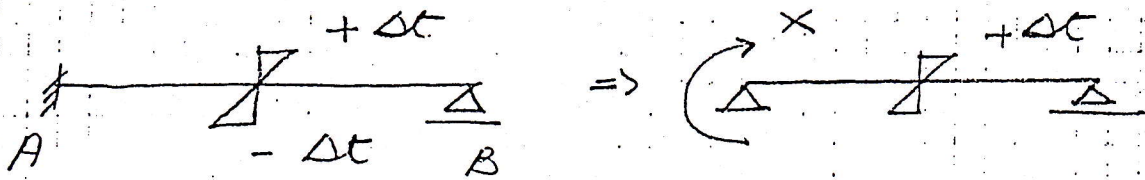


A.1)



(1)

$$\frac{d^2 \sigma}{dz^2} = -X = -X(x) - X(\Delta t)$$

$$X(x) = \frac{X}{EI} - \frac{X}{6EI} z \quad X(\Delta t) = -\frac{2\alpha \Delta t}{h}$$

$$\frac{d^2 W}{dz^2} = -\frac{X}{EI} + \frac{X}{6EI} z + \frac{2\alpha \Delta t}{h}$$

$$\frac{dW}{dz} = -\frac{X}{EI} z + \frac{X}{12EI} z^2 + \frac{2\alpha \Delta t}{h} z + C_1$$

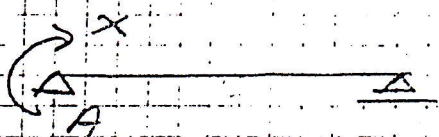
$$W = -\frac{X}{2EI} z^2 + \frac{X}{60EI} z^3 + \frac{\alpha \Delta t}{h} z^2 + C_1 z + C_2$$

$$z=0 \quad W = \frac{dW}{dz} = 0 \Rightarrow C_1 = C_2 = 0$$

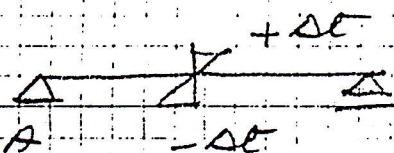
$$z=l \quad W = 0 \Rightarrow -\frac{X l^2}{2EI} + \frac{X l^3}{6EI} + \frac{\alpha \Delta t l^2}{h} = 0$$

$$-\frac{X l}{3EI} + \frac{\alpha \Delta t l}{h} = 0 \quad \boxed{X = \frac{3\alpha \Delta t EI}{h}}$$

Del vsto, tramite compressa =



$$P_A(x) = -\frac{X l}{3EI}$$



$$P_A(\Delta t) = \frac{\alpha \Delta t EI}{h}$$

$$P_A = P_A(x) + P_A(\Delta t) = -\frac{X l}{3EI} + \frac{\alpha \Delta t EI}{h} = 0$$