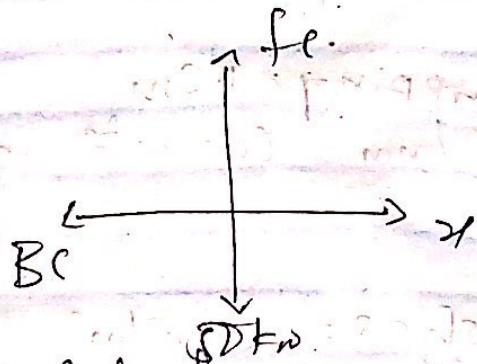


SANI AHMAD DAHLU
171201031049
STRUCTURAL MECHANICS



At point C \Rightarrow



From previous calculated example,

$B_c = 50 \text{ kN}$

$$\therefore -B_c + DC = 0$$

$$-50 + DE = 0$$

$DE = 50 \text{ kN}$ (Tensional)

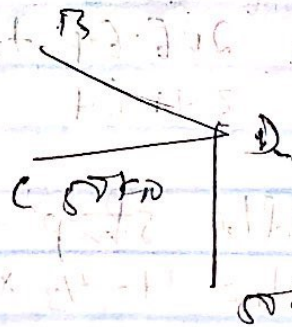
(Resolving to horizontal)

Resolving to vertical

$$\Rightarrow -SDkw + f_c = 0$$

$$f_c = 50 \text{ kN}$$
 (Tensional)

At point D



Resolving to horizontal: $-SDkw - DE \cos 45^\circ = 0$

$$SDkw = -DE \cos 45^\circ$$

$$DE = \frac{SDkw}{-\cos 45^\circ} = \frac{-70.7}{-0.707}$$

$DE = 70.7$ (Compression)

Member	P (kN)	l (m)	A (m ²)	P/A (kN/m ²)	u	Pu
AF	-70.71	4.24	0.004	-17679.5	-0.471	3536.2
AB	SD	3	0.004	125000	0.333	75
BC	SD	3	0.004	125000	0.666	42467.2
BF	SD	3	0.004	125000	0.333	24975
FE	SD	3	0.004	125000	0.333	24825
BE	0	3	0.004	125000	0.333	-12412.5
EC	SD	4.24	0.004	0	-0.471	0
ED	-70.71	4.24	0.004	125000	0.471	375000
CD	SD	3	0.004	-17679.5	-0.942	706053.4
		3	0.004	125000	0.666	492
						249750
						205545
						5.24

Σ =