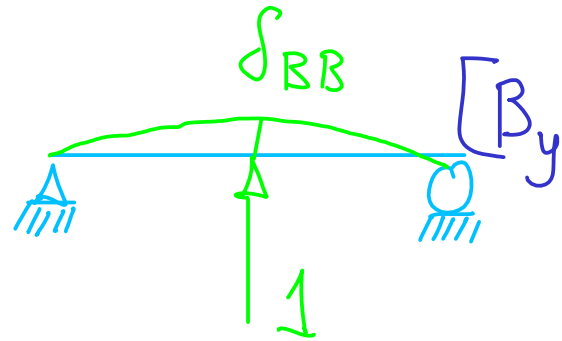
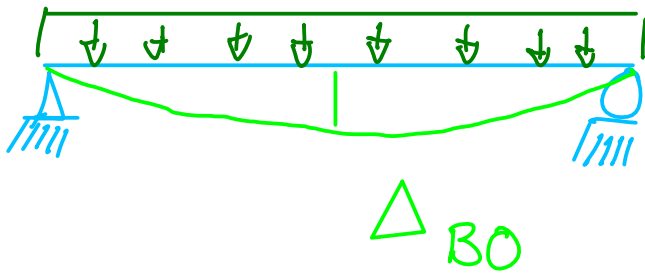


R
V M



Ec. compatibilidad

$$\Delta_{B0} + \delta_{BB} B_y = 0$$

Despl. Viga real

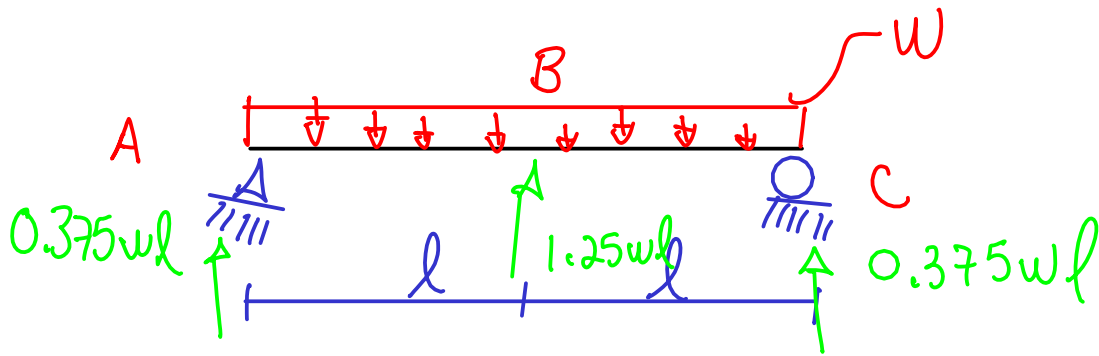
$$\frac{-5w l^4}{384EI} \rightarrow \frac{-5w(2l)^4}{384EI} = \frac{-5w l^4}{24EI} \quad (\downarrow)$$

Despl. Sistema redundante

$$\frac{P l^3}{48EI} \Rightarrow \frac{(1)(2l)^3}{48EI} = \frac{l^3}{6EI} \quad \uparrow$$

$$-\frac{5}{24} \frac{wl^4}{EI} + \frac{l^3}{6EI} B_y = 0$$

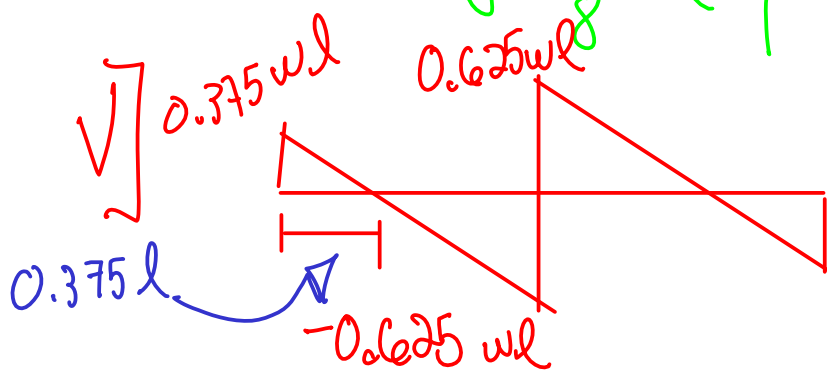
$$B_y = 1.25wl$$



$$\Sigma M_A = w(2l)(l) - 1.25wl \cdot l - C_y(2l) = 0$$

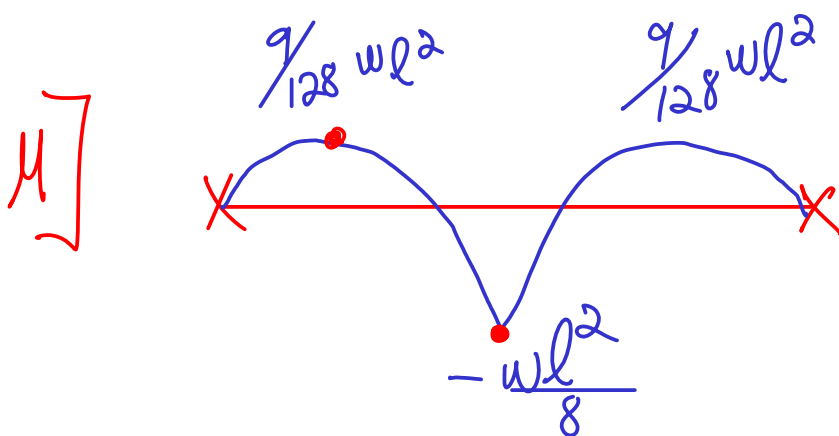
$$C_y = \frac{2wl^2 - 1.25wl^2}{2l} = \frac{3}{8}wl \uparrow$$

$$\Sigma F_y \rightarrow A_y = \frac{3}{8}wl \uparrow$$



$$0.375wl - 1wl = -\frac{5}{8}wl = -0.625wl$$

$$0.625wl - 1wl = -0.375wl$$



$$wl \cdot x = 0.375wl$$

$$x = 0.375$$

$$M_{\max}^+ = \frac{1}{2} (0.375l)(0.375wl) = \frac{9}{128} wl^2$$

$$M_{\min}^- = \frac{9}{128} wl^2 - \frac{1}{2} (l - 0.375l)(0.625wl) =$$

$\frac{25}{128} wl^2$

$-\frac{1}{8} wl^2$