

$$A_y = B_y = 8000 \text{ N}$$

$$V = \frac{dM}{dx}$$

$$\int V dx = \Delta M$$

$$? = \frac{32000}{3} \text{ see next page}$$

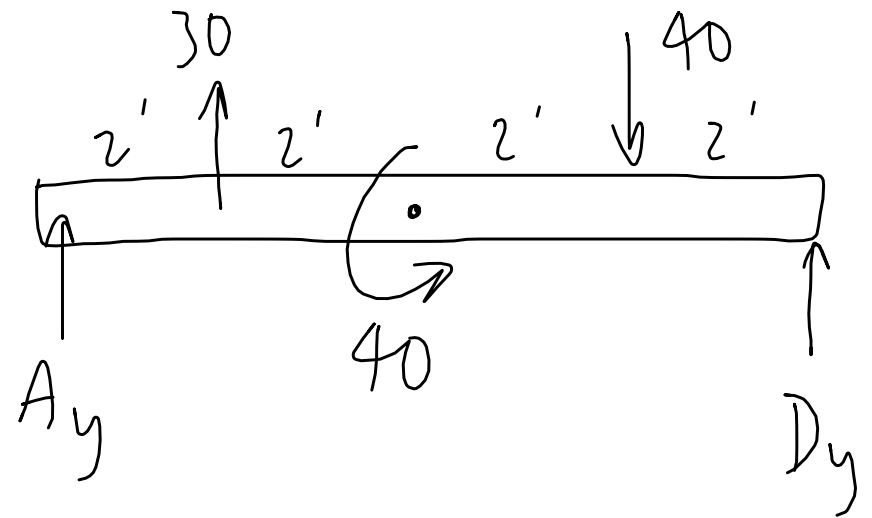
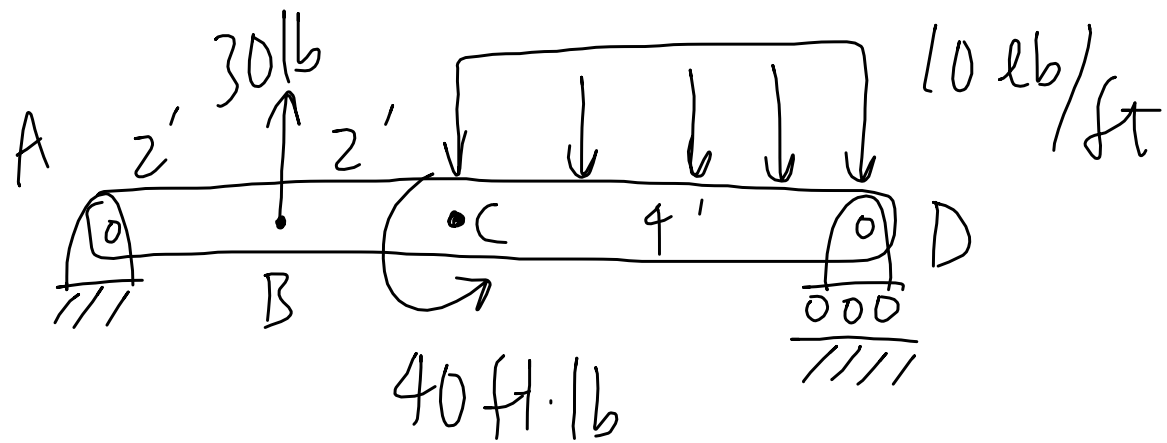
$$w(x) = -4000x \quad 0 \leq x \leq 2$$

$$V(x) - V(0) = \int_0^x w(x) dx$$

$$\begin{array}{c} \uparrow \\ 8000 \end{array} = -2000x^2 \Big|_0^x = -2000x^2$$

$$V(x) = -2000x^2 + 8000 \quad N$$

$$\Delta M = \int_0^2 (-2000x^2 + 8000) dx = \frac{-2000x^3}{3} + 8000x \Big|_0^2 = \frac{32000}{3} \quad N \cdot m$$

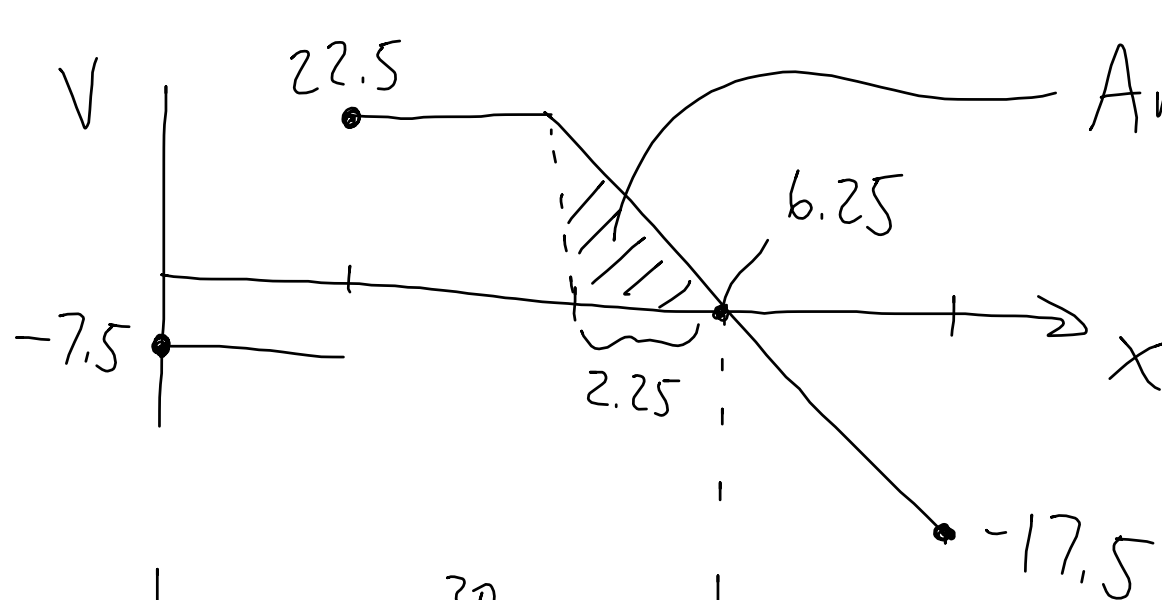
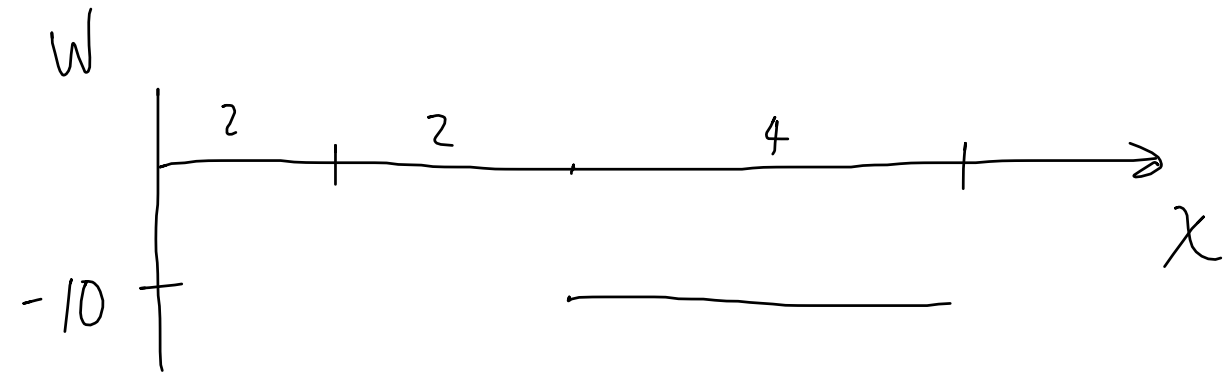


$$+\curvearrowright \sum M_A = 30(2) + 40 - 40(6) + D_y(8) = 0$$

$$D_y = 17.5 \text{ lbs}$$

$$+\uparrow \sum F_y = A_y + 30 - 40 + 17.5 = 0$$

$$A_y = -7.5 \text{ lbs}$$



$$\text{Area} = \frac{1}{2}(2.25)(22.5)$$

$$= 25.31 \text{ ft}\cdot\text{lb}$$

