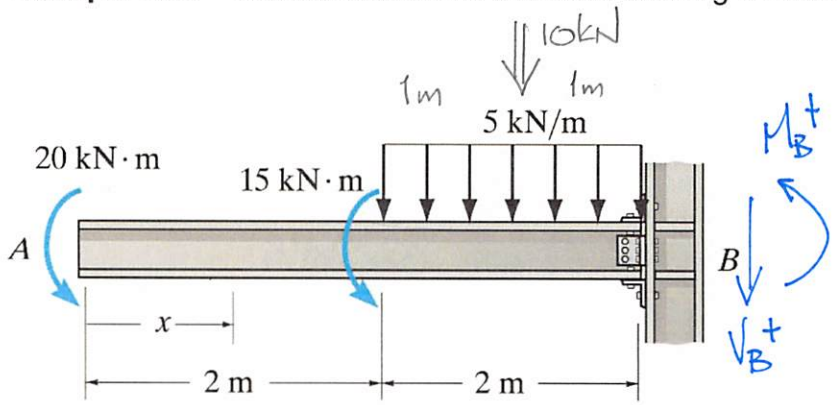
Example 4c-5 – Construct the shear force and bending moment diagrams.

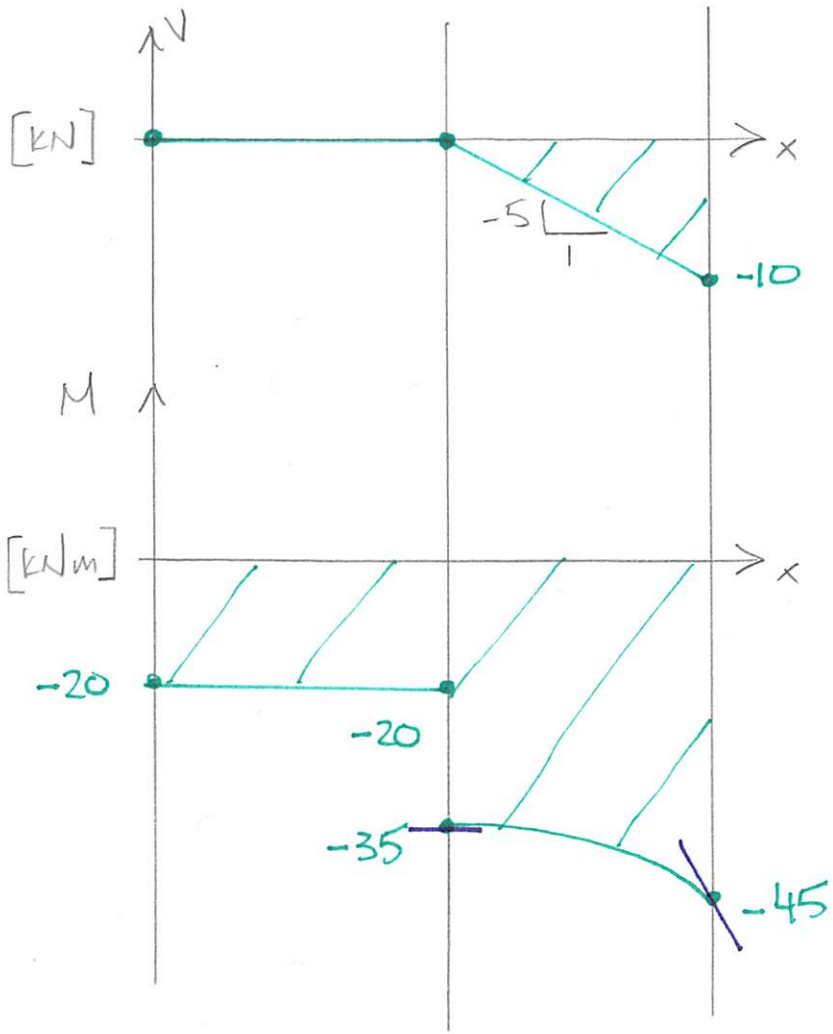


$$\circlearrowleft +\sum M_B = 0 = M_B + 10\text{kN}(1\text{m}) + 15\text{kNm} + 20\text{kNm}$$

$$M_B = -45\text{kNm}$$

$$+\uparrow \sum F_y = 0 = -V_B - 10\text{kN}$$

$$V_B = -10\text{kN}$$



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

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

$$M_{MAX} = -45\text{kNm} \text{ @ B}$$