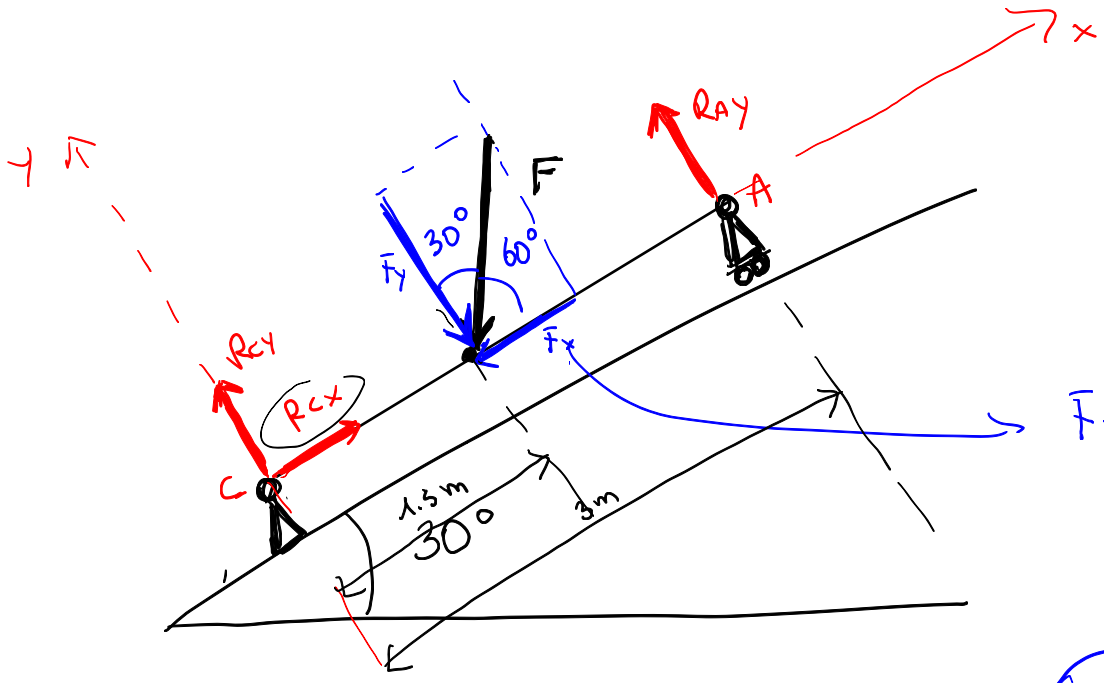
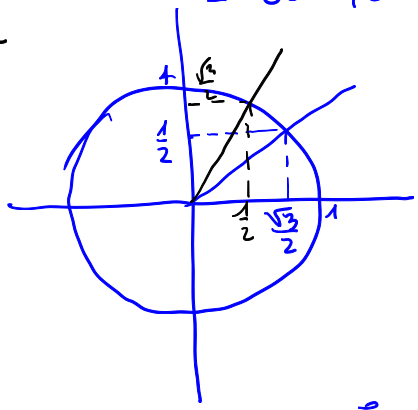


$\bar{F} = 1000\ N$

$\bar{F}_x = \bar{F}\cos 60° = 1000 \cdot \frac{1}{2} = 500\ N$



$\bar{F}_y = \bar{F}\cos 30° = \bar{F}\sin 60° = 1000 \cdot \frac{\sqrt{3}}{2} = 866\ N$

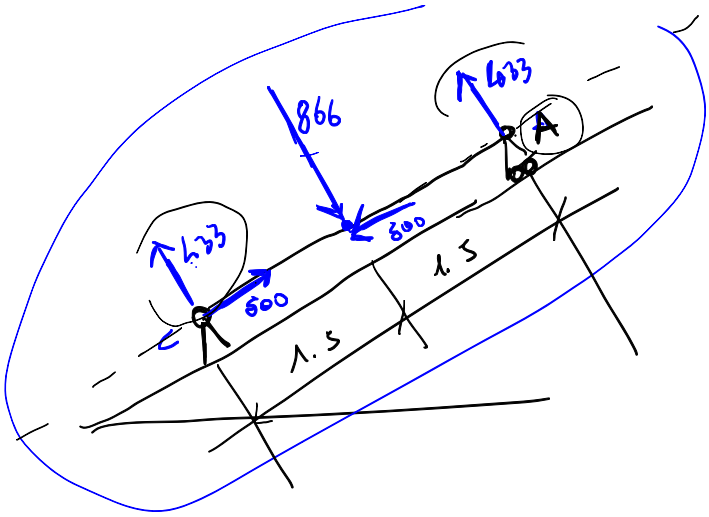
$$\begin{cases} \sum \bar{F}_x = 0 \\ \sum \bar{F}_y = 0 \\ \sum M = 0 \end{cases}$$

$$\begin{cases} \rightarrow^{+}: & R_{CX} - \bar{F}_x = 0 \\ \uparrow^{+}: & R_{CY} - \bar{F}_y + R_{AY} = 0 \\ \circlearrowleft^{+}: & -\bar{F}_y \cdot 1.5\,m + R_{AY} \cdot 3\,m = 0 \end{cases} \Rightarrow$$

$$\Rightarrow \begin{cases} R_{CX} = \bar{F}_x \\ R_{CY} = \bar{F}_y - R_{AY} \\ R_{AY} \cdot 3m = \bar{F}_y \cdot 1.5 \end{cases} \Rightarrow \begin{cases} R_{CX} = 500\ N \\ R_{CY} = 866\ N - 433\ N = 433\ N \\ R_{AY} = \dfrac{866\ N \cdot 1.5\,m}{3\,m} = 433\ N \end{cases}$$

$$\Rightarrow \begin{cases} R_{CX} = 500\ N \\ R_{CY} = 433\ N \\ R_{AY} = 433\ N \end{cases}$$

METODO di VERIFICA

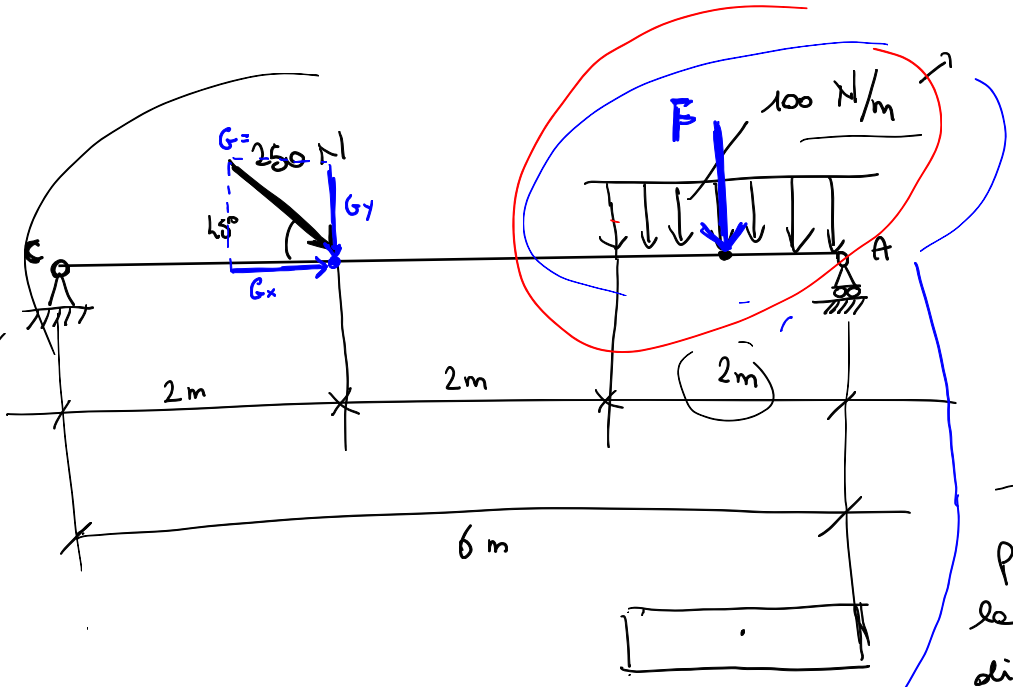


$+\rightarrow x$ $\quad 500 - 500 = 0$

$+\uparrow y$ $\quad 433 + 433 - 866 = 0$

$+\circlearrowleft A$ $\quad -433 \cdot 3 + 866 \cdot 1.5 = -1299 + 1299 = 0$

Es. 3C



CARICO DISTRIBUITO LINEARMENTE:

CARICO × UNITÀ DI LUNGHEZZA

↓

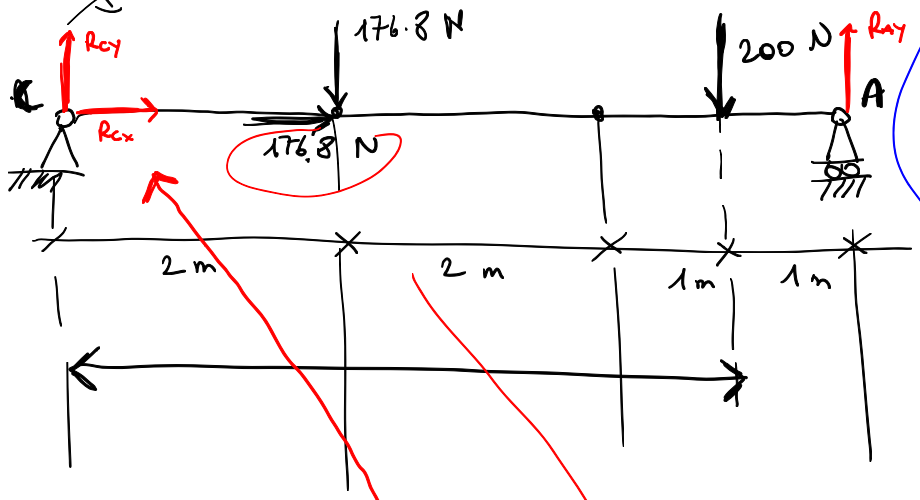
che ∀ (punto) m di lunghezza ho 100 N

Posso sostituire la distribuzione di carico con la sua risultante applicata nel baricentro della distribuzione.

↓

La risultante vale

$F = 100 \frac{N}{m} \cdot 2m = 200 N$



$G_x = G \cos 45° = 250 \frac{\sqrt{2}}{2} = 176.8$

$G_y = G \sin 45° = 176.8$

$= 250 \frac{\sqrt{2}}{2} =$

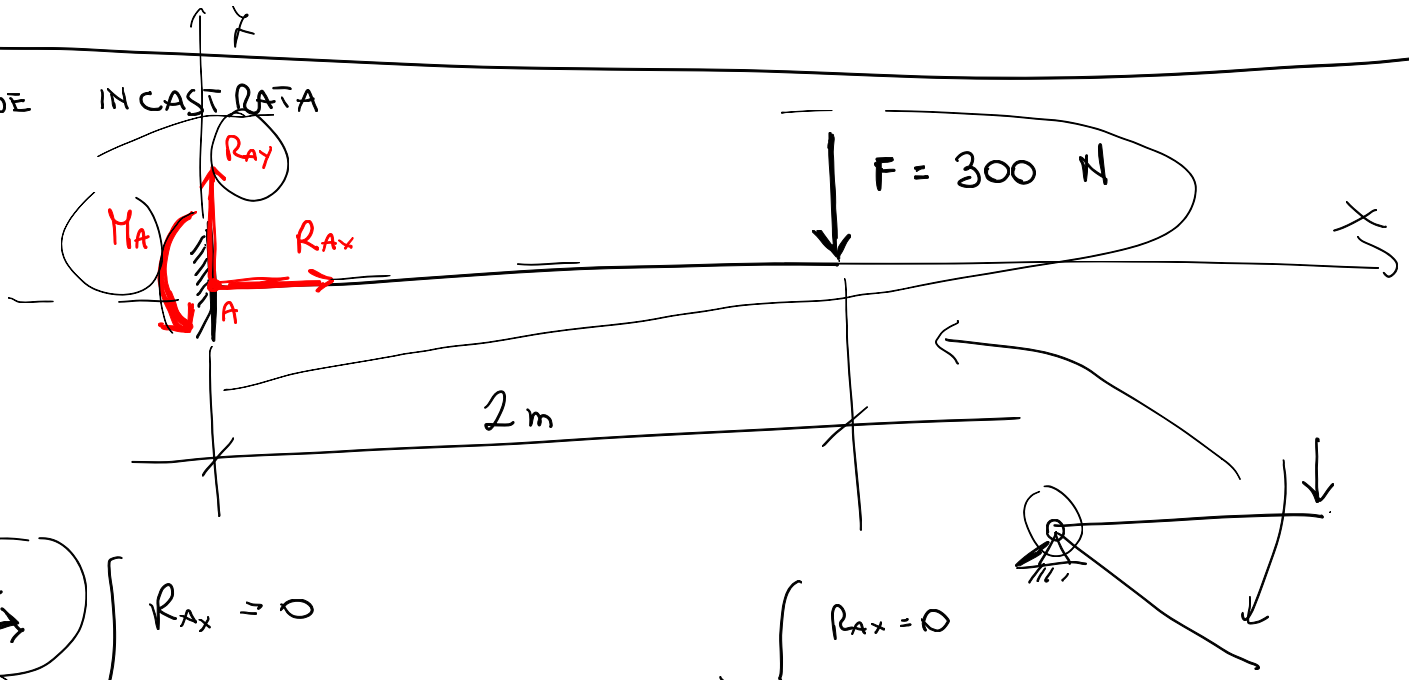
$$\begin{cases} R_{cx} + 176.8\ N = 0 \\ R_{cy} - 176.8\ N - 200\ N + R_{Ay} = 0 \\ -176.8\ N \cdot 2m - 200\ N \cdot 5m + R_{Ay} \cdot 6m = 0 \end{cases} \Rightarrow$$

$$\Rightarrow \begin{cases} R_{cx} = -176.8\ N \\ R_{cy} = 176.8\ N + 200\ N - R_{Ay} = 176.8\ N + 200\ N - 225.6\ N = 151.2\ N \\ R_{Ay} = \dfrac{176.8\ N \cdot 2m + 200\ N \cdot 5m}{6m} = 225.6\ N \end{cases}$$

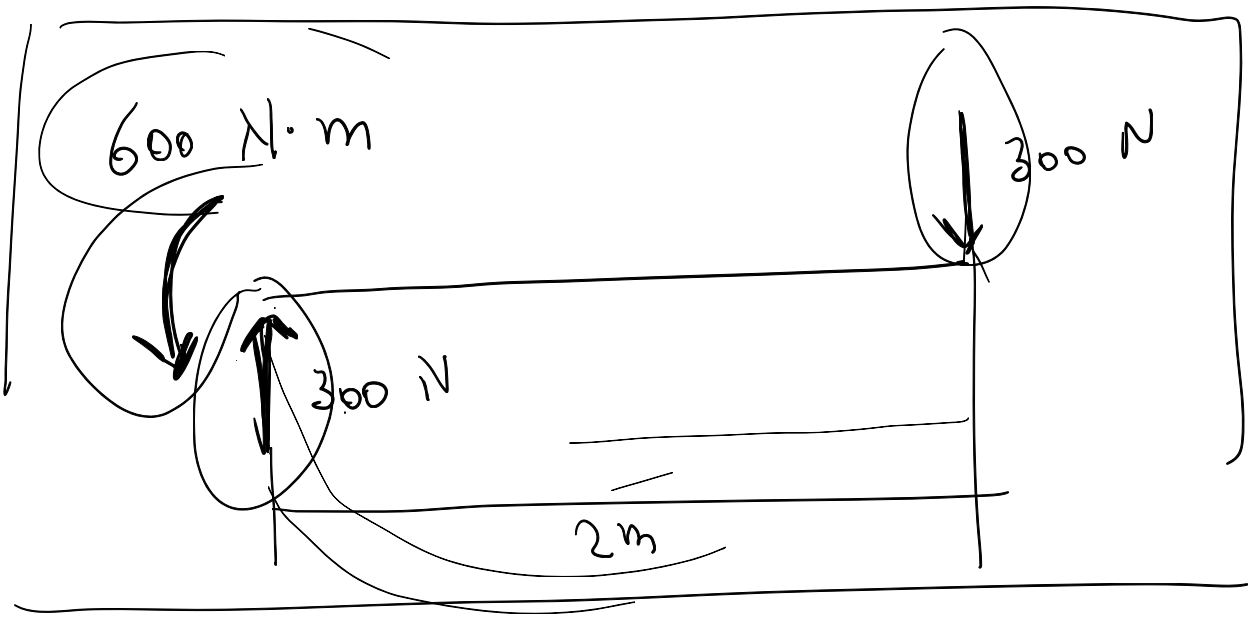
$$\begin{cases} R_{cx} = -176.8\ N \\ R_{cy} = 131.2\ N \\ R_{Ay} = 225.6\ N \end{cases}$$

-176.8 → = 176.8 ←

TRAVE INCASTRATA



$$\begin{cases} \rightarrow^{+} & R_{Ax} = 0 \\ \uparrow^{+} & R_{Ay} - 300\ N = 0 \\ A)^{+} & M_A - 300\ N \cdot 2m = 0 \end{cases} \Rightarrow \begin{cases} R_{Ax} = 0 \\ R_{Ay} = 300\ N \\ M_A = 600\ N \cdot m \end{cases}$$



$$\begin{cases} 1e - 1b - 1c \\ 2e - 2b - 2c \end{cases}$$

7 : 8

→