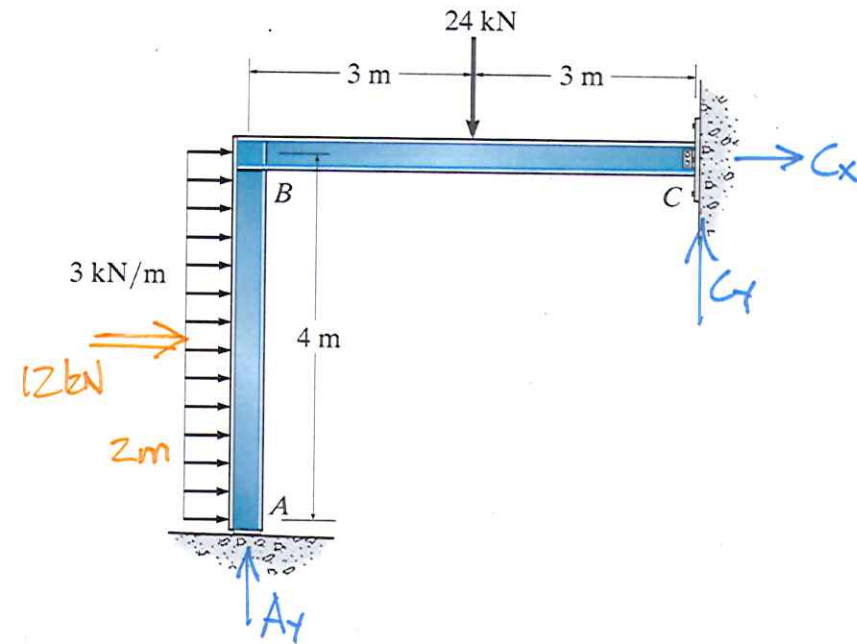


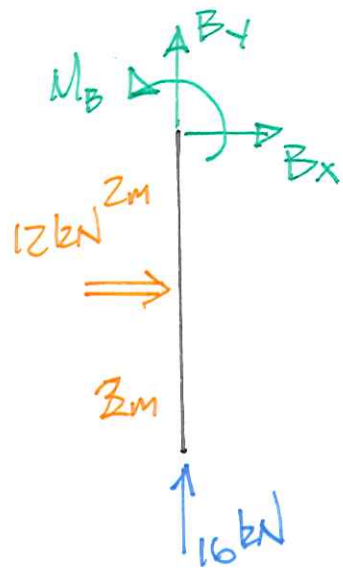
Example 4d-3: Draw the shear and moment diagrams for the following frame:

1/2



$$\begin{aligned} \sum M_C = 0 &= 24 \text{ kN}(3 \text{ m}) + 12 \text{ kN}(2 \text{ m}) - A_y(6 \text{ m}) \\ A_y &= 16 \text{ kN} \\ \sum F_y = 0 &= A_y + C_y - 24 \text{ kN} \\ C_y &= 8 \text{ kN} \\ \sum F_x = 0 &= C_x + 12 \text{ kN} \\ C_x &= -12 \text{ kN} \end{aligned}$$

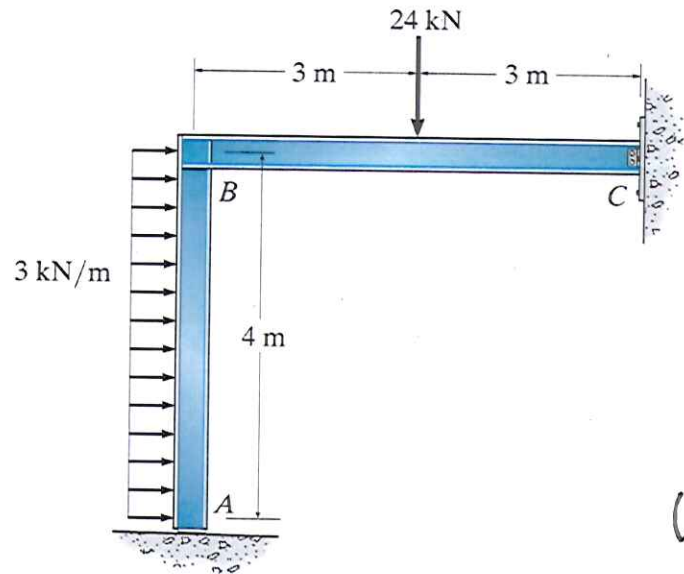
SECTION AB



$$\begin{aligned} \sum M_B = 0 &= M_B + 12 \text{ kN}(2 \text{ m}) \\ M_B &= -24 \text{ kNm} \\ \sum F_y = 0 &= B_y + 16 \text{ kN} \\ B_y &= -16 \text{ kN} \\ \sum F_x = 0 &= B_x + 12 \text{ kN} \\ B_x &= -12 \text{ kN} \end{aligned}$$

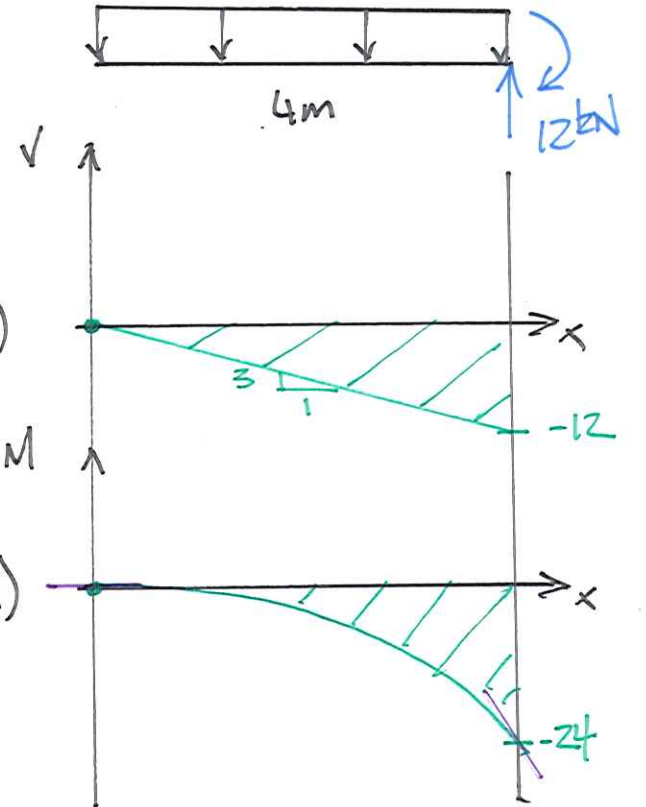
Example 4d-3: Draw the shear and moment diagrams for the following frame:

2/2

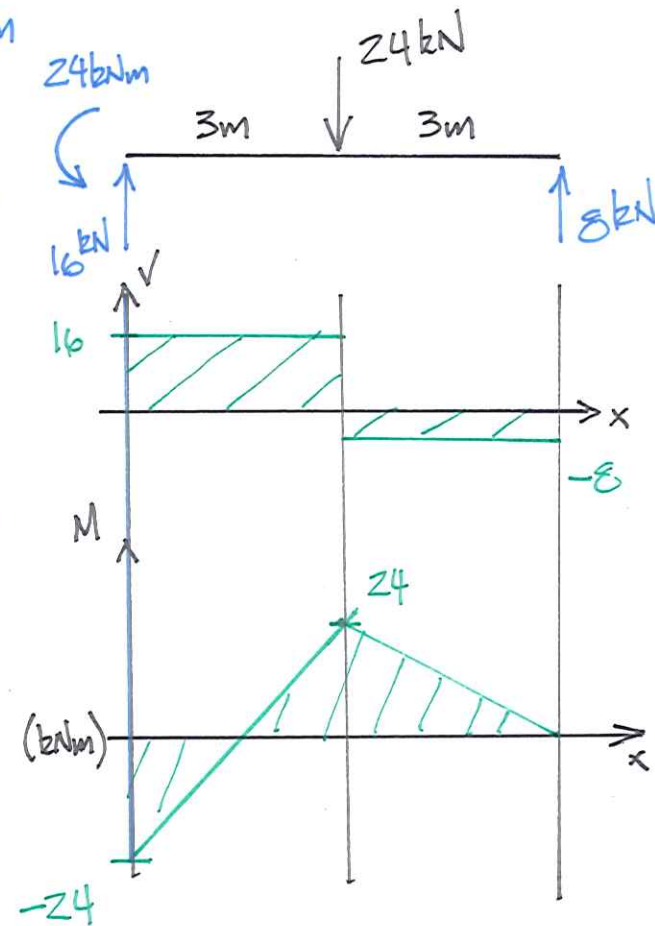


SECTION AB

3 kN/m



SECTION BC



$$\Delta V = \int w dx \quad \frac{dV}{dx} = w$$

$$\Delta M = \int V dx \quad \frac{dM}{dx} = V$$