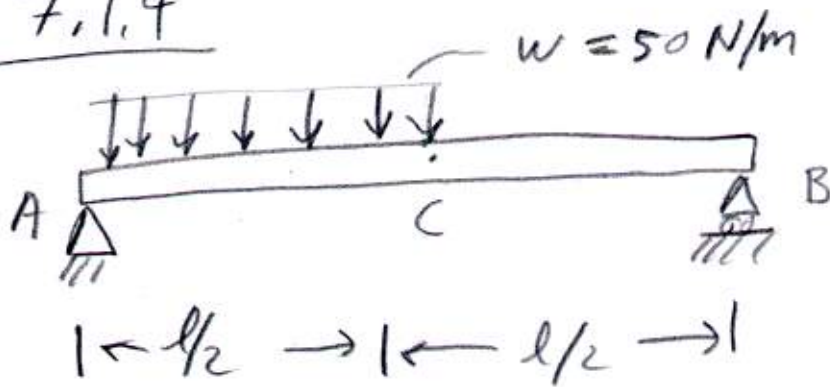
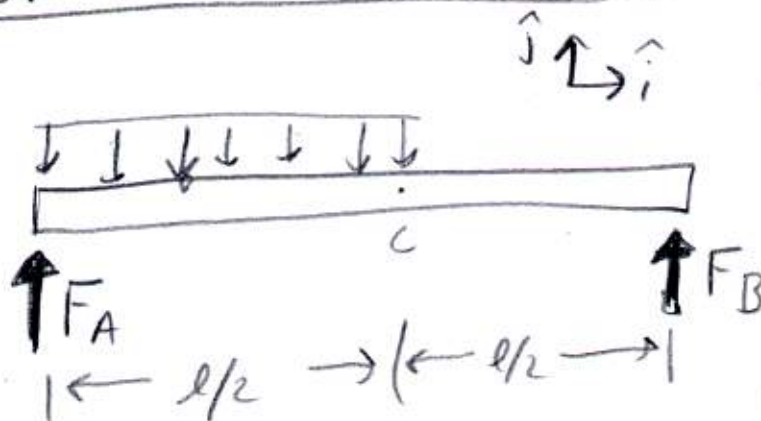


RP 7.1.4



$V(x) = ?$
 $M(x) = ?$

FBD of whole beam



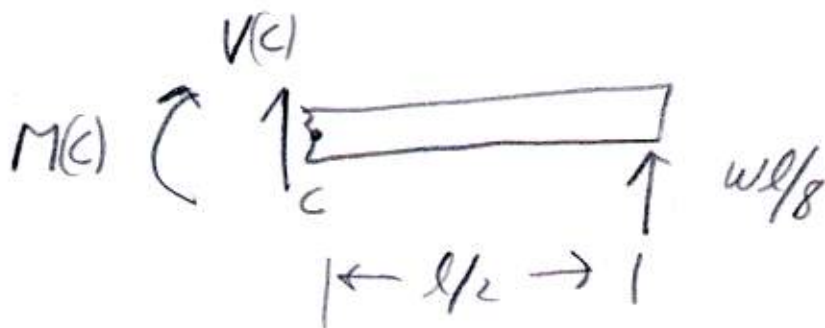
$\sum M_B = 0$

$\Rightarrow -F_A \cdot l + \frac{wl}{2} \cdot \frac{3l}{4} = 0$

$\Rightarrow F_A = \frac{3wl}{8}$

$\sum F_y = 0 \Rightarrow F_B = \frac{wl}{8}$

FBD of right half



$\sum F_y = 0 \Rightarrow \boxed{V(x) = -\frac{wl}{8}}$

$\sum M_C = 0 \Rightarrow \boxed{M(x) = \frac{l}{2} \left(\frac{wl}{8} \right) = \frac{wl^2}{16}}$