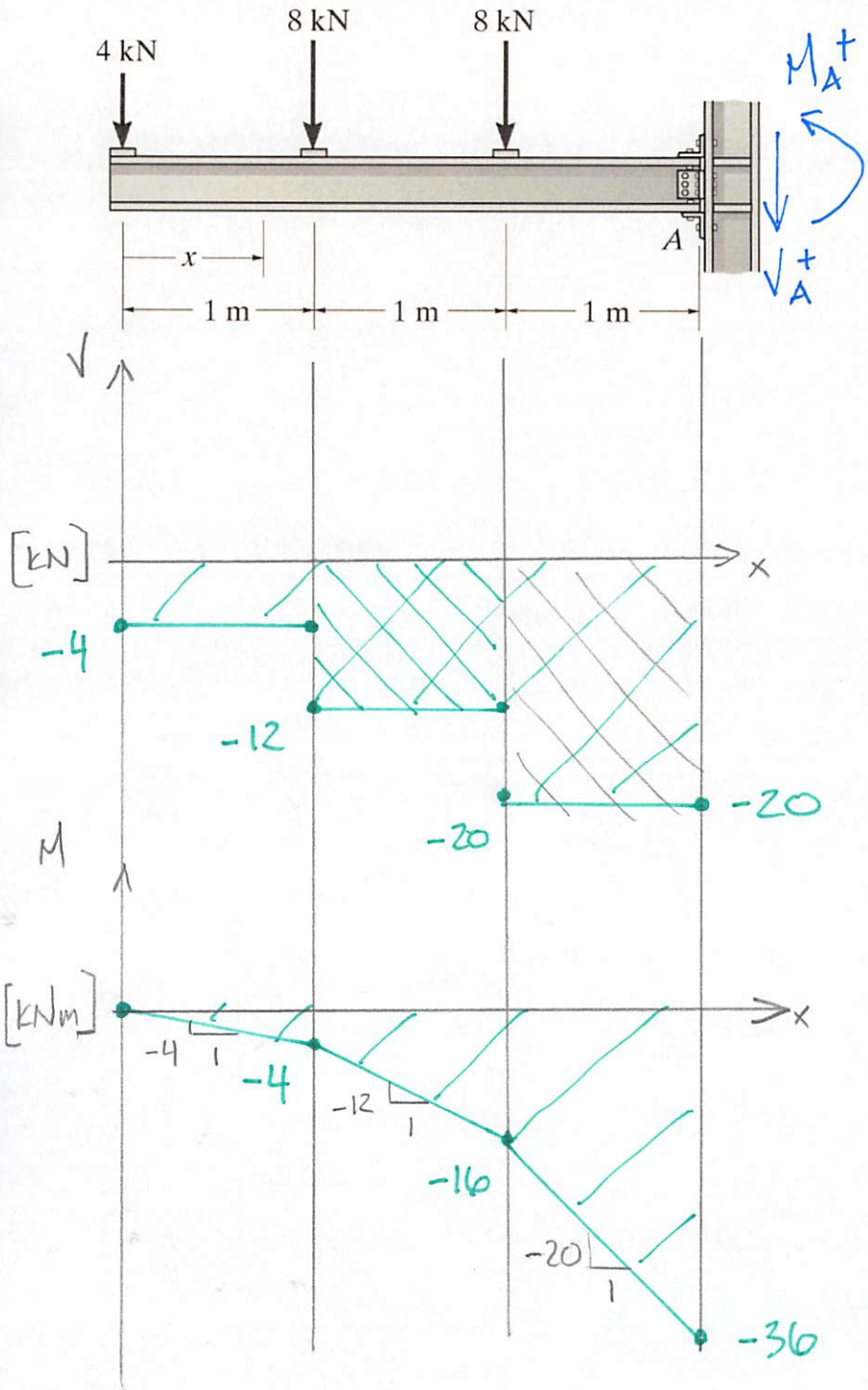
Example 4c-2 – Construct the shear force and bending moment diagrams.

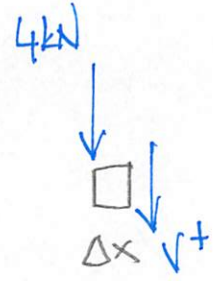


$$\circlearrowleft^+ \Sigma M_A = 0 = M_A + 8kN(1m) + 8kN(2m) + 4kN(3m)$$

$$\underline{M_A = -36kNm}$$

$$+\uparrow \Sigma F_y = 0 = -V_A - 8kN - 8kN - 4kN$$

$$\underline{V_A = -20kN}$$



$$+\uparrow \Sigma F_y = 0 = -V - 4kN$$

$$\underline{V = -4kN}$$

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

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

$$\underline{M_{MAX} = -36kNm \text{ @ } x = 3m}$$