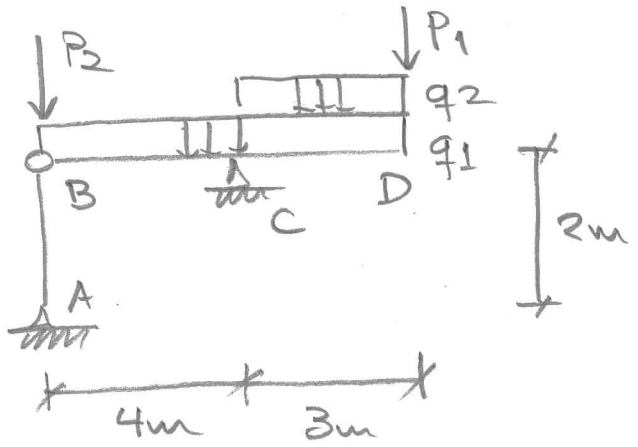
B1TSNA0310 VALOR 05 PONTO



- COMBINAÇÕES NORMAIS ELU;
- EDIFICAÇÃO COMERCIAL;

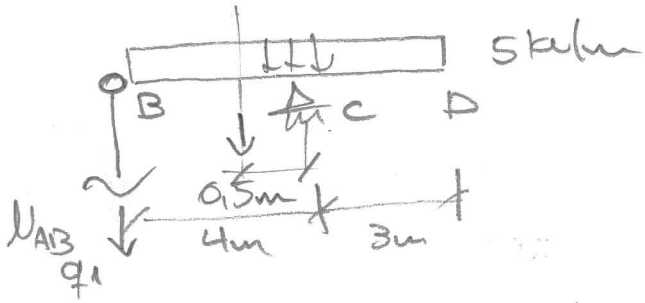
CARGAS:

		γ	ψ_0
$q_1 = 5\,kN/m$	PESO PRÓPRIO EST. METÁLICA	1,25	—
$q_2 = 8\,kN/m$	ACIDENTAL DE OCUPAÇÃO	1,50	0,7
$P_1 = 30\,kN$	ACIDENTAL DE MANUTENÇÃO	1,50	0,7
$P_2 = 25\,kN$	ACIDENTAL DE MANUTENÇÃO	1,50	0,7

Q01) MÁXIMO N_{AB} [kN]?

Q02) MÍNIMO N_{AB} [kN]?

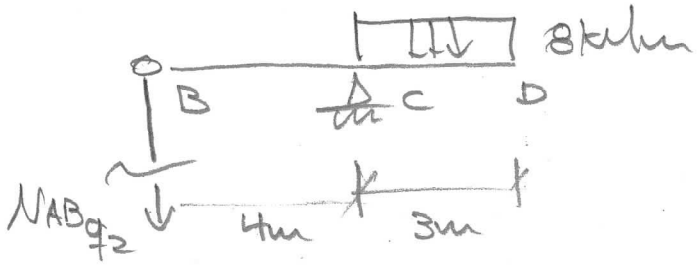
$N_{AB\,q1}$:



$\sum M_C = 0$ ↺ ⊕ $\quad N_{ABq1} \times 4m + 5kN/m \times 7m \times 0,5m = 0$

$$N_{ABq1} = \frac{-5\,kN/m \times 7m}{4m \times 2} = -4,375\,kN$$

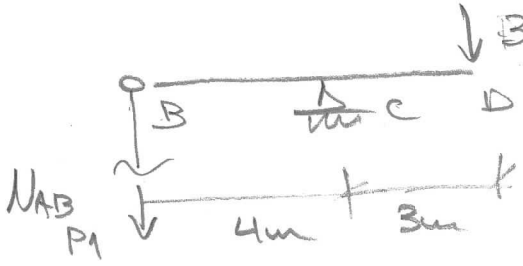
$N_{AB\,q2}$:



$\Sigma M_C = 0 \circlearrowleft (+) \quad N_{AB_{q2}} \times 4m - 8kN/m \times 3m \times 1,5m = 0$

$N_{AB_{q2}} = \frac{8kN/m \times 3m \times 1,5m}{4m} = +9kN$ //

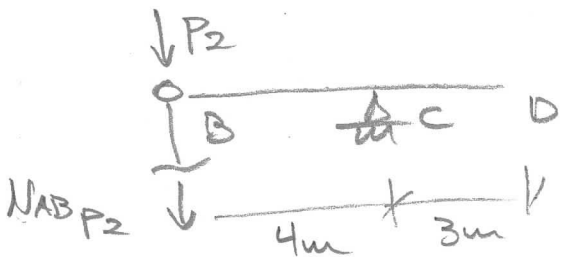
$N_{AB_{P1}}$:



$\Sigma M_C = 0 \circlearrowleft (+) \quad N_{AB_{P1}} \times 4m - 30kN \times 3m = 0$

$N_{AB_{P1}} = \frac{30kN \times 3m}{4m} = +22,5kN$ //

$N_{AB_{P2}}$:



$N_{AB_{P2}} = -P_2 = -25kN$ //

COMB1 (q_2)

$N_{sd1} = [1,0 \times (-4,375kN)] + 1,5 \times 9kN + [1,5 \times 22,5kN \times 0,7]$

$= +32,75kN$

COMB2 (P_1)

$N_{sd2} = [1,00(-4,375kN)] + 1,5 \times 22,5kN + [1,5 \times 9kN \times 0,7]$

$= \boxed{+38,825kN}$ // Q01

COMB3 (P_2)

$N_{sd3} = [1,25 \times (-4,375kN)] + 1,5 \times (-25kN)$

$= \boxed{-42,969kN}$ // Q02