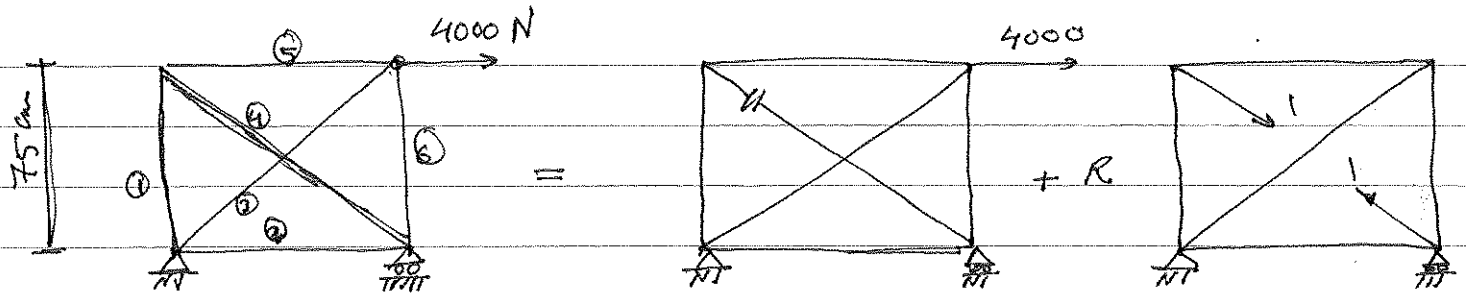
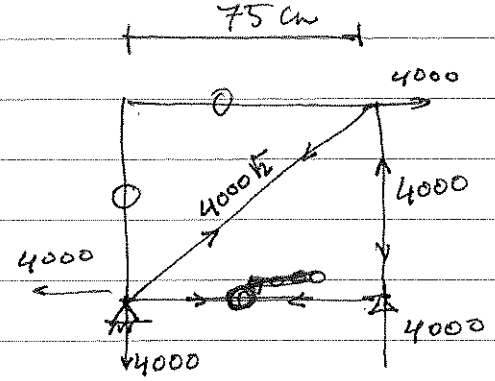
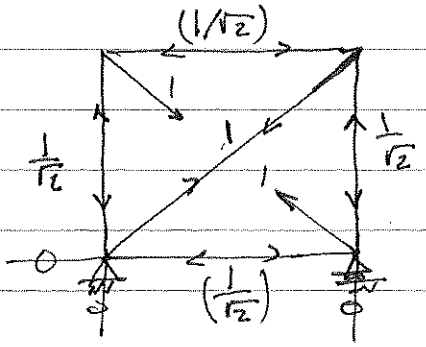
All areas are equal to $40\ mm^2$, $E = 200\ GPa$







	F	f_1	L	$\left(\frac{F f_1 L}{EA}\right)$	$f_1^2 L/EA$	Actual F	MPa σ
1	0	$(-1/\sqrt{2})$	75	0	4.89×10^{-6}	1586	40
2	0	$(-1/\sqrt{2})$	75	0	4.69×10^{-6}	1586	40
3	$4000\sqrt{2}$	1	$75\sqrt{2}$	0.075	13.26×10^{-6}	3414	85
4	0	1	$75\sqrt{2}$	0	13.26×10^{-6}	−2243	−56
5	0	$(-1/\sqrt{2})$	75	0	4.69×10^{-6}	1586	40
6	−4000	$(-1/\sqrt{2})$	75	0.02652	4.69×10^{-6}	−2414	−60
				0.10152	4.53×10^{-6}		

$\Rightarrow \quad 0.10152 + R\ 4.5338\times10^{-6} = 0$

$R = -2242.64\ N$