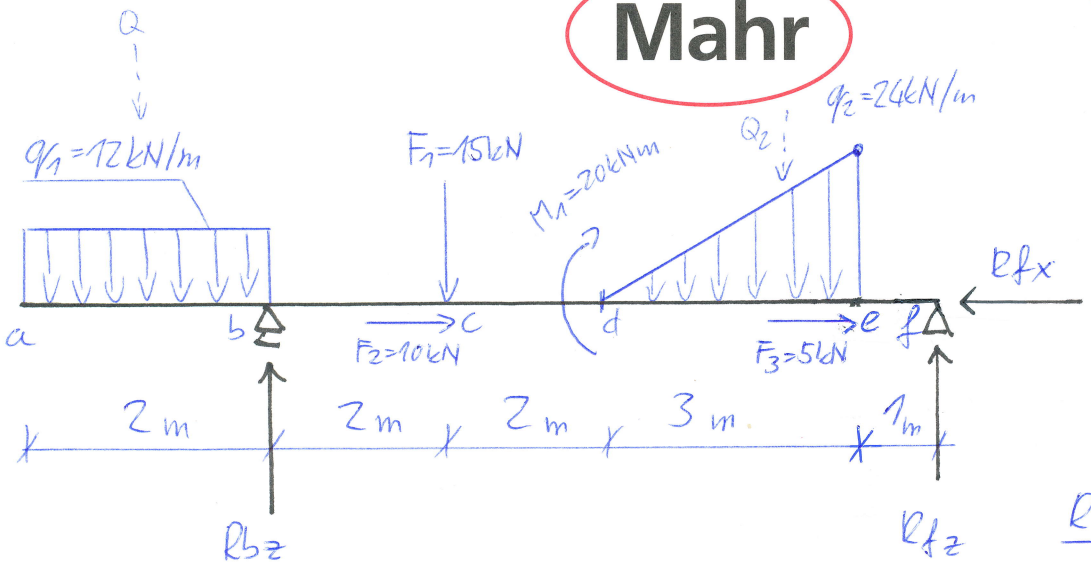
Mahr



$\Sigma F_{ix} = 0$

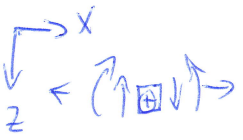
$10 + 5 - Rf_x = 0$

$\underline{Rf_x = 15\,kN}$

$\Sigma F_{iz} = 0$

$(12 \cdot 2) + Rb_z + 15 + (24 \cdot 3)/2 + Rf_z = 0$

$\underline{Rb_z + Rf_z = 75\,kN}$ ✓



$\Sigma M_{if}^{L} = 0$

$-(12 \cdot 2) \cdot 9 + Rb_z \cdot 8 - 15 \cdot 6 + 20 - \frac{24 \cdot 3}{2} \cdot 2 = 0$

$\underline{Rb_z = 44{,}75\,kN}$

$\Sigma M_{ib}^{L} = \Sigma M_{ib}^{P}$

$-(12 \cdot 2) \cdot 1 = -15 \cdot 2 - 20 - \frac{24 \cdot 3}{2} \cdot 6 + Rf_z \cdot 8$

$-24 = -266 + Rf_z \cdot 8$

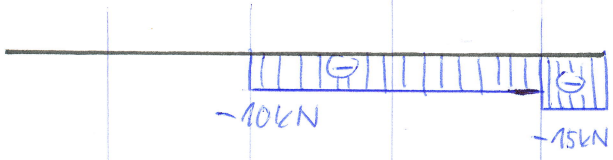
$\underline{Rf_z = 30{,}25\,kN}$

$\Sigma M_{ia}^{P} = 0$

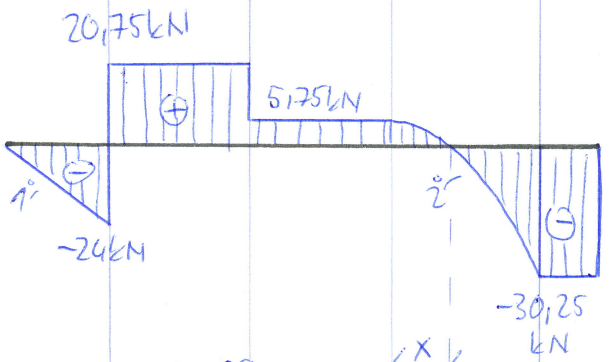
$0 = -(12 \cdot 2) \cdot 1 + Rb_z \cdot 2 - 15 \cdot 4 - 20 - \frac{24 \cdot 3}{2} \cdot 8 + Rf_z \cdot 10$

$\underline{0 = 0}$ ✓

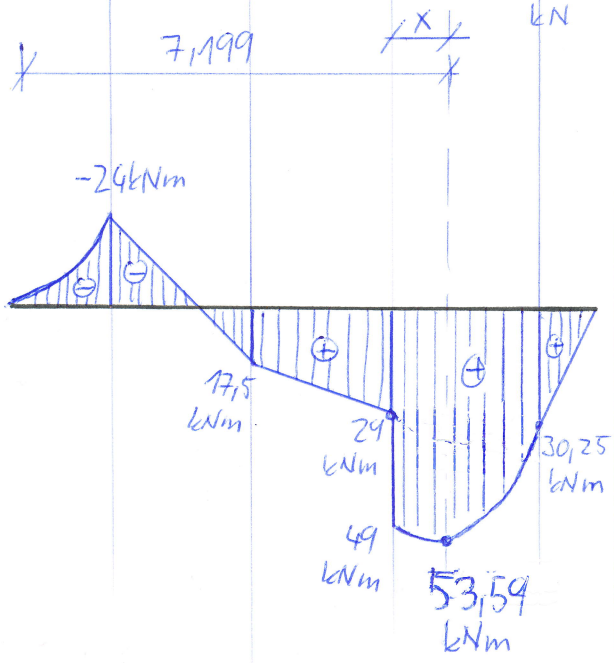
(N)



(V)



(M)



x:

$5{,}75 - q \frac{x}{2} \cdot x \cdot \frac{1}{2} = 0$

$5{,}75 - 24 \cdot \frac{x}{3} \cdot x \cdot \frac{1}{2} = 0$

$4x^2 = 5{,}75$

$\underline{x = 1{,}199\,m}$

$M_{max}^{L} = -12 \cdot 2 \cdot 6{,}199 + Rb_z \cdot 5{,}199 - 15 \cdot 3{,}199 + 20 - \frac{24 \cdot 1{,}199}{3} \cdot \frac{1{,}199}{2} \cdot \frac{1{,}199}{3}$

$= \underline{53{,}59\,kNm}$