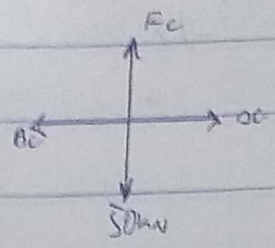
Name: Akeem O.

At joint C ⇒



From previous calculated example,

BC = 50kN

∴ $-BC + OC = 0$ (Resolving to horizontal)

$-50 + OC = 0$

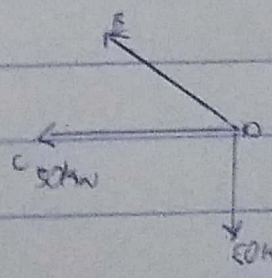
OC = 50kN (compressional)

Resolving to vertical

$\Rightarrow -50kN + Fc = 0$

Fc = 50kN (Tensional)

At joint D



Resolving to horizontal = $-50kN - DE \cos 45 = 0$

$50kN = -DE \cos 45$

DE = $\frac{S2}{-\cos 45}$ = -70.7

DE = 70.7 compressional

MEMBER	P (kN)	L(m)	a (cm^2)	P = $\frac{P}{a}$ (kN/m^2)	μ	PuL
AF	-70.71	4.24	0.0004	-176775	-0.471	353026.35
AB	50	3	0.0004	125000	0.333	~~424875~~
BC	50	3	0.0004	125000	0.666	~~249750~~ ~~83250~~
BF	50	3	0.0004	125000	0.333	124825 ~~124625~~
FE	50	3	0.0004	125000	-0.333	-124875 ~~-41625~~
BE	0	4.24	0.0004	~~125000~~ 0	-0.471	0
EC	50	3	0.0004	125000	1.000	375000 ~~125000~~
ED	-70.71	4.24	0.0004	-176875	-0.942	706053.492
CD	50	3	0.0004	125000	0.666	249750
			~~0.0004~~			Σ = 2058455.24

$\frac{\Sigma PuL}{E} = \frac{2058455.24}{200000} = 10.29mm$ //