

Problemas sobre vigas

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Resuelva correctamente el siguiente problema:

P4-5. The rigid beam supports the load of 60 kN. Determine the displacement at B . Take $E = 60 \text{ GPa}$, and $A_{BC} = 2 (10^{-3}) \text{ m}^2$.

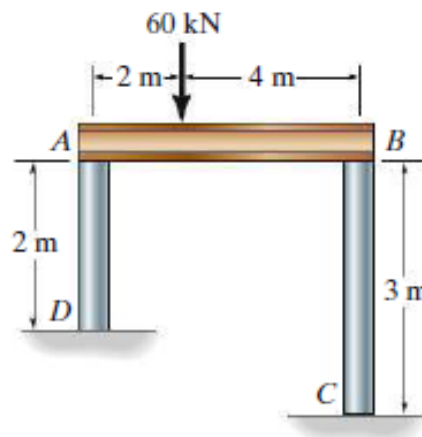


Fig. 1. This is a caption

DATOS:
 $A_{BC} = 2(10^{-3}) \text{ m}^2$
 $E = 60 \text{ GPa}$
 $\Sigma F_y = 0$

$$\Sigma: M=0$$

PROCEDIMIENTO:

$$\Sigma F_Y=0$$

$$F_{ba}+f_{bc}-60kn=0$$

$$-(2m)(60kn)+(6m)F_{pc}=0$$

$$-120kmn+F_{bc}(6m)=0$$

$$F_{bc}=\frac{120kmn}{6m}=20 \text{ M}$$

$$F_{da}+20kn=60kn=0$$

$$f_{ad}=60-20=40$$

$$\Sigma bc: \frac{pl}{ab} \frac{(-20x10-3kn)(3kn)}{2x10-3m(60x10-4MKN)} = 5X10^{-3}$$