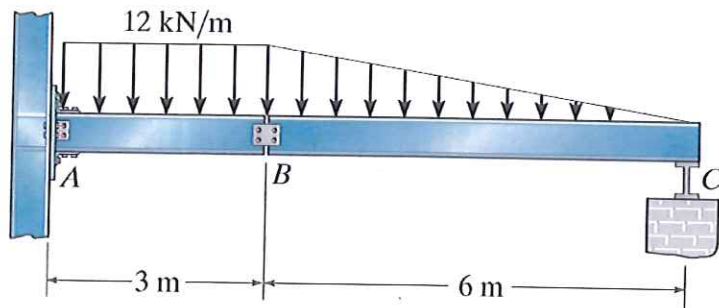
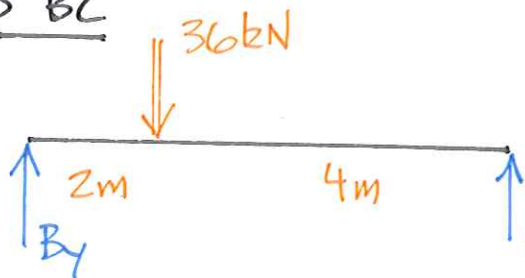


Determine the reactions at the supports A and C. Assume C is a roller and A is fixed.



FBD BC



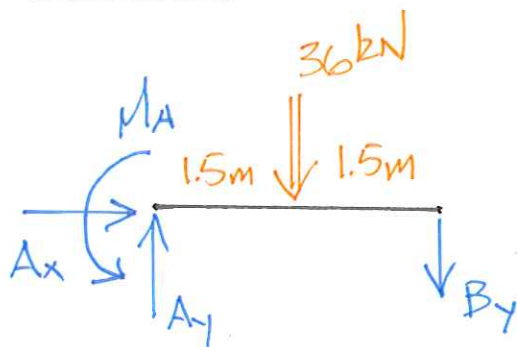
$$\circlearrowleft \sum M_C = 0 = 36 \text{ kN} (4 \text{ m}) - B_y (6 \text{ m})$$

$$\underline{B_y = 24 \text{ kN}}$$

$$+\uparrow \sum F_y = 0 = B_y + C_y - 36 \text{ kN}$$

$$\underline{\underline{C_y = 12 \text{ kN}}}$$

FBD AB



$$\circlearrowleft \sum M_A = 0 = M_A - 36 \text{ kN} (1.5 \text{ m}) - B_y (3 \text{ m})$$

$$\underline{\underline{M_A = 126 \text{ kNm}}}$$

$$+\uparrow \sum F_y = 0 = A_y - 36 \text{ kN} - B_y$$

$$\underline{\underline{A_y = 60 \text{ kN}}}$$

$$+\rightarrow \sum F_x = 0 = A_x$$