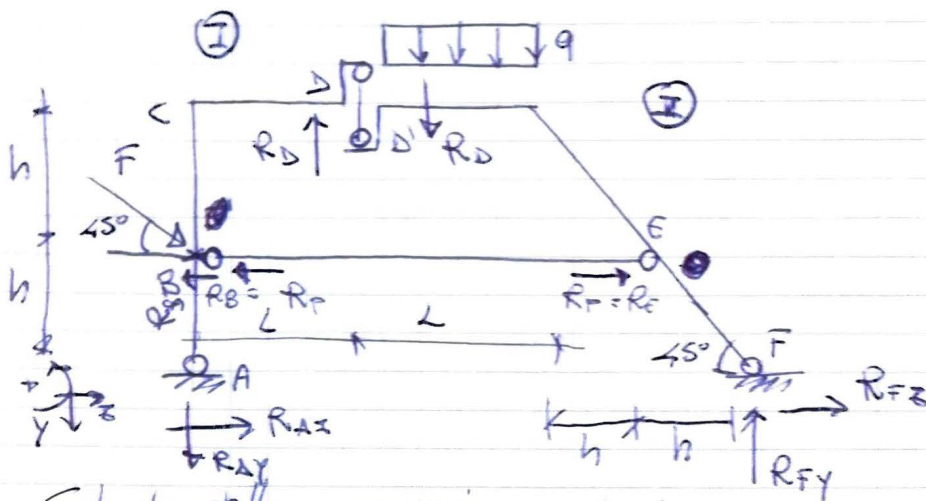


Esercizio 3 - Aste inclinate e pendole interne $i-l = s-3t$



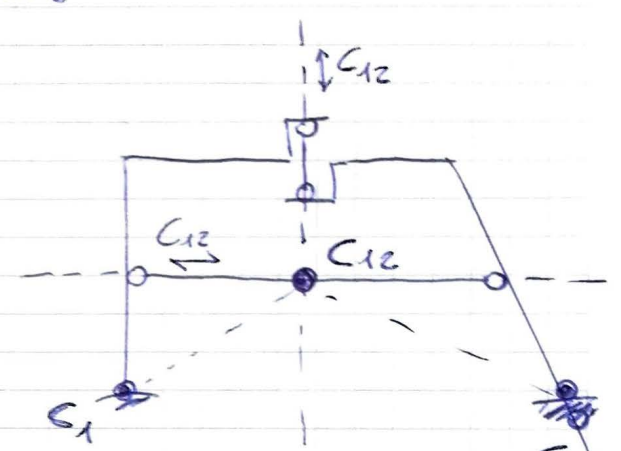
$3t = 6$
 $S = 6$
 $s - 3t = 0$

$i - l = 0$
 \downarrow
 con coteno cinematiche

Calcolo delle reazioni vincolari

I tronco

$$\left\{ \begin{array}{l} \downarrow) R_{Ay} + \frac{\sqrt{2}}{2} F - R_D = 0 \\ \rightarrow) R_{Ax} + \frac{\sqrt{2}}{2} F - R_B = 0 \\ \curvearrowright) R_B h + R_D L = 0 \end{array} \right.$$



non allineati \Rightarrow non labile
 $l = 0 \Rightarrow i = 0$
 sistema \neq isostatico

II tronco

$$\left\{ \begin{array}{l} \downarrow) R_D + qL - R_{Fy} = 0 \\ \rightarrow) R_E + R_{Fz} = 0 \\ \curvearrowright) R_D(L + 2h) + qL\left(\frac{L}{2} + 2h\right) - R_E h = 0 \end{array} \right.$$

Determiniamo quindi la matrice statica

$$\begin{bmatrix}
 1 & 0 & 0 & -1 & 0 & 0 \\
 0 & 1 & -1 & 0 & 0 & 0 \\
 0 & 0 & h & L & 0 & 0 \\
 0 & 0 & 0 & 1 & -1 & 0 \\
 0 & 0 & 1 & 0 & 0 & 1 \\
 0 & 0 & L+2h & -h & 0 & 0
 \end{bmatrix}
 \begin{bmatrix}
 R_{AY} \\
 R_{AZ} \\
 R_P \\
 R_D \\
 R_{FY} \\
 R_{FZ}
 \end{bmatrix}
 +
 \begin{bmatrix}
 \sqrt{\frac{3}{2}} F \\
 \sqrt{\frac{3}{2}} F \\
 0 \\
 qL \\
 0 \\
 qL(\frac{L}{2} + 2h)
 \end{bmatrix}
 = 0$$