

$$\frac{d^4 v}{dx^4} = 0$$

$$v(x) = a_0 + a_1 x + a_2 x^2 + a_3 x^3$$

$$x=0 \left\{ \begin{array}{l} v(0) = 0 \Rightarrow a_0 = 0 \\ M(0) = 0 \Rightarrow a_2 = 0 \end{array} \right.$$

$$x=l \left\{ \begin{array}{l} v(l) = 0 \Rightarrow a_1 l + a_3 l^3 = 0 \\ M(l) = C \Rightarrow -EI \cdot 6a_3 l = C \end{array} \right.$$

$$a_3 = -\frac{C}{6EI l}$$

$$a_1 = \frac{C l}{6EI}$$

$$v(x) = \frac{C l}{6EI} x - \frac{C x^3}{6EI l}$$

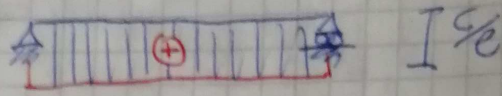
$$v(x) = \frac{C l^2}{6EI} \left[\frac{x}{l} - \left(\frac{x}{l}\right)^3 \right]$$

$$\phi(x) = -\frac{C l}{6EI} \left[1 - 3\left(\frac{x}{l}\right)^2 \right]$$

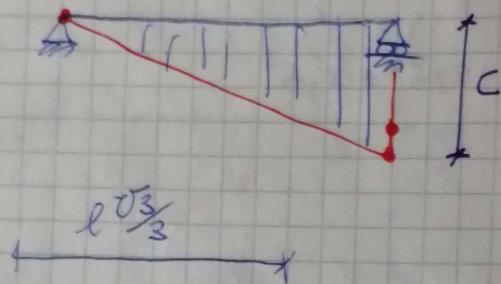
$$M(x) = -\frac{C}{6} \left[-6 \frac{x}{l} \right] = C \frac{x}{l}$$

$$T(x) = \frac{C}{l}$$

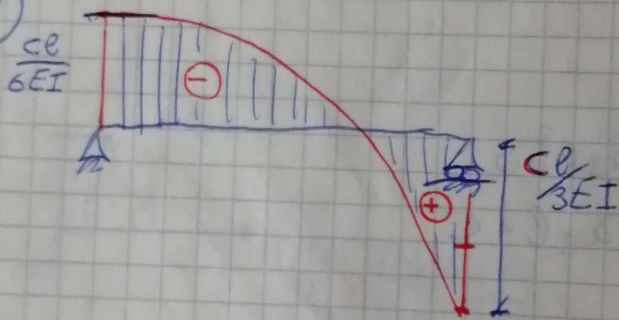
(7)



(8)



(9)



(v)

