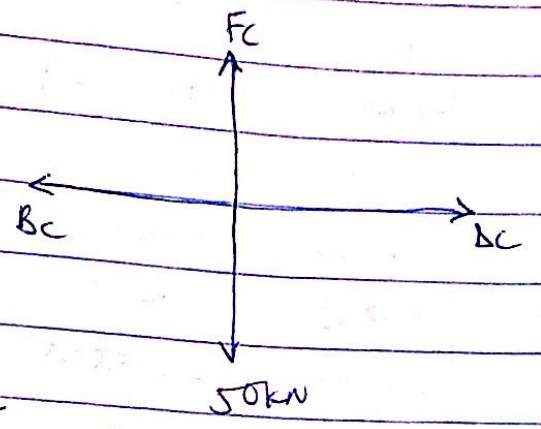
At Joint C;



From Pranons Calculate example;

BC = 50kN

$= -BC + DC = 0$ (Resolving Horizontally)

$-50 + DC = 0$

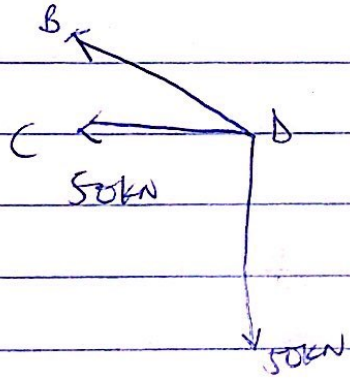
$DC = 50kN$ (tensional)

Resolving Vertically;

$-50kN + FC = 0$

$FC = 50kN$

At joint D;



Member	P(kN)	L(m)	a(m^2)	$P=\frac{P}{q}$ (kN/m^2)	u	PuL
AF	-70.71	4.24	0.0004	-176775	-0.491	353026.95
AB	50	3	0.0004	125000	0.333	424875
BC	50	3	0.0004	125000	0.666	249750
BF	50	3	0.0004	125000	0.333	124825
FE	50	3	0.004	125000	-0.333	-124825
BE	0	4.24	0.004	0	-0.491	0
EC	50	3	0.0004	125000	1.000	375000
ED	-70.71	4.24	0.004	-176775	-0.942	706053.49
CD	50	3	0.004	125000	0.666	249750

$\Sigma = 2058455.24$

$$\frac{\Sigma PuL}{E} = \frac{2058455.24}{200000}$$

$$= 10.29\,mm$$