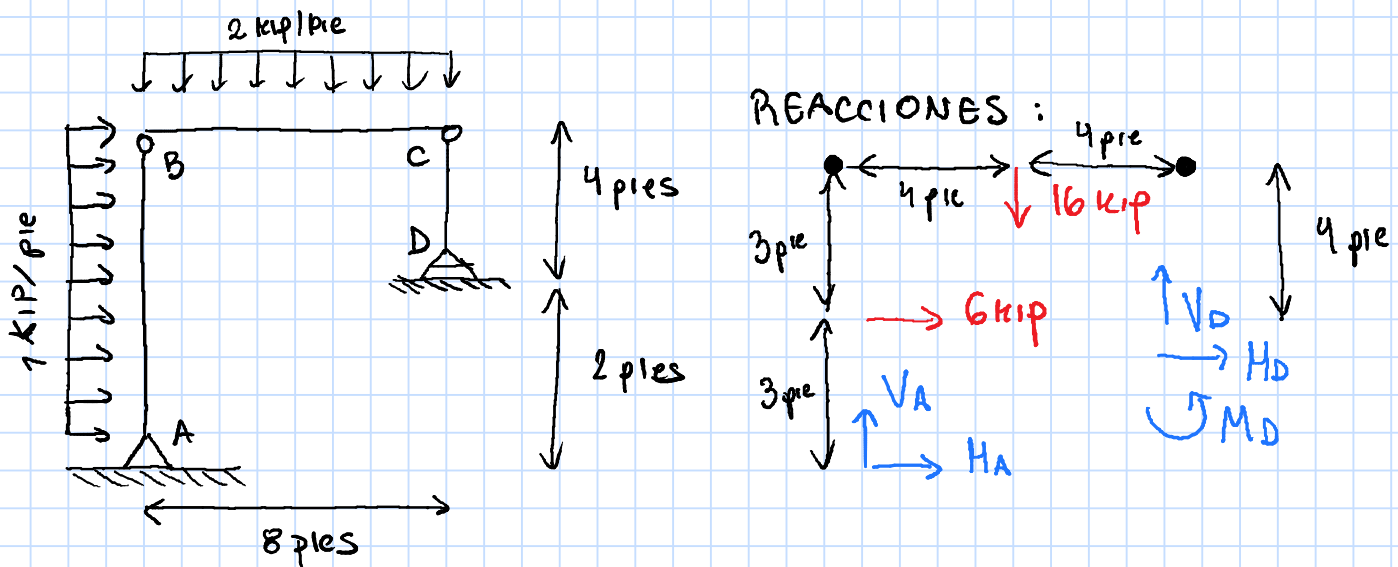


PAUTA EJERCICIO 4



N° INCOGNITAS : $V_A, H_A, V_D, M_D, M_C = 5$
 N° ECUACIONES : $\sum F_x, \sum F_y, \sum M_A, \sum M_{C_1}, \sum M_{C_2} = 5$ } ISOSTÁTICO

PUNTAJE : 2 PUNTOS POR ECUACIONES Y SOLUCIONES
 - IGUAL PUNTAJE POR CADA ECUACIÓN
 3 PUNTOS POR CALCULO DE ESFUERZOS
 1 PUNTO POR DIAGRAMAS

$$\sum F_x = H_A + 6 + M_D = 0$$

$$\sum F_y = V_A - 16 + V_D = 0$$

$$\sum M_D = M_D + 16 \cdot 4 - 8 \cdot V_A + 2 \cdot M_A - 6 \cdot 1 = 0$$

$$\sum M_B = 3 \cdot 6 + 6 \cdot M_A = 0$$

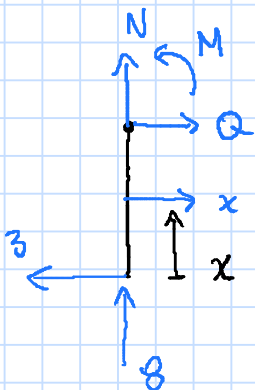
$$\sum M_C = M_D + 4 \cdot M_D = 0$$

$$\Rightarrow M_A = -3 \text{ kip} \quad M_D = -3 \text{ kip}$$

$$M_D = 12 \text{ kip}\cdot\text{ft} \quad V_A = 8 \text{ kip} \quad V_D = 8 \text{ kip}$$

ESFUERZOS :

TRAMO AB : ($x \in [0, 6]$)

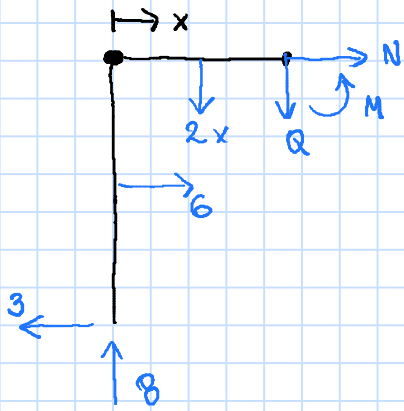


$$N = -8 \text{ kip}$$

$$Q = 3 - x \text{ [kip]}$$

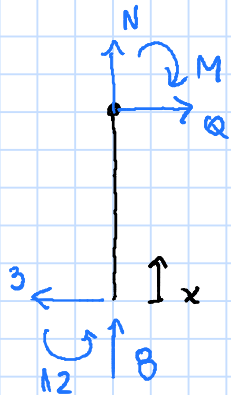
$$M = 3x - \frac{x^2}{2} \text{ [kip}\cdot\text{ft]}$$

TRAMO BC ($x \in [0,8]$)



$$\Rightarrow \begin{cases} N = -3 + 6 = -3 \text{ [kip]} \\ Q = 8 - 2x \text{ [kip]} \\ M = 8x - x^2 \text{ [kip}\cdot\text{ft]} \end{cases}$$

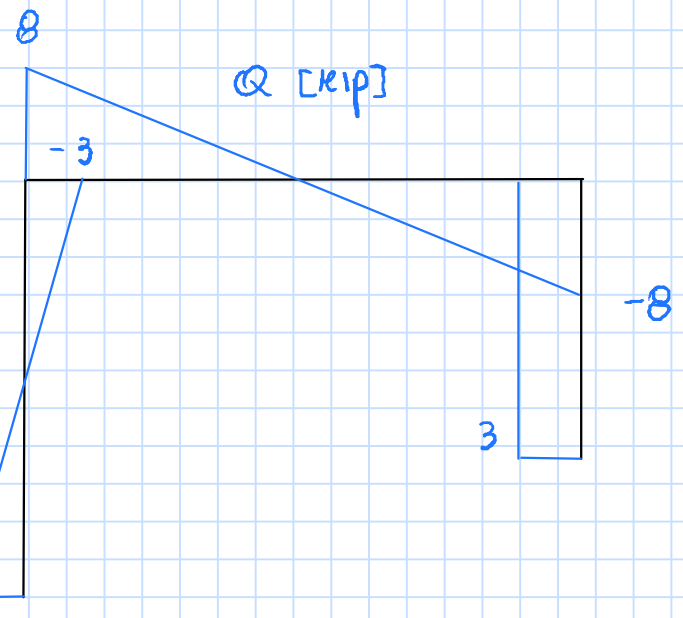
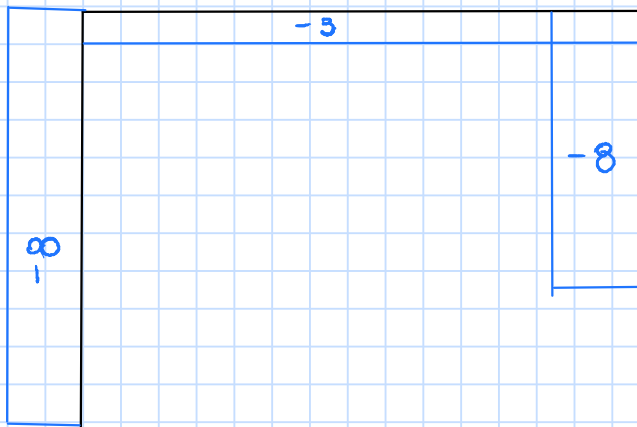
TRAMO DC ($x \in [0,4]$)



$$\Rightarrow \begin{cases} N = -8 \text{ [kip]} \\ Q = 3 \text{ [kip]} \\ M = 12 - 3x \end{cases}$$

DIAGRAMAS :

N [kip]



M [kip·ft]

