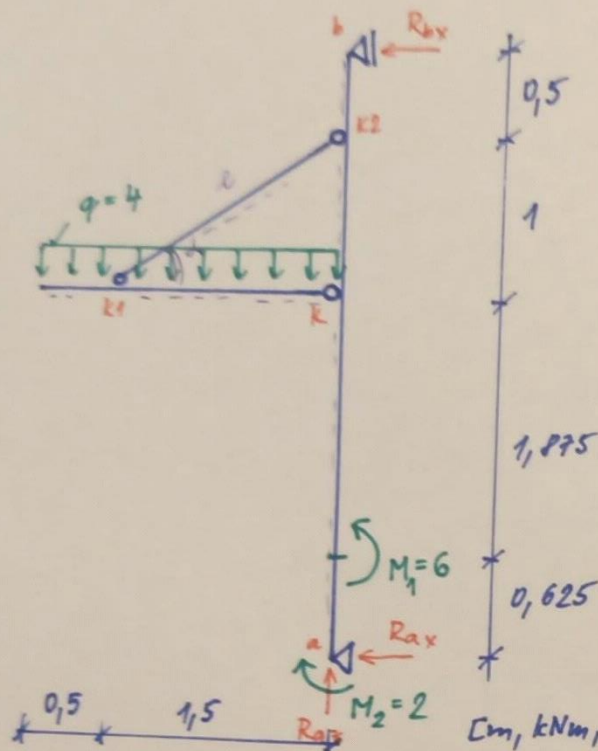


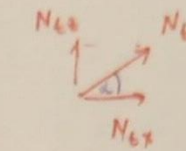


① $\sum M_{ia} = 0$
 $-M_2 + M_1 + R_{bx} \cdot 4 + q \cdot 2 \cdot 1 = 0$
 $R_{bx} = \frac{2 - 6 - 4 \cdot 2 \cdot 1}{4}$
 $R_{bx} = -3 \text{ kN } (\rightarrow)$

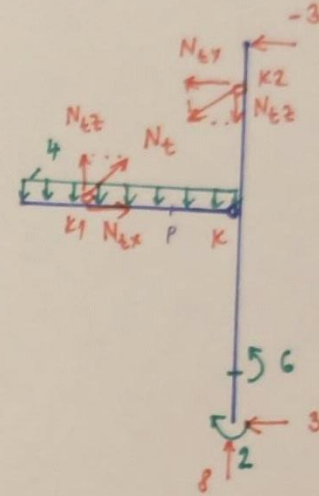
② $\sum M_{ib} = 0$
 $q \cdot 2 \cdot 1 + M_1 - M_2 - R_{ax} \cdot 4 = 0$
 $R_{ax} = \frac{4 \cdot 2 \cdot 1 + 6 - 2}{4}$
 $R_{ax} = 3 \text{ kN } (\leftarrow)$

KO: $\sum F_{ix} = 0$: $R_{bx} + R_{ax} = 0$
 $-3 + 3 = 0 \checkmark$

$\sum F_{iz} = 0$:
 $R_{az} - q \cdot 2 = 0$
 $R_{az} = 4 \cdot 2 = 8 \text{ kN } (\uparrow)$

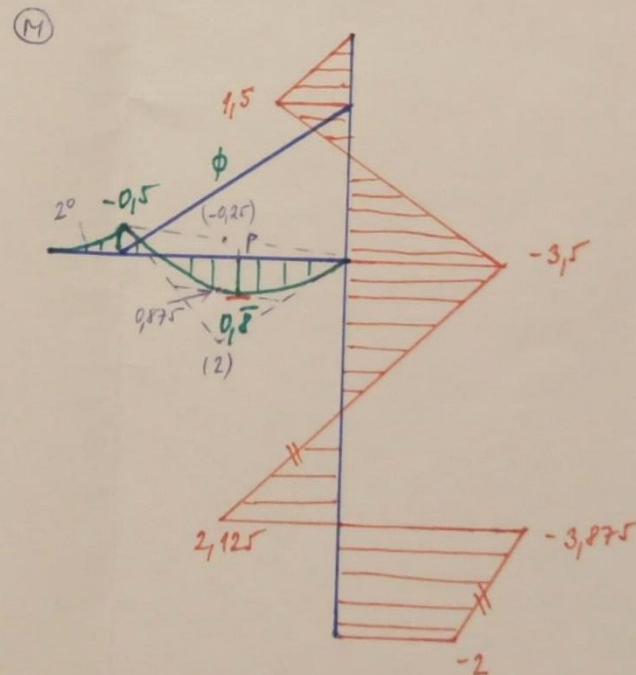
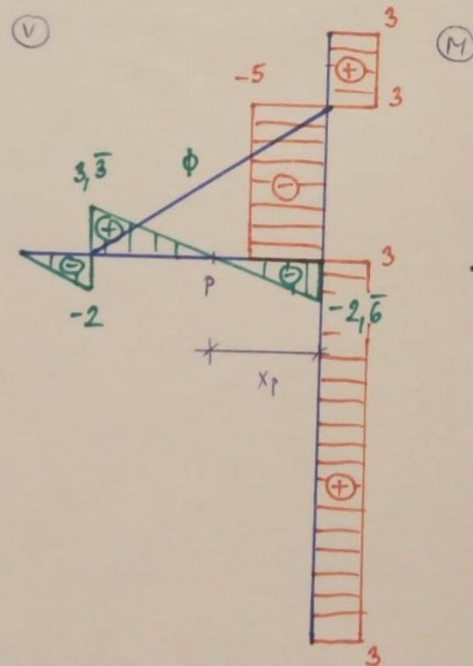
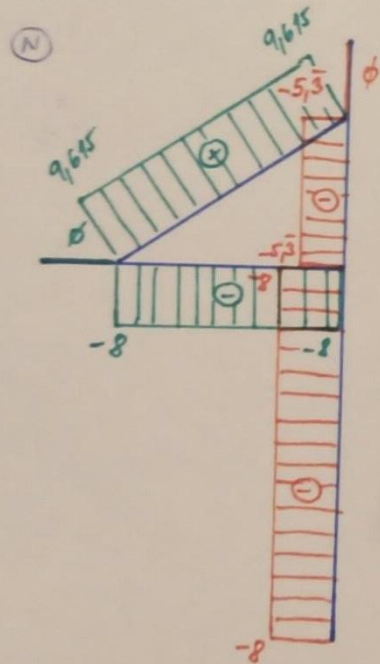


$l = \sqrt{1.5^2 + 1^2}$
 $l = \sqrt{3.25} \text{ m}$
 $\sin \alpha = \frac{1}{\sqrt{3.25}}$
 $\cos \alpha = \frac{1.5}{\sqrt{3.25}}$



③ $\sum M_{ik}^L = 0$
 $q \cdot 2 \cdot 1 - N_{tz} \cdot 1.5 = 0$
 $N_{tz} = \frac{4 \cdot 2 \cdot 1}{1.5} = 5.33 \text{ kN}$
 $N_t = \frac{N_{tz}}{\sin \alpha} = \frac{5.33}{\frac{1}{\sqrt{3.25}}} = 9.615 \text{ kN}$
 $N_{tx} = N_t \cdot \cos \alpha = 8 \text{ kN}$

④ KO: $\sum M_{ie}^P = 0$
 $R_{bx} \cdot 1.5 + N_{tx} \cdot 1 + M_1 - M_2 - R_{ax} \cdot 2.5 = 0$
 $N_{tx} = \frac{-(-3) \cdot 1.5 - 6 + 2 + 3 \cdot 2.5}{1}$
 $N_{tx} = 8 \text{ kN}$
 $N_t = \frac{N_{tx}}{\cos \alpha} = \frac{8}{\frac{1.5}{\sqrt{3.25}}} = 9.615 \text{ kN}$
 $N_{tz} = N_t \cdot \sin \alpha = 5.33 \text{ kN}$



$V_p = 0$:
 $-R_{az} + N_{tz} + q \cdot x_p = 0$
 $-8 + 5.33 + 4 \cdot x_p = 0$
 $x_p = 0.6 \text{ m} = \frac{2}{3} \text{ m}$

$M_p^L = -q \cdot (2 - \frac{2}{3})^2 \cdot \frac{1}{2} +$
 $+ N_{tz} \cdot (1.5 - \frac{2}{3}) =$
 $= -4 \cdot (2 - \frac{2}{3})^2 \cdot \frac{1}{2} + 5.33 \cdot (1.5 - \frac{2}{3}) =$
 $= 0.875 \text{ kNm}$

$f = \frac{1}{8} \cdot 4 \cdot 1.5^2 = 1.125$