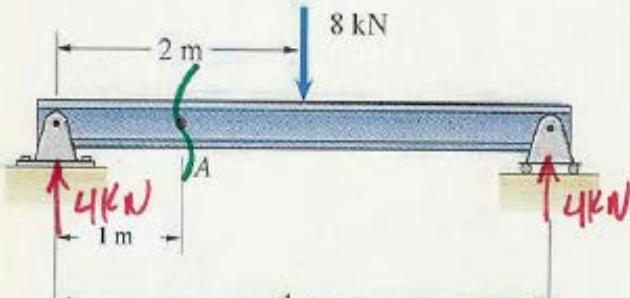
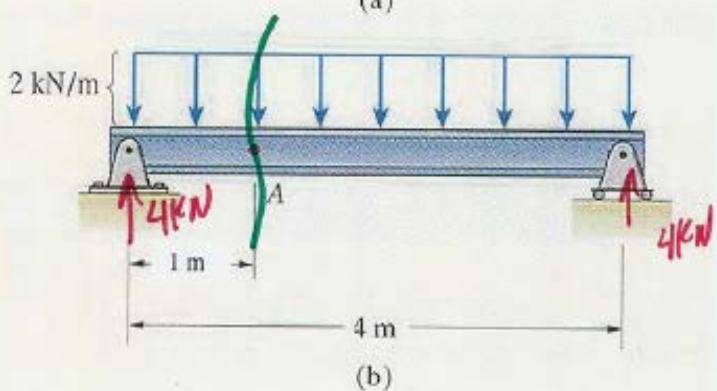


## Internal Forces 2

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



(a)



(b)

(a) FBD

$$\begin{aligned} N_A &= 0 \quad \sum F_x = 0 \\ V_A &= 4 \text{ kN} \downarrow \text{m B.A} \quad \sum F_y = 0 \\ \sum M_A &= 0 = 4(1) - M_A \\ M_A &= 4 \text{ kN.m} \uparrow \text{m B.A} \end{aligned}$$

OR

$$\begin{aligned} N_A &= 0 \quad \sum F_y = 0 = V_A - 0 + 4 \quad V_A = 4 \text{ kN} \uparrow \text{m A.C} \\ \Delta \sum M_A &= 0 = M_A + 1(4) - 3(4) \\ M_A &= 4 \text{ kN.m} \uparrow \text{m A.C} \end{aligned}$$

(b)

$$\begin{aligned} N_A &= 0 \quad \sum F_y = 0 = 4 \text{ kN} - 2(1) - V_A \quad V_A = 2 \text{ kN} \uparrow \text{m B.A} \\ \sum M_A &= 0 = 4(1) - 2\left(\frac{1}{2}\right) - M_A \quad M_A = 3 \text{ kN.m} \uparrow \text{m B.A} \end{aligned}$$