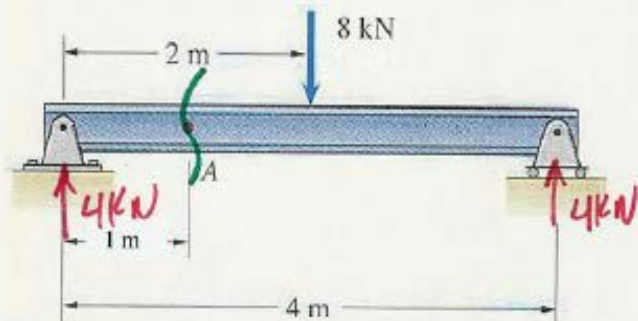
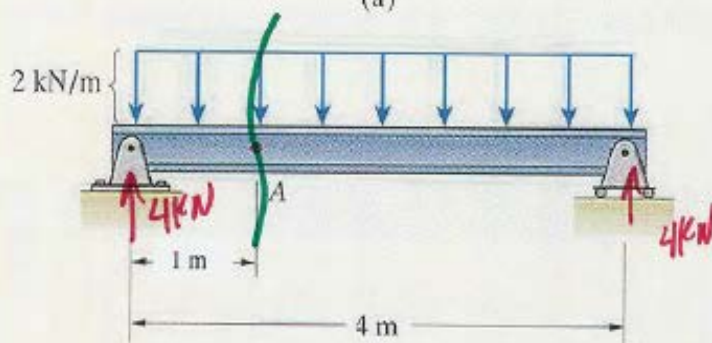


Internal Forces 2

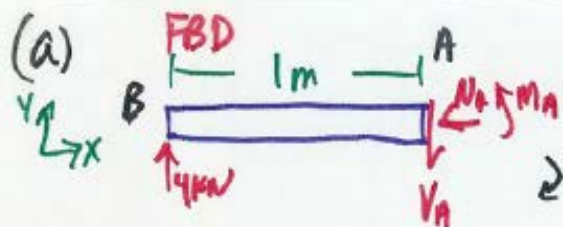
Determine the internal forces and moment at A for each loading.



(a)



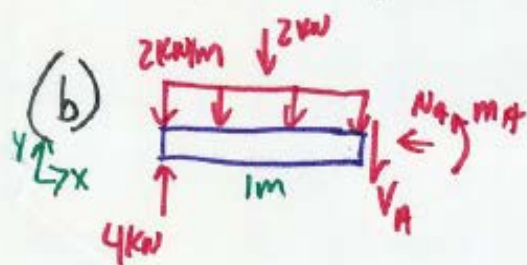
(b)



$$\begin{aligned} N_A &= 0 & \sum F_x &= 0 \\ V_A &= 4 \text{ kN} \downarrow \text{ on BA} & \sum F_y &= 0 \\ \sum M_A &= 0 = 4(1) - M_A \\ M_A &= 4 \text{ kN}\cdot\text{m} \uparrow \text{ on BA} \end{aligned}$$



$$\begin{aligned} N_A &= 0 \\ \sum F_y &= 0 = V_A - 4 + 4 & V_A &= 4 \text{ kN} \uparrow \text{ on AC} \\ \sum M_A &= 0 = M_A + 1(0) - 3(4) \\ M_A &= 4 \text{ kN}\cdot\text{m} \downarrow \text{ on AC} \end{aligned}$$



$$\begin{aligned} N_A &= 0 \\ \sum F_y &= 0 = 4 \text{ kN} - 2(1) - V_A & V_A &= 2 \text{ kN} \downarrow \text{ on BA} \\ \sum M_A &= 0 = 4(1) - 2\left(\frac{1}{2}\right) - M_A & M_A &= 3 \text{ kN}\cdot\text{m} \uparrow \text{ on BA} \end{aligned}$$