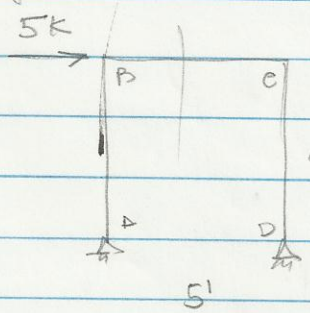
Pg 163 SARWAR E I = constante. Hallar los momentos de extremo.



Como el pórtico es anti-simétrico usamos las rigideces modificadas para anti-simetría. Además la columna es simplemente apoyada.

$K_{BA} = \frac{I}{4} \rightarrow K'_{BA} = \frac{3}{4}\left(\frac{I}{4}\right) = \frac{3}{16} I$ (S.A.)

$K_{BC} = \frac{I}{5} \rightarrow K'_{BC} = \frac{3}{2}\left(\frac{I}{5}\right) = \frac{3}{10} I$ (anti-sim.).

$K'_{BA} = \frac{3}{16} I = 1$

$K'_{BC} = \frac{3}{10} I \times \frac{16}{16} = \frac{3I}{16}\left(\frac{16}{10}\right) = 1.6$

$F.D)_{BA} = \frac{k'}{\Sigma k} = \frac{1}{1+1.6} = 0.385$

$F.D_{BC} = \frac{k'}{\Sigma k} = \frac{1.6}{2.6} = 0.615$

0.385	0.615
−10	
+3.85	6.15
−6.15	6.15

M.C. Ladeo:

$\frac{M_{AB}}{M_{CD}} = \frac{-1}{-1} = \frac{-10}{-10}$

$H_1 + H_2 = Q$

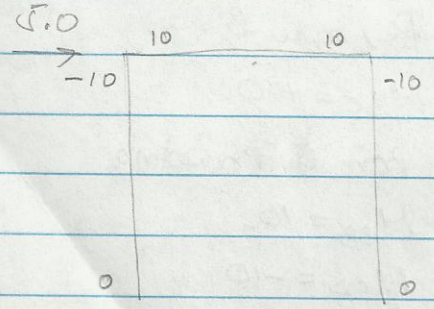
$H_1 = -\frac{M_{AB} + M_{BA}}{4} = \frac{-6.15}{4} = +1.538$

$H_2 = -\frac{M_{CD} + M_{BC}}{4} = 1.538$

$Q = 3.075$

Factor de Corrección:

$F.C = \frac{5}{3.075} = 1.626$



⟹ Figura.