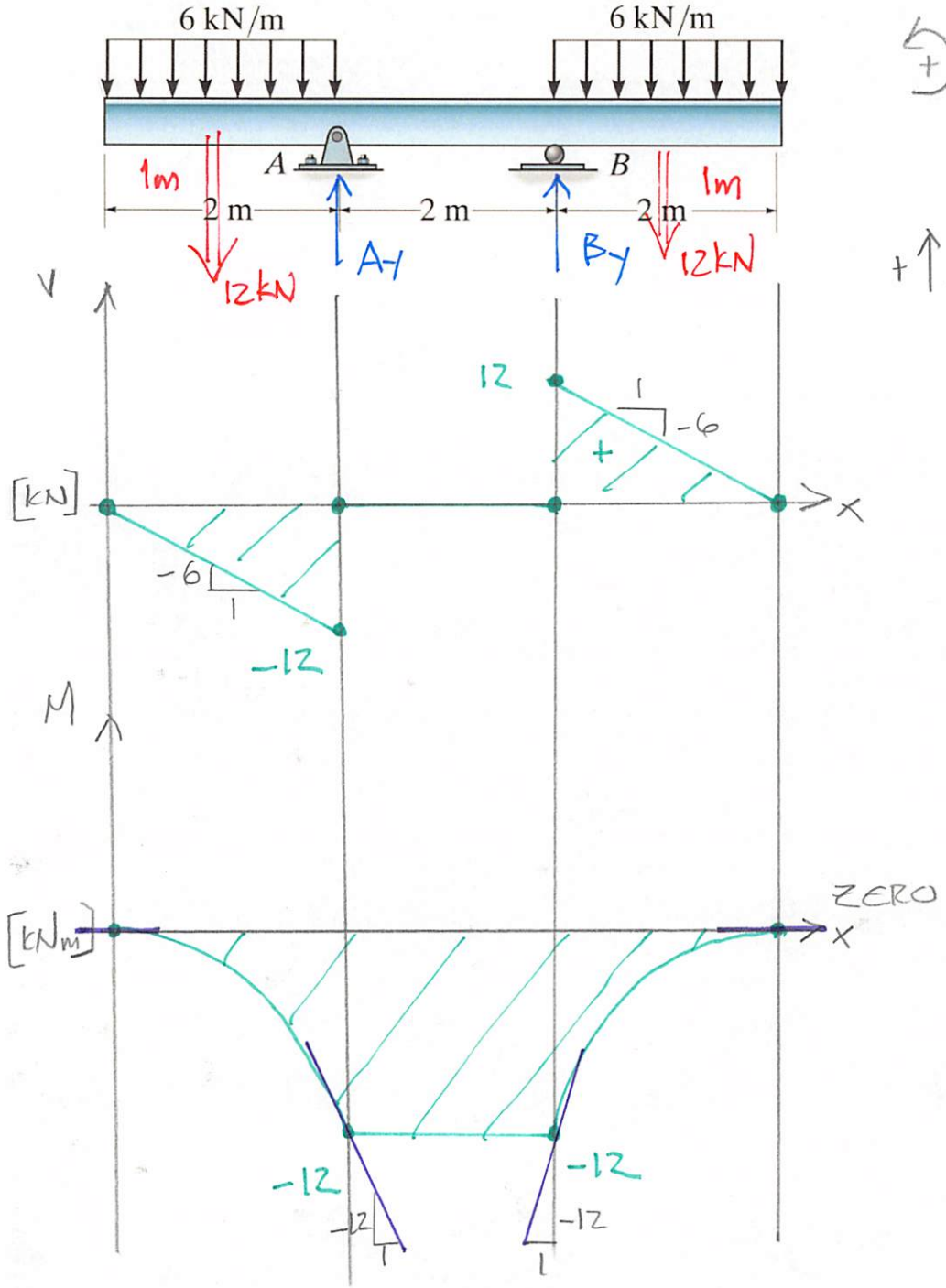
Example 4c-6 – Construct the shear force and bending moment diagrams.



$$\circlearrowleft + \Sigma M_B = 0 = -12\,kN(1m) + 12\,kN(3m) - A_y(2m)$$

$$\underline{A_y = 12\,kN}$$

$$+\uparrow \Sigma F_y = 0 = A_y + B_y - 12\,kN - 12\,kN$$

$$\underline{B_y = 12\,kN}$$

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

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

$$\underline{M_{MAX} = -12\,kNm \quad 2m \le x \le 4x}$$