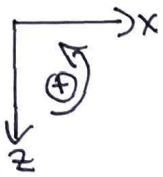
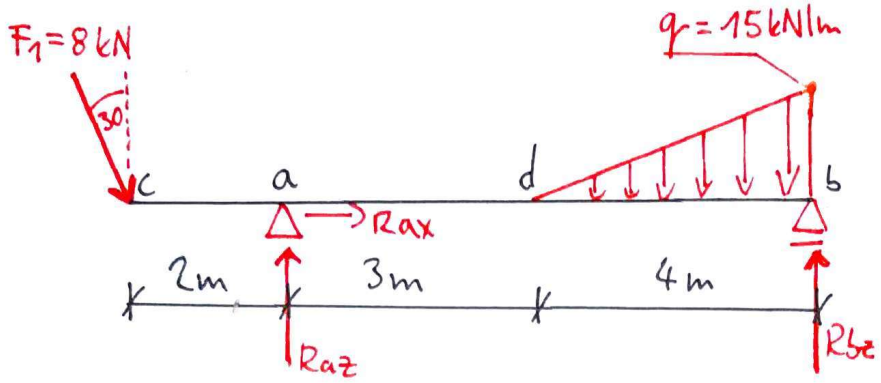


Mahr

$F_{1x} = F_1 \cdot \sin(30) = 4\ kN$

$F_{1z} = F_1 \cdot \cos(30) = 6{,}928\ kN$



$\sum F_{ix} = 0;$

$4 + R_{ax} = 0$

$R_{ax} = -4\ kN$

$\sum F_{iz} = 0;$

$6{,}928 - R_{az} + 15 \cdot 4/2 - R_{bz} = 0$

$R_{az} + R_{bz} = 36{,}928\ kN$ ✓

$\sum M_{ia} = 0;$

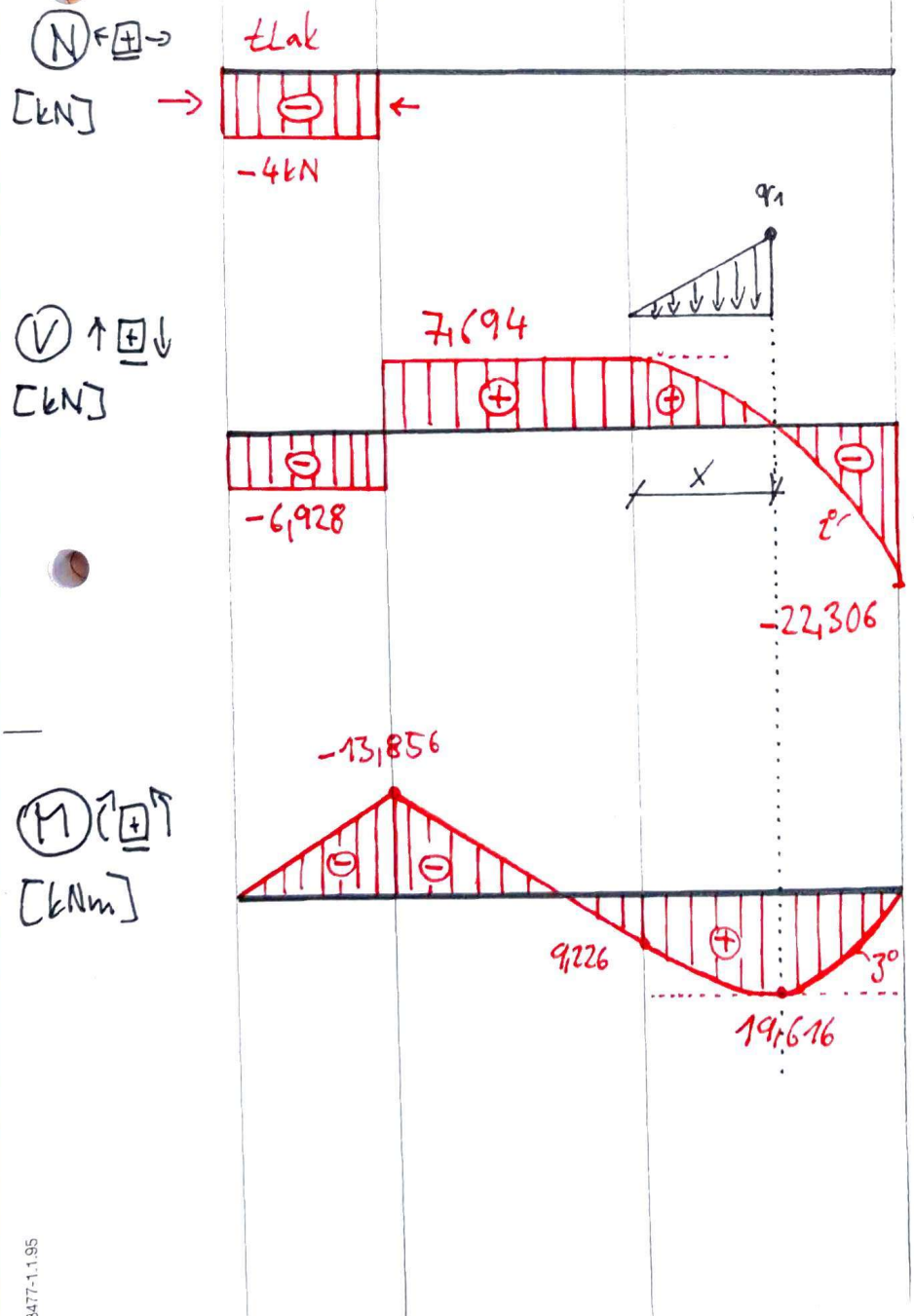
$6{,}928 \cdot 2 + R_{bz} \cdot 7 - 30 \cdot 5{,}667 = 0$

$R_{bz} = 22{,}308\ kN$

$\sum M_{ib} = 0;$

$6{,}928 \cdot 9 - R_{az} \cdot 7 + 30 \cdot \frac{1}{3} \cdot 4 = 0$

$R_{az} = 14{,}622\ kN$



x: $7{,}694 - \underbrace{q \cdot \frac{x}{\ell}}_{q_1} \cdot \frac{x}{2} = 0$

$7{,}694 - 15 \cdot \frac{x}{4} \cdot \frac{x}{2} = 0$

$7{,}694 - 1{,}875\,x^2 = 0$

$x = 2{,}026\ m$

Maximální moment:

$M_{max} = M(x) = -6{,}928 \cdot 7{,}026 + R_{az} \cdot 5{,}026 - q \cdot \frac{2{,}026}{4} \cdot \frac{2{,}026}{2} \cdot \frac{2{,}026}{3}$

$= 19{,}616\ kNm$