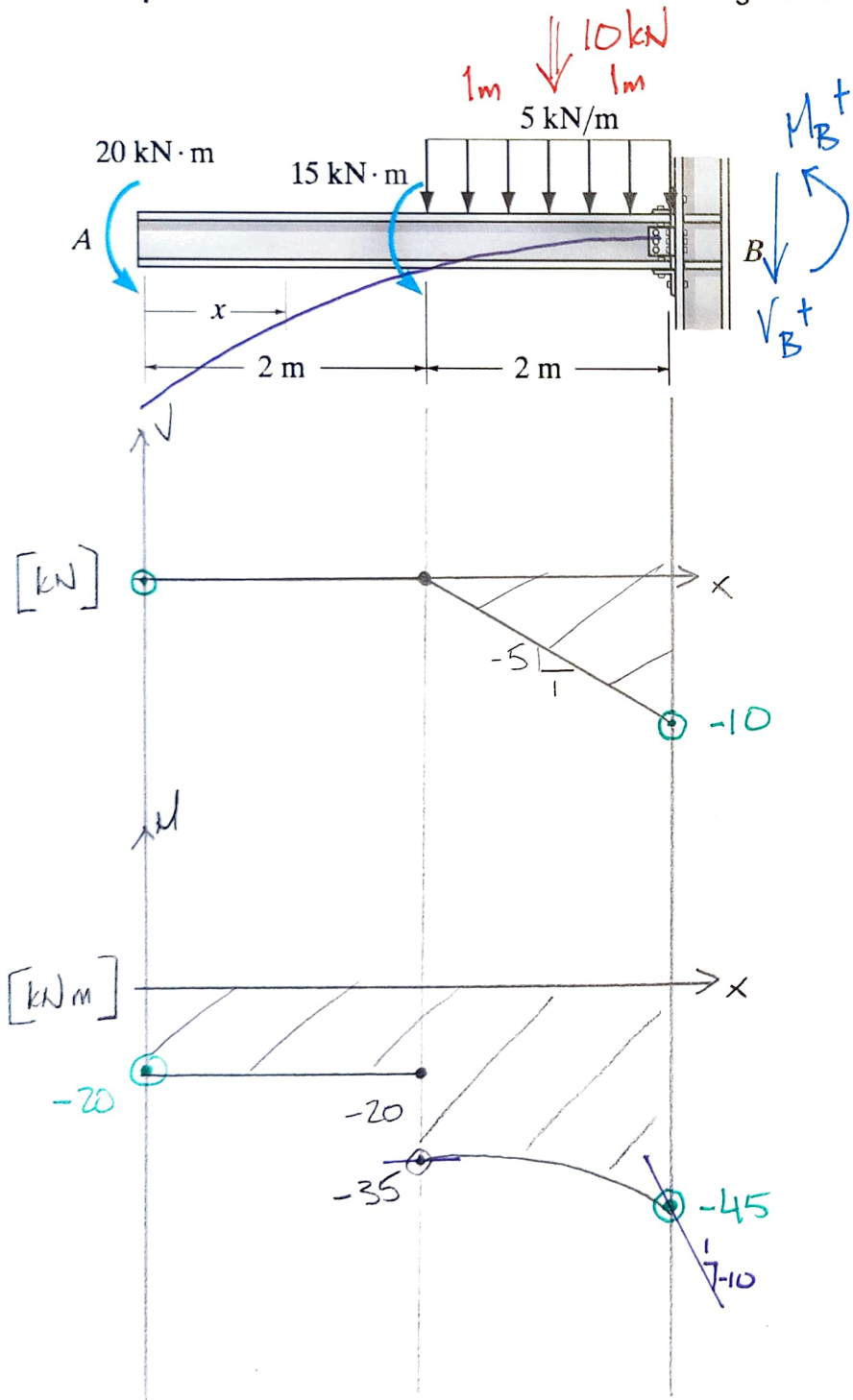


Example 4c-5 – Construct the shear force and bending moment diagrams.



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

$$M_B = -45\text{kN}\cdot\text{m}$$

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

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

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

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

$$\Delta M = M_0$$

$$M_{\text{MAX}} = -45\text{kN}\cdot\text{m} @ B$$