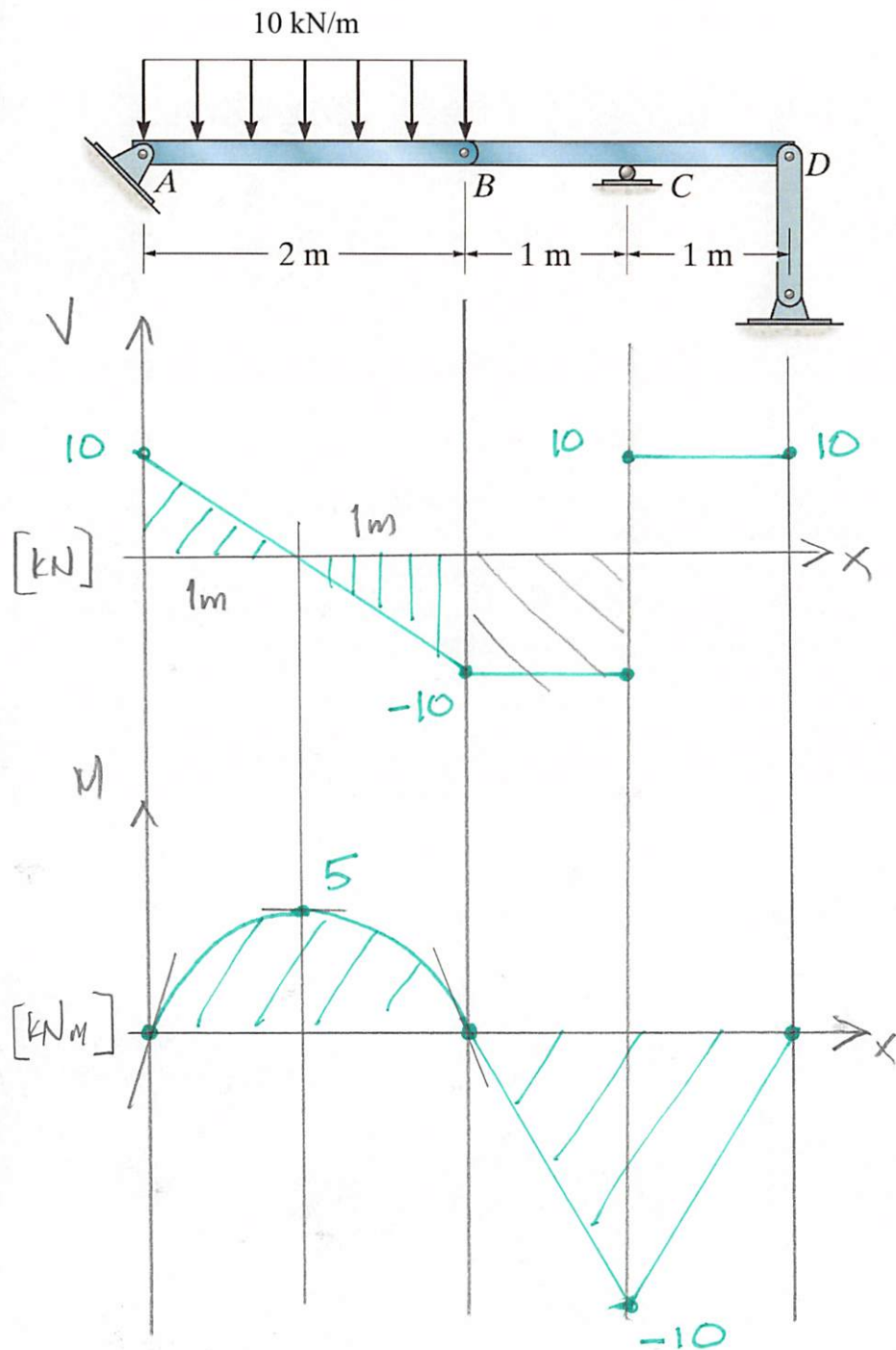
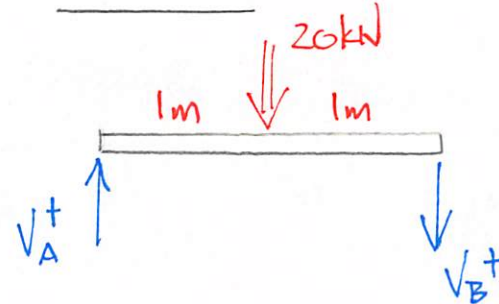


Example 4c-9 – Construct the shear force and bending moment diagrams.



FBD AB



$$\sum M_B = 0$$

$$= 20 \text{ kN}(1 \text{ m}) - V_A(2 \text{ m})$$

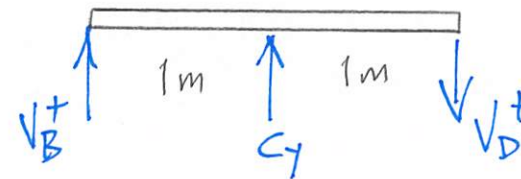
$$\underline{V_A = 10 \text{ kN}}$$

$$+\uparrow \sum F_y = 0 =$$

$$= V_A - V_B - 20 \text{ kN}$$

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

FBD BCD



$$\sum M_D = 0$$

$$= -V_B(2 \text{ m}) - C_y(1 \text{ m})$$

$$\underline{C_y = 20 \text{ kN}}$$

$$+\uparrow \sum F_y = 0$$

$$V_B + C_y - V_D$$

$$\underline{V_D = -10 \text{ kN}}$$