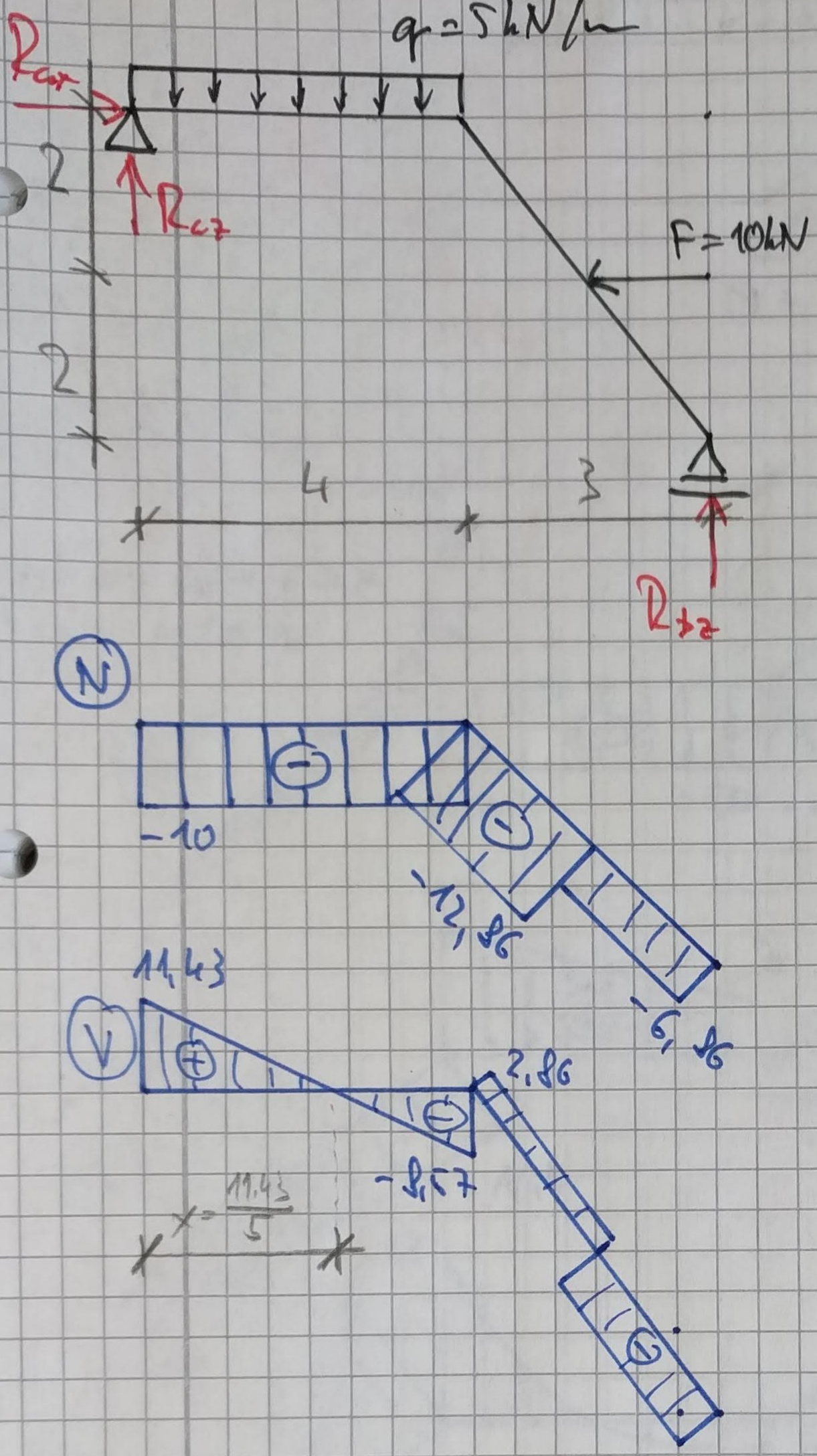


$$\sum F_{ix} = 0 : R_{ax} = 10\,kN$$

$$\sum M_{ia} = 0 : \circlearrowleft +$$

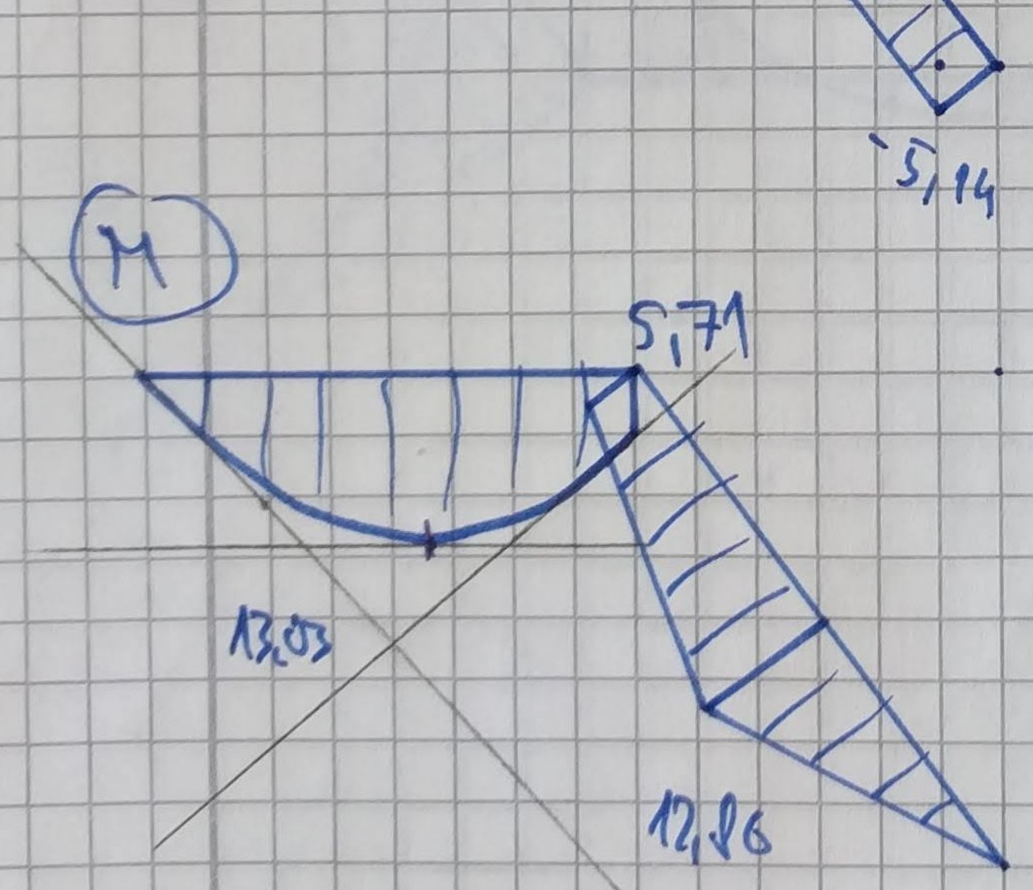
$$-q \cdot 4 \cdot 2 - F \cdot 2 + R_{bz} \cdot 7 = 0$$

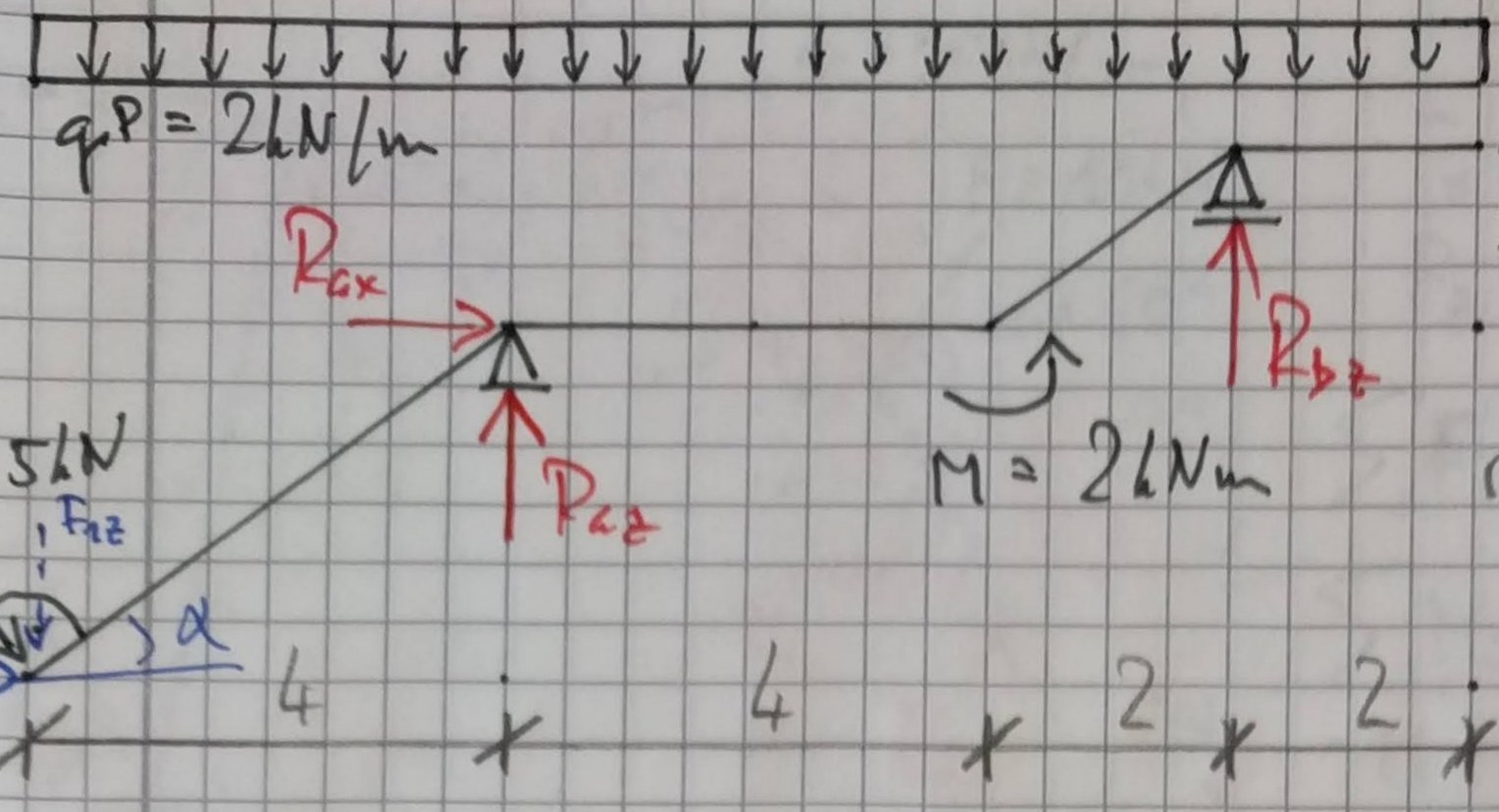
$$R_{bz} = 8{,}57\,kN\ (\uparrow)$$

$$\sum M_{ib} = 0 \circlearrowleft +$$

$$q \cdot 4 \cdot 5 + F \cdot 2 - R_{az} \cdot 7 - R_{ax} \cdot 4 = 0$$

$$R_{az} = 11{,}43\,kN\ (\uparrow)$$





$F_2 = 10kN$

$F_{1z} = 4kN$

$F_{1x} = 3kN$

$\alpha = \arctg\left(\frac{3}{4}\right)$

$\sum F_{ix} = 0$

$F_{1x} + R_{ax} - F_2 = 0$

$R_{ax} = 7kN \ (\rightarrow)$

$\sum M_{ia} = 0 \ (+)$

$F_{1z} \cdot 4 + F_{1x} \cdot 3 + M - q \cdot 12 \cdot 2 + F_2 \cdot 1,5 + R_{bz} \cdot 6 = 0$

$R_{bz} = 12kN \ (\uparrow)$

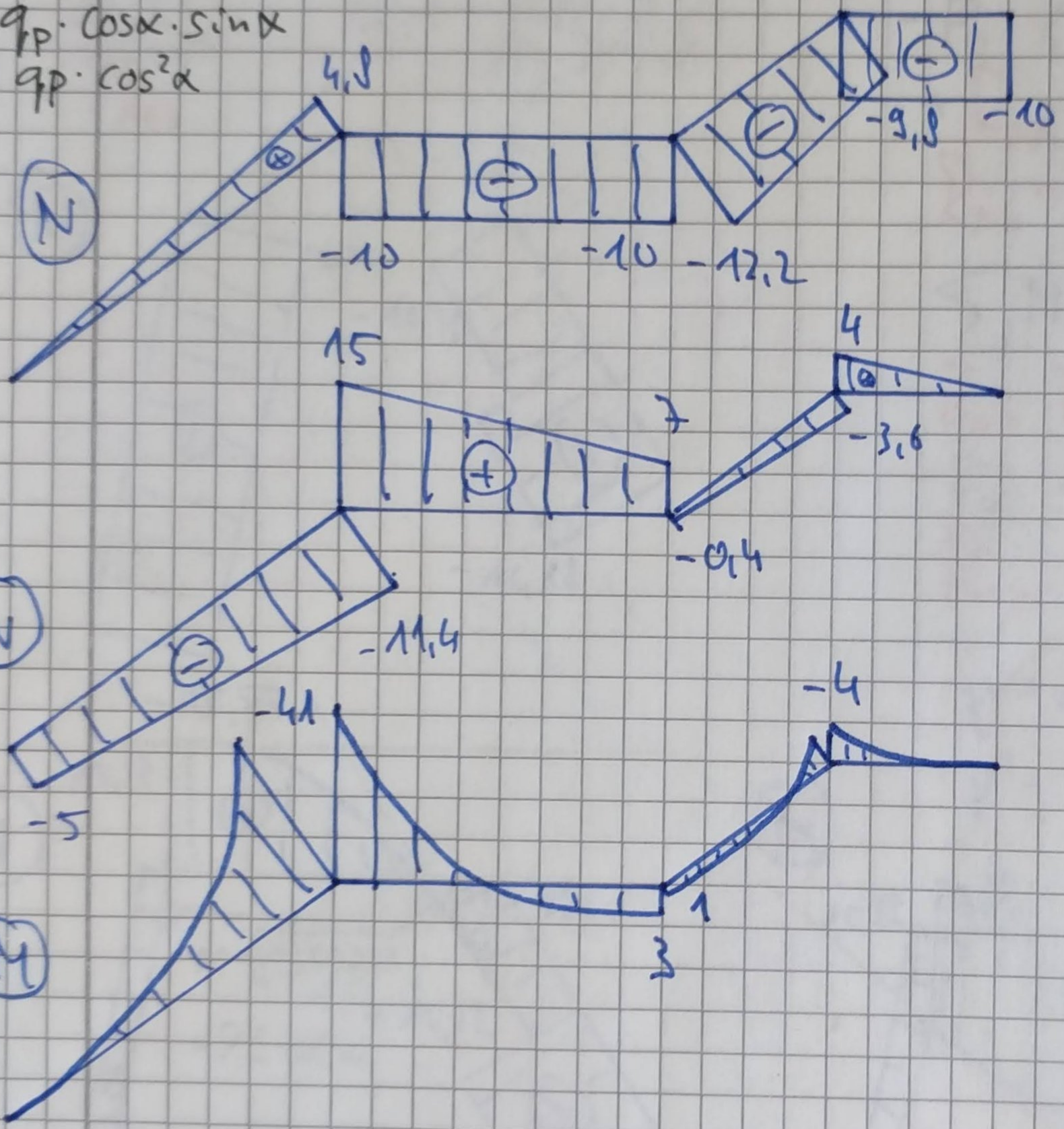
$\sum M_{ib} = 0 \ (+)$

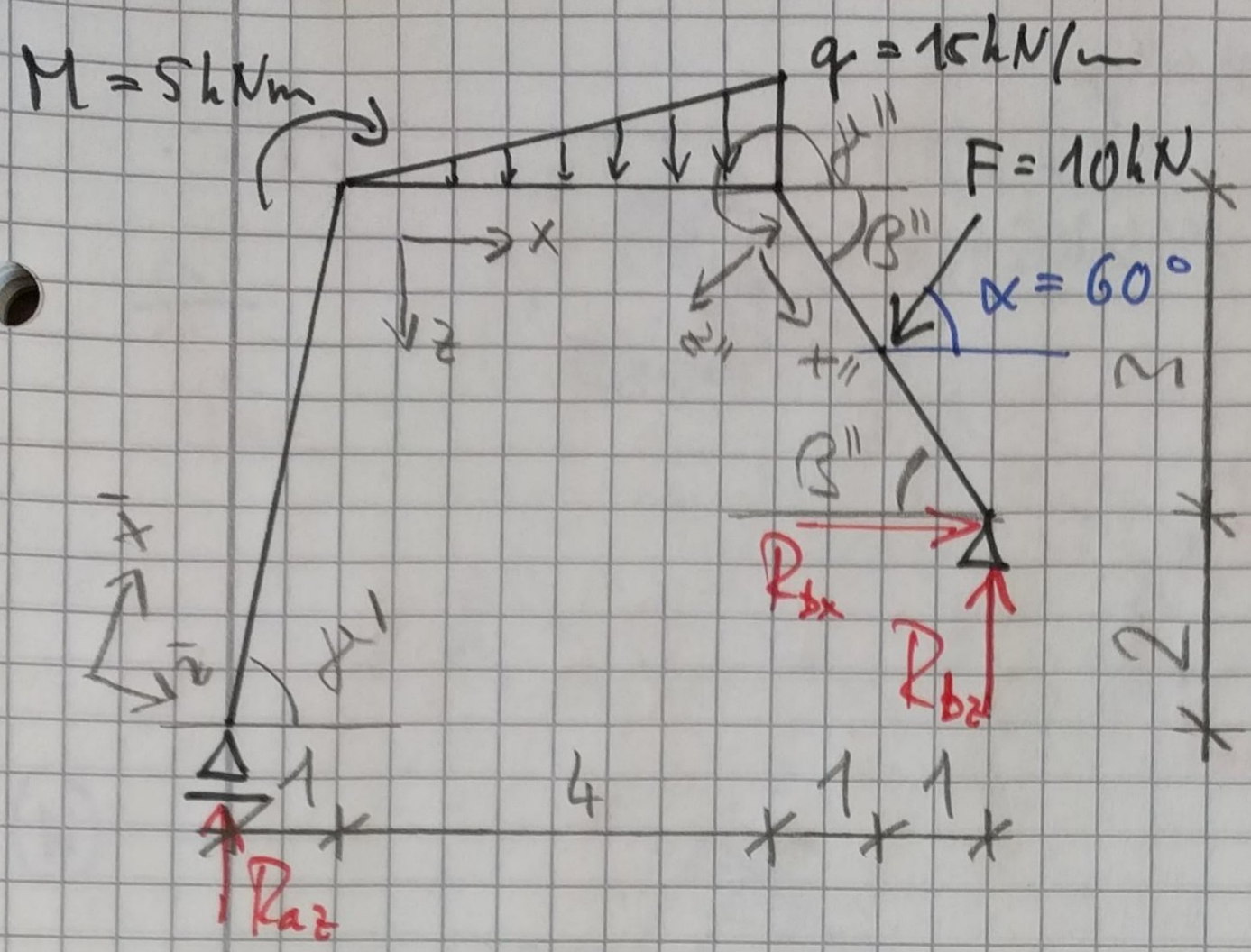
$F_{1z} \cdot 10 + F_{1x} \cdot 4,5 + M + R_{ax} \cdot 1,5 + q \cdot 12 \cdot 4 + R_{az} \cdot 6 = 0$

$R_{az} = 27kN \ (\uparrow)$

$h = q_P \cdot \cos\alpha \cdot \sin\alpha$

$q = q_P \cdot \cos^2\alpha$





$F_x = 5kN$

$F_z = 8,6603kN$

$\sum F_{ix} = 0 \quad R_{bx} = 5kN\ (\rightarrow)$

$\sum M_{ia} = 0 \quad (+)$

$-M - \frac{q \cdot 4}{2}\left(1 + 4 \cdot \frac{2}{3}\right) -$

$-F_z \cdot 6 + F_x \cdot 3,5 - R_{bx} \cdot 2 +$

$+ R_{bz} \cdot 7 = 0$

$R_{bz} = 22,758kN\ (\uparrow)$

$\sum M_{ib} = 0 \quad (+)$

$-R_{az} \cdot 7 - M + \frac{q \cdot 4}{2}\left(\frac{4}{3} + 2\right) -$

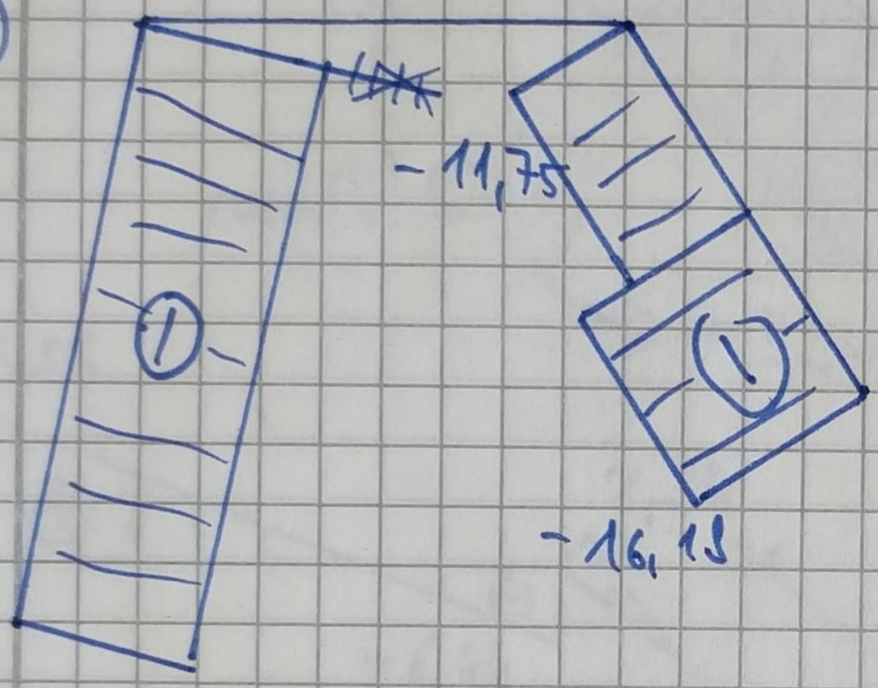
$-F_z \cdot 1 + F_x \cdot 1,5 = 0$

$R_{az} = 15,888kN\ (\uparrow)$

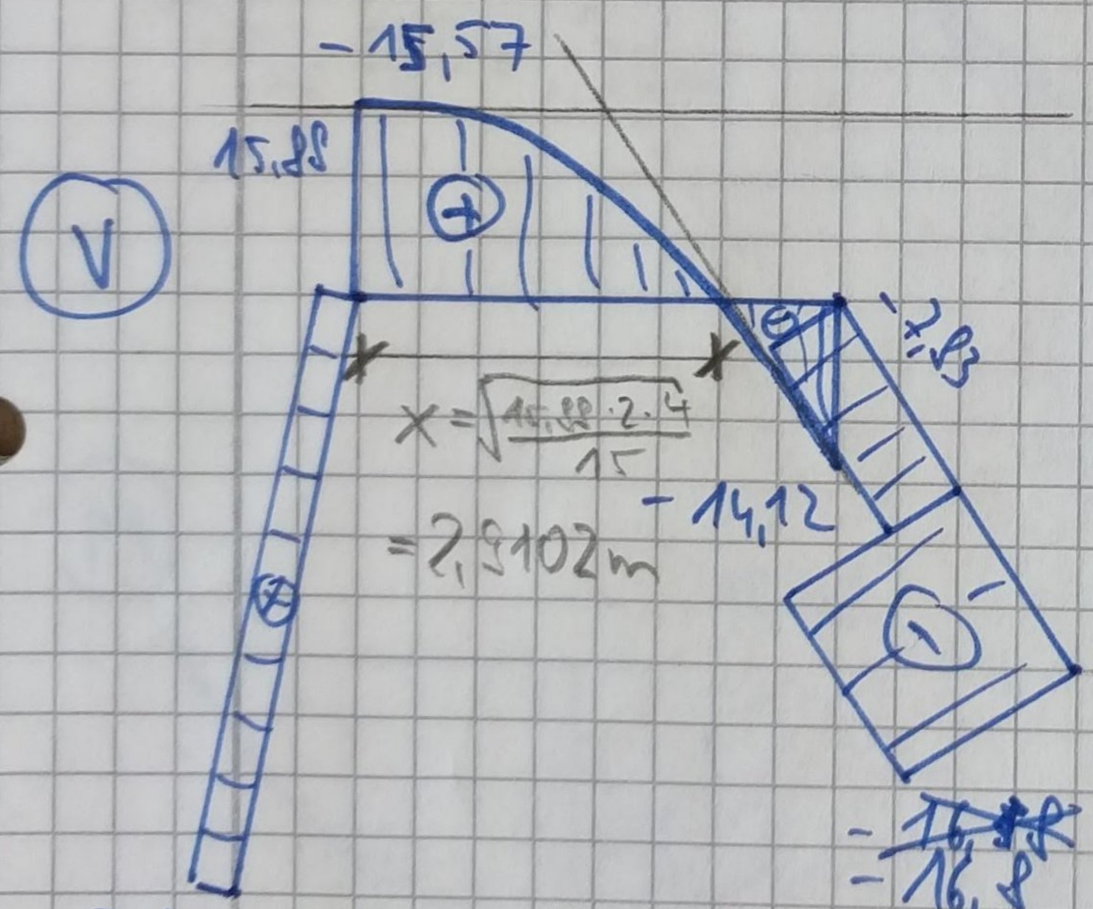
$\gamma' = \operatorname{arctg}\left(\frac{5}{1}\right) = 78,69°$

$\gamma'' = 360 - \operatorname{arctg}\left(\frac{5}{2}\right) = 303,69°$

(N)

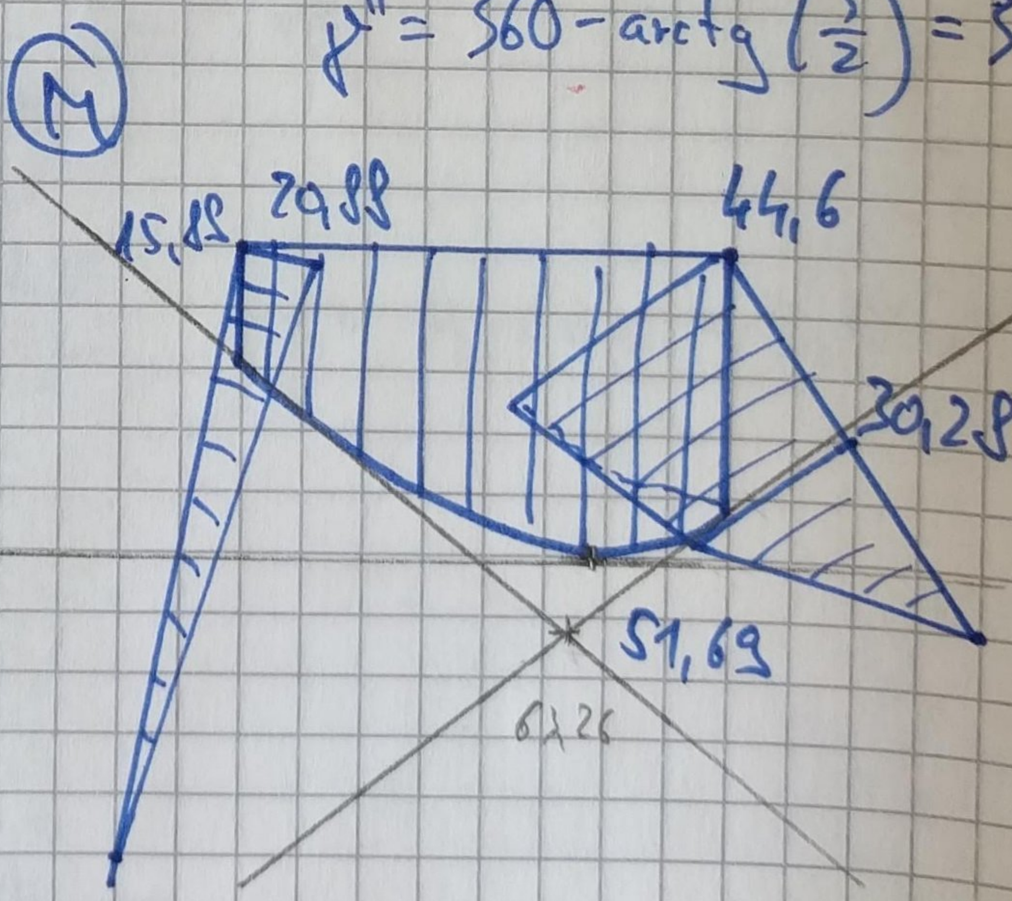


(V)



$x = \sqrt{\frac{15,88 \cdot 2,4}{15}} = 2,3102m$

(M)



$M_x = R_{az} \cdot (1 + x) - Q_x \cdot \frac{x}{3} =$

$= 15,88 \cdot 3,91 - 15,88 \cdot \frac{2,91}{3} = 51,69kNm$

$N^* = N \cos\gamma - V \sin\gamma$

$V^* = N \sin\gamma + V \cos\gamma$