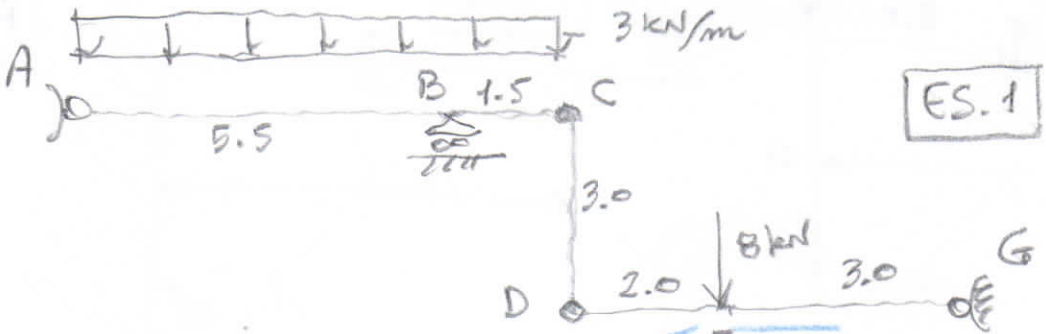
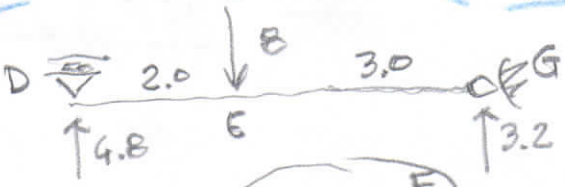
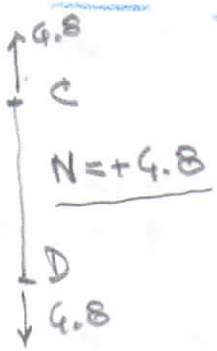
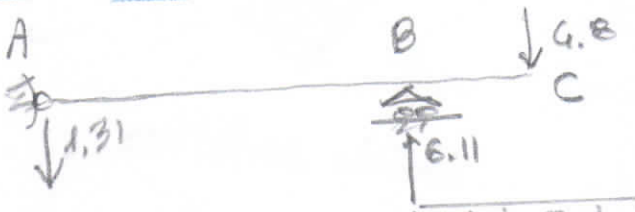
ES. 1

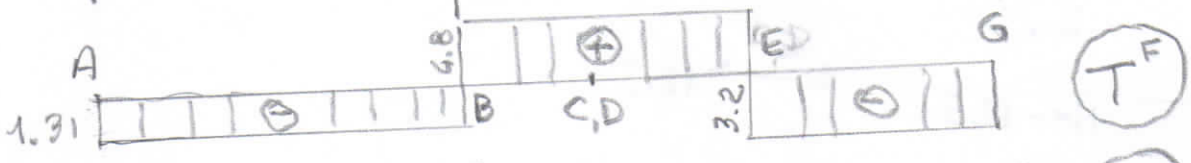




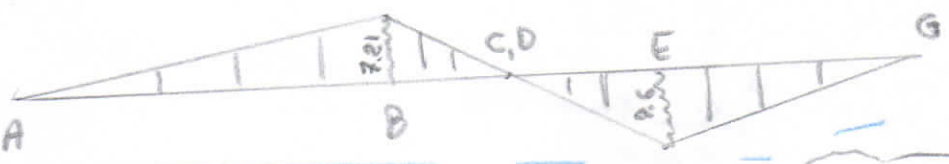
Reazioni F







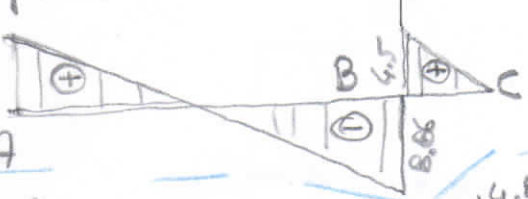
T^F



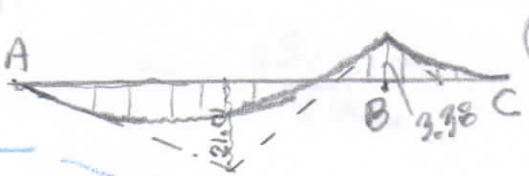
M^F

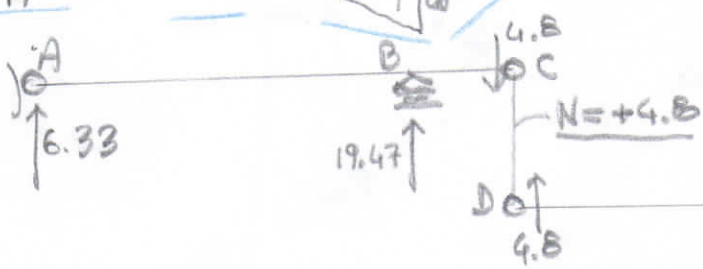
Reazioni q

T^q

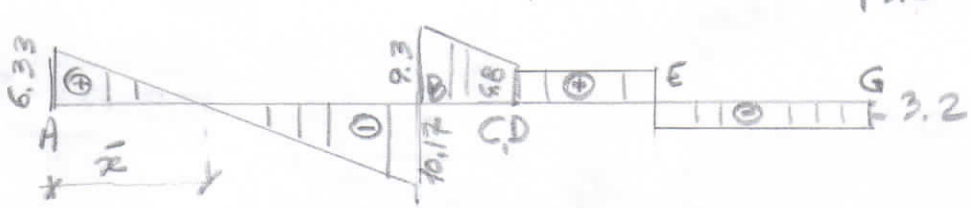


M^q

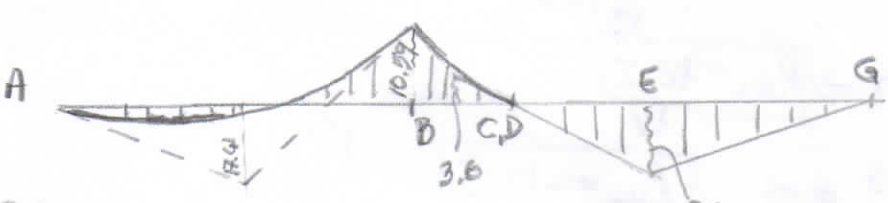




R^{b-f}



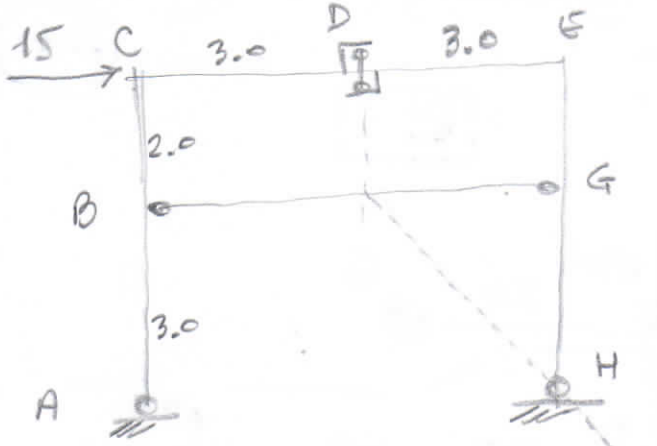
T^{tot}

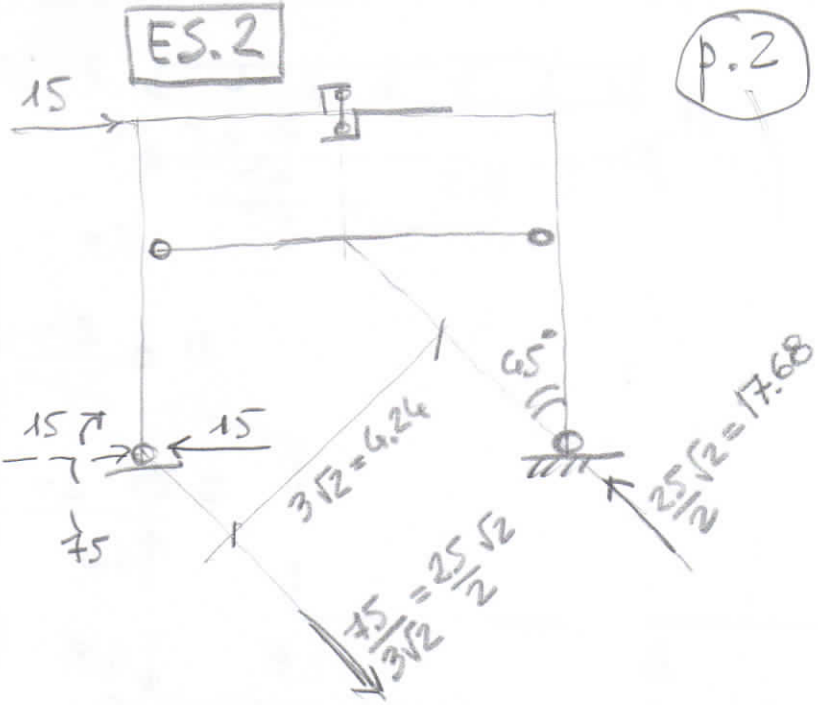


M^{tot}

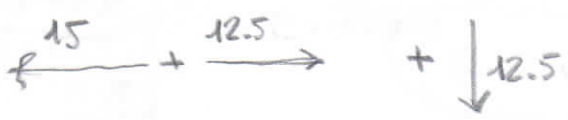
$6.33 - 3\bar{z} = 0 \Rightarrow \bar{z} = 2.11\ m \qquad M(\bar{z}) = 6.33 \times 2.11/2 = 6.68\ kNm$

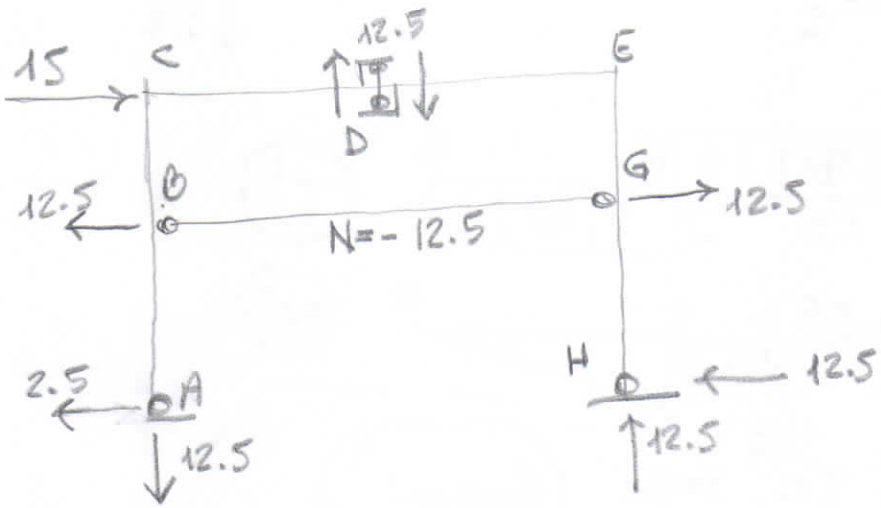
ES. 2



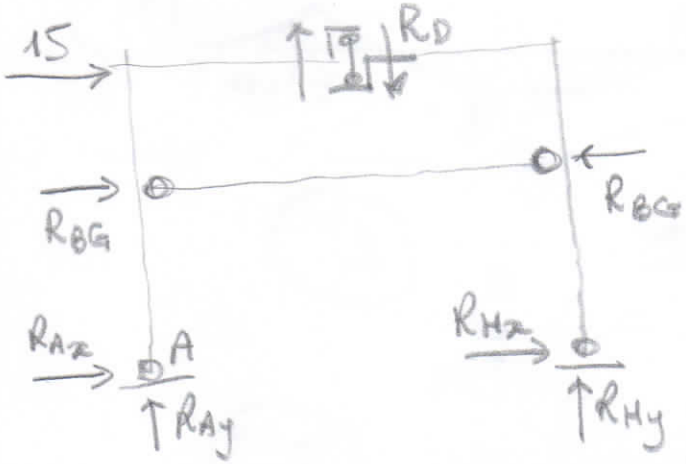


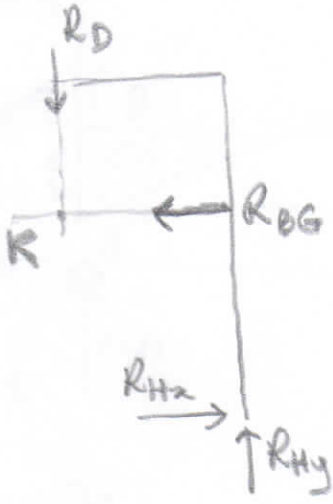
Metodo sintetico





Metodo eq. ausil.





$R_{Ax} + 15 + R_{Hx} = 0$

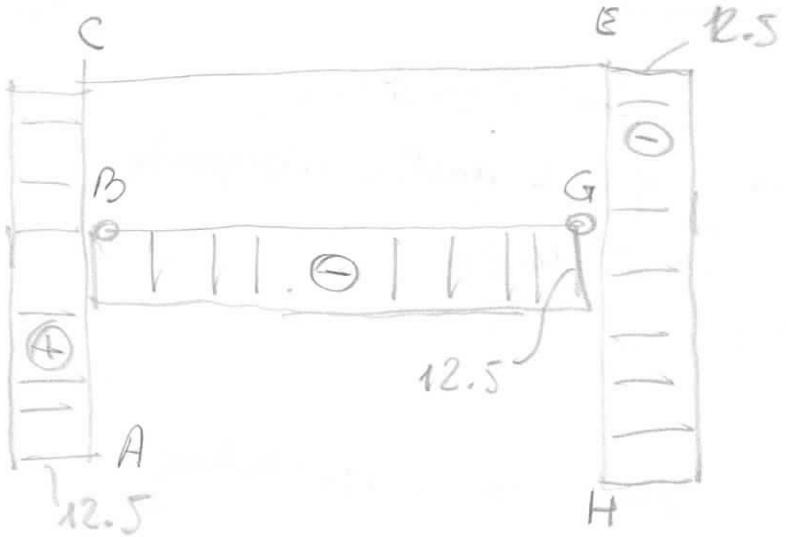
$R_{Ay} + R_{Hy} = 0$

A) $-15 \times 5 + R_{Hy} \times 6 = 0 \Rightarrow$ $R_{Hy} = 12.5$

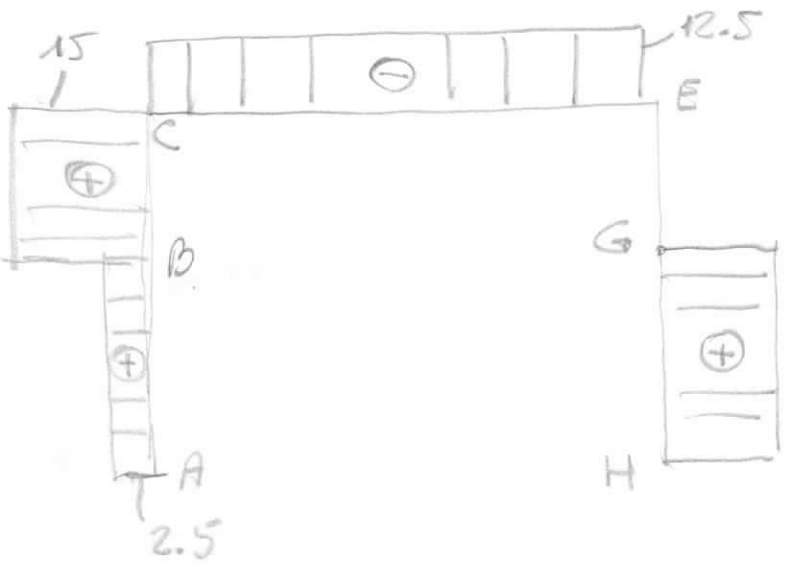
$R_{Ay} = -12.5$

$R_{Ax} = 12.5 - 15 = -2.5$

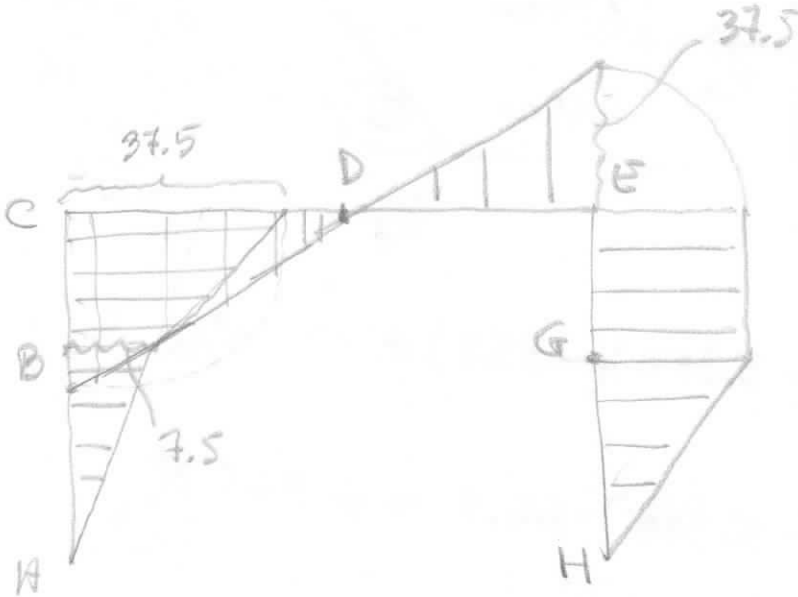
K^{dx}) $R_{Hx} \times 3 + R_{Hy} \times 3 = 0$ $\Rightarrow$ $R_{Hx} = -12.5$



N

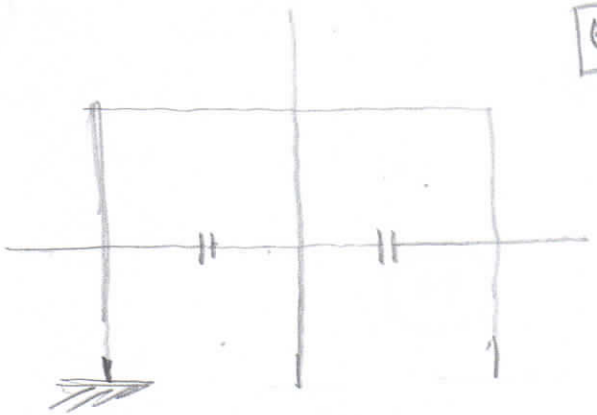


T

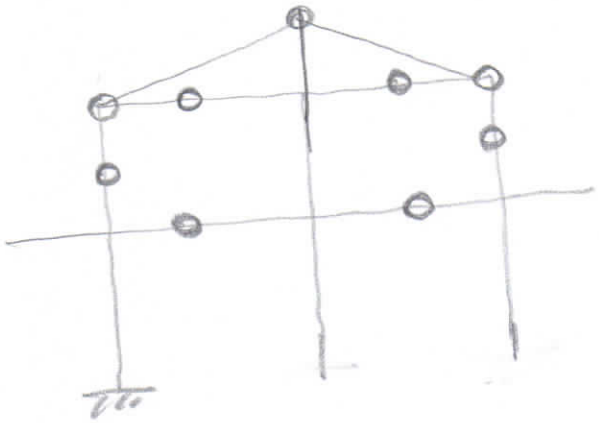


M

ES.3

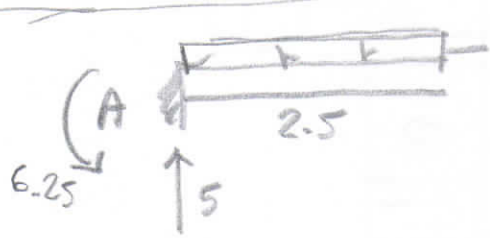


Così è isostatica, quindi quella assegnata è 14 cp

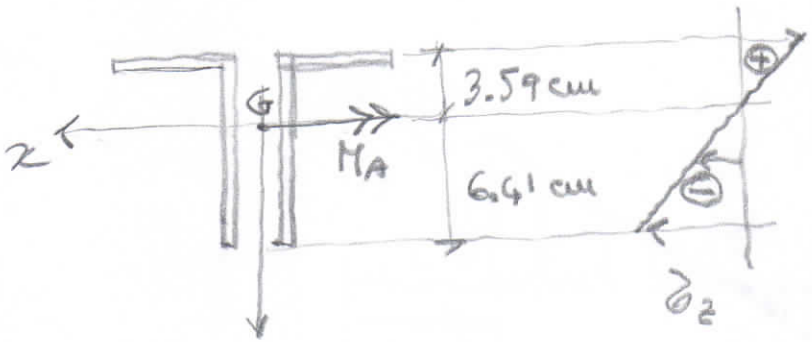


Anche così è isostatica

ES.4



$|M_A| = 6.25\ kNm$



$$\sigma_z = \underbrace{\frac{-6.25\times10^6}{2.116\times10^9}}_{L_{\frac{N}{mm^2}}} y = -2.694\, y$$

$$\sigma_z^{max} = (-2.694)(-35.9) = 97\ N/mm^2$$

$$\sigma_z^{min} = (-2.694)\cdot 64.1 = -173\ \frac{N}{mm^2}$$