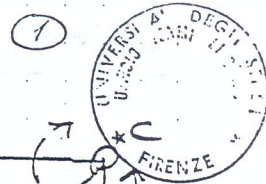
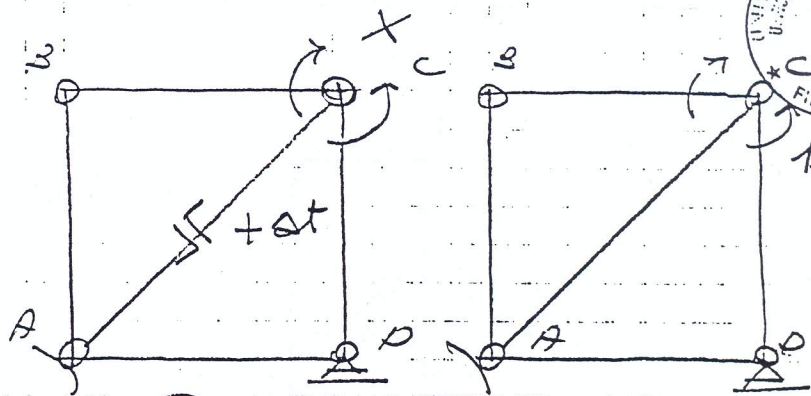
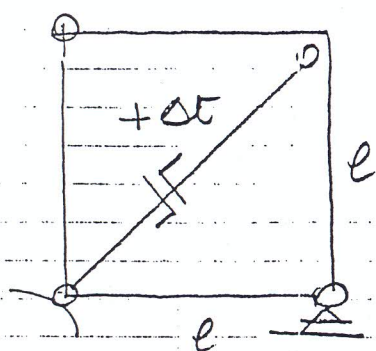
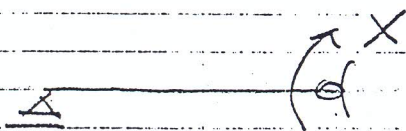
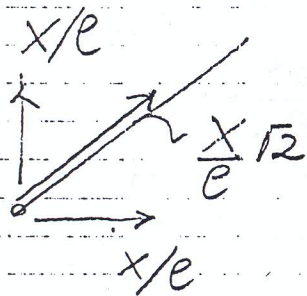
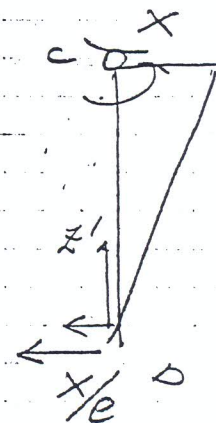
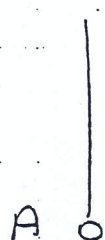
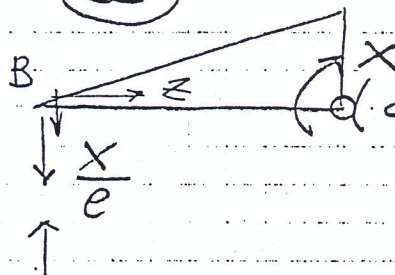


1)



(SD)

(FT)

 $\Rightarrow$ 

	AB	BC	CD	AD	AC
N^t	$1/e$	0	0	$1/e$	$\sqrt{2}/e$
N^z	x/e	0	0	x/e	$x\sqrt{2}/e$
M^t	0	$-\frac{1}{e}x$	$-\frac{1}{e}x'$	0	0
M^z	0	$-\frac{x}{e}$	$-\frac{x'}{e}$	0	0
Δe^z	0	0	0	0	$\propto e\sqrt{2}\Delta T$
e	e	e	e	e	$e\sqrt{2}$

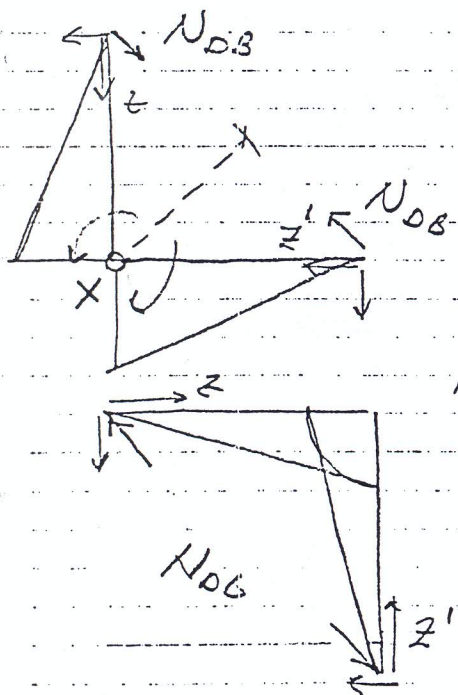
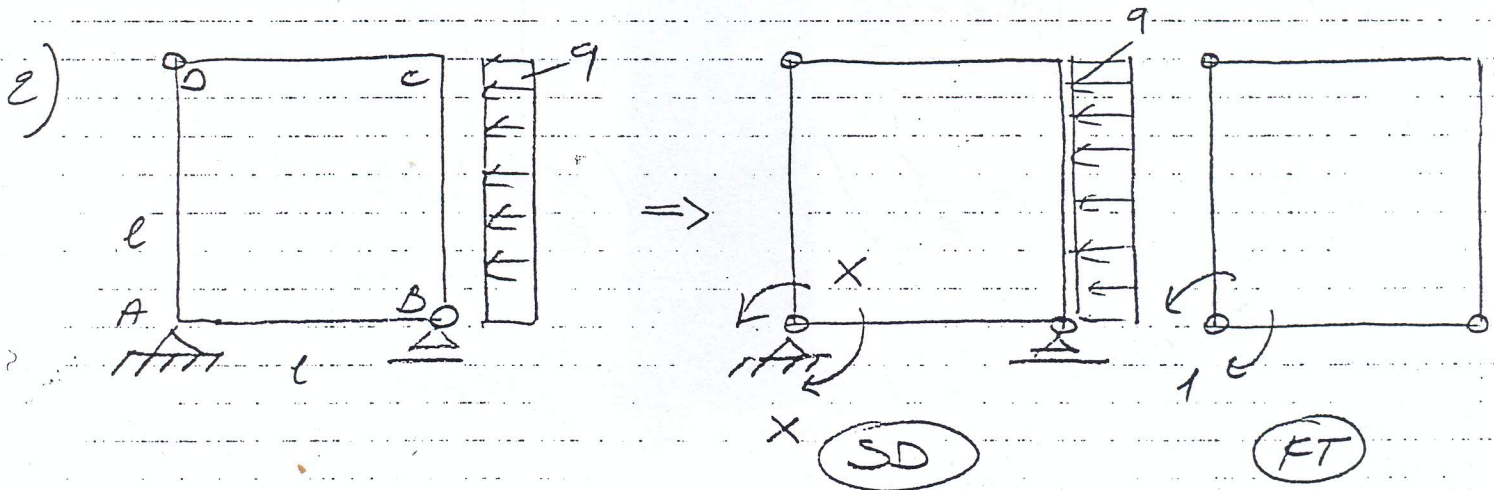
$$\Delta k = 1\varphi^D - 1\varphi^S = 1\Delta\varphi = \frac{1}{EI} \int_0^l \left(\frac{z}{e}\right) \left(\frac{x-z}{e}\right) dz + \quad (2)$$

$$+ \frac{1}{EI} \int_0^l \left(\frac{z'}{e}\right) \left(\frac{x-z'}{e}\right) dz' + \frac{1}{e} \frac{x \cdot e}{EA} + \frac{1}{e} \frac{x \cdot e}{EA} +$$

$$+ \frac{\sqrt{2}}{e} \left(\frac{x \sqrt{2} e}{e EA} + \alpha e \sqrt{2} \Delta t \right) = 0$$

$$\frac{1}{EI} \frac{x l^3}{3 e^2} + \frac{1}{EI} \frac{x l^3}{3 e^2} + \frac{2x}{e EA} + \frac{2x}{e EA} + 2\alpha \Delta t =$$

$$= \frac{2x l}{3 EI} + \frac{4x}{e EA} + 2\alpha \Delta t = 0 \Rightarrow x$$

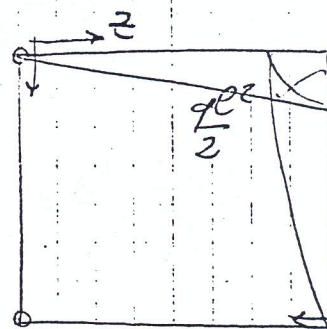
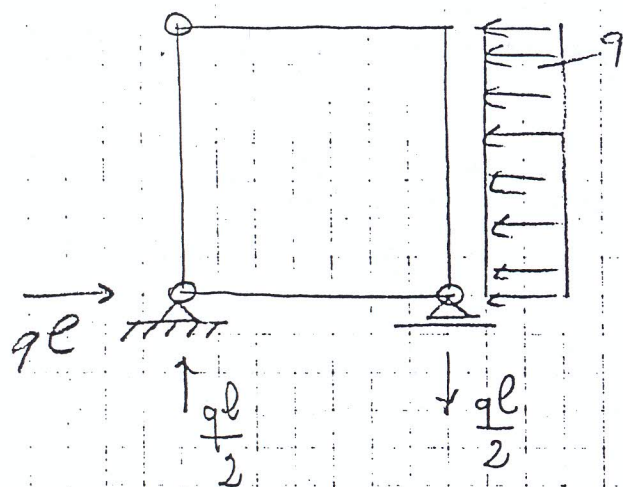


$$N_{DB} \cdot \frac{e \sqrt{2}}{2} - X = 0$$

$$N_{DB} = \frac{2X}{e \sqrt{2}} = \frac{\sqrt{2} X}{e}$$

$M(x)$

③



	AB	BC	CD	DA
M^z	$\frac{1}{e} z'$	$\frac{1}{e} z'$	$\frac{1}{e} z$	$\frac{1}{e} z$
$M^z(x)$	$\frac{x}{e} z'$	$\frac{x}{e} z'$	$\frac{x}{e} z$	$\frac{x}{e} z$
$M^z(q)$	0	$qlz' - q\frac{z'^2}{2}$	$\frac{ql}{2} z$	0

$$L_{re} = 1 \cdot \Delta\varphi = 0 = \frac{1}{EI} \int_0^e \left(\frac{z'}{e} \right) \left(\frac{x}{e} z' \right) dz' +$$

$$+ \frac{1}{EI} \int_0^e \left(\frac{z'}{e} \right) \left(\frac{x}{e} z' + qlz' - q\frac{z'^2}{2} \right) dz' +$$

$$+ \frac{1}{EI} \int_0^e \left(\frac{z}{e} \right) \left(\frac{x}{e} z + \frac{ql}{2} z \right) dz +$$

$$+ \frac{1}{EI} \int_0^e \left(\frac{z}{e} \right) \left(\frac{x}{e} z \right) dz \Rightarrow X$$