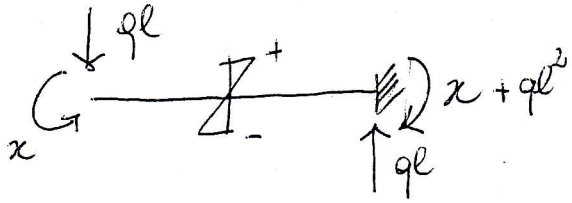
C1



$$\chi = -\frac{2\alpha\Delta t}{h}$$

$$\frac{\partial^2 v(z)}{\partial z^2} = \frac{-M(z)}{EI} + \chi \qquad M(z) = -qlz - x$$

$$\frac{\partial^2 v(z)}{\partial z^2} = \frac{qlz + x}{EI} + \frac{2\alpha\Delta t}{h}$$

$$\frac{\partial v(z)}{\partial z} = \frac{ql z^2}{2EI} + \frac{xz}{EI} + \frac{2\alpha\Delta t}{h} z + C_1 = -\varphi(z)$$

$$v(z) = \frac{ql z^3}{6EI} + \frac{x z^2}{2EI} + \frac{2\alpha\Delta t z^2}{2h} + C_1 z + C_2 =$$

Per $z = 0$

I $\varphi(z) = 0$

Per $z = l$

II $\varphi(z) = 0$

III $v(z) = 0$

Dalla prima

$\varphi(0) = 0 \qquad C_1 = 0$

Dalla seconda

$\varphi(l) = 0 \qquad -\frac{ql^2}{2EI} - \frac{xl}{EI} - \frac{2\alpha\Delta t}{h} l = 0 \qquad x = -\frac{ql^2}{2} - \frac{2\alpha\Delta t}{h} EI$