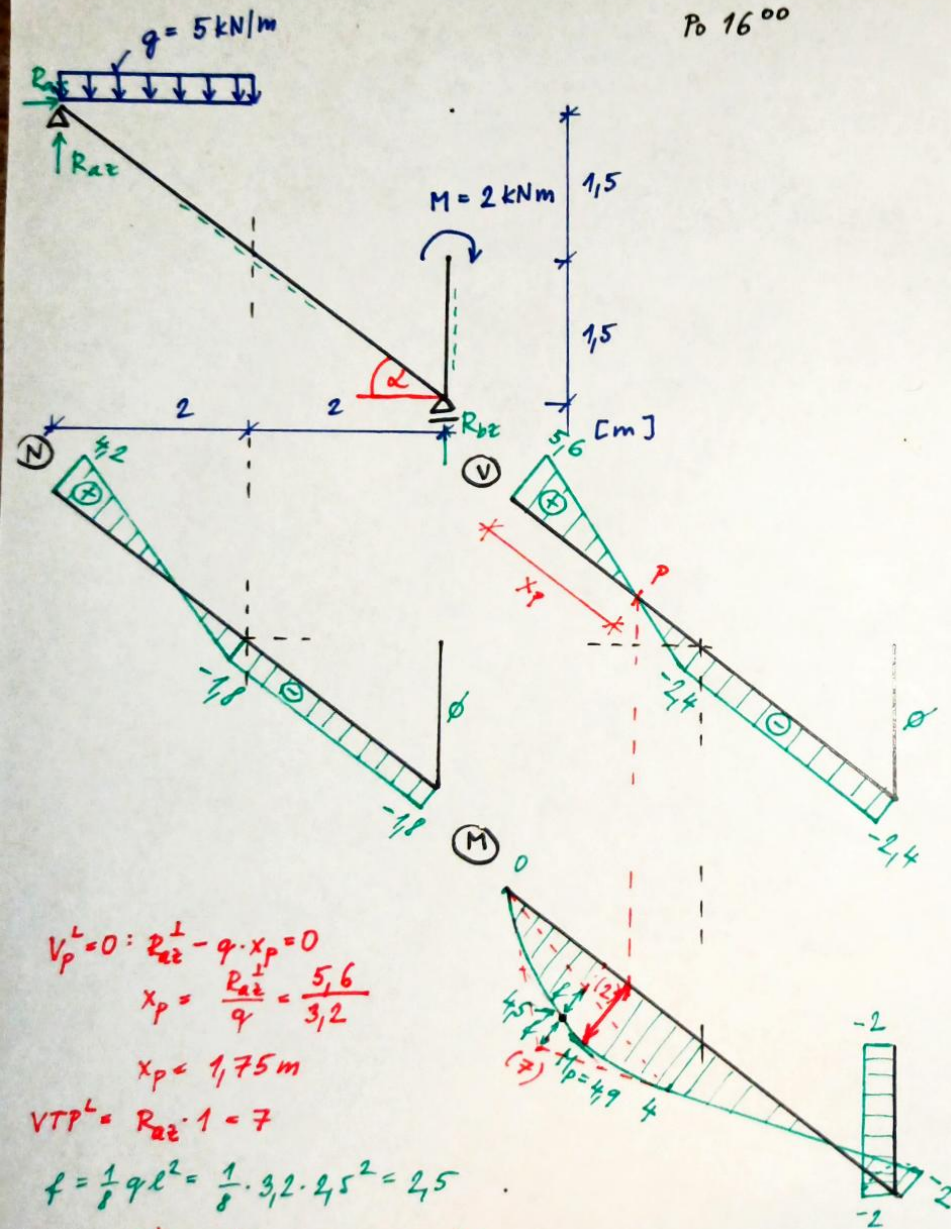




$$V_P^L = 0: R_{ax}^L - q \cdot x_P = 0$$

$$x_P = \frac{R_{ax}^L}{q} = \frac{5,6}{3,2}$$

$$x_P = 1,75 \text{ m}$$

$$VTP^L = R_{ax} \cdot 1 = 7$$

$$f = \frac{1}{8} q l^2 = \frac{1}{8} \cdot 3,2 \cdot 2,5^2 = 2,5$$

$$M_{max} = M_P^L = R_{ax}^L \cdot x_P - q \cdot x_P \cdot \frac{x_P}{2} =$$

$$= 5,6 \cdot 1,75 - 3,2 \cdot \frac{1,75^2}{2} = 4,9 \text{ kNm}$$

$$\oplus \sum F_{ix} = 0: \underline{R_{ax} = 0}$$

$$\oplus \sum M_{ia} = 0: -q \cdot 2 \cdot 1 + R_{bx} \cdot 4 - M = 0$$

$$\underline{R_{bx} = \frac{5 \cdot 2 \cdot 1 + 2}{4} = 3 \text{ kN}}$$

$$\oplus \sum M_{ib} = 0: -R_{ax} \cdot 4 - R_{ax} \cdot 3 + q \cdot 2 \cdot 3 - M = 0$$

$$\underline{R_{ax} = \frac{-0 \cdot 3 + 5 \cdot 2 \cdot 3 - 2}{4} = 7 \text{ kN}}$$

$$K: \sum F_{iz} = 0: R_{az} - q \cdot 2 + R_{bz} = 0 \rightarrow 7 - 5 \cdot 2 + 3 = 0 \checkmark$$

$g = g'$
 $g \cdot 2 = g' \cdot l$
 $g' = \frac{g \cdot 2}{l} = \frac{5 \cdot 2}{2,5} = 4 \text{ kN/m}$

$l = \sqrt{2^2 + 1,5^2} = 2,5 \text{ m}$
 $\sin \alpha = \frac{1,5}{2,5} = 0,6$
 $\cos \alpha = \frac{2}{2,5} = 0,8$

$q = g' \cdot \cos \alpha = 4 \cdot 0,8 = 3,2 \text{ kN/m}$
 $n = g' \cdot \sin \alpha = 4 \cdot 0,6 = 2,4 \text{ kN/m}$

$$R_{ax}^L = R_{ax} \cdot \cos \alpha = 7 \cdot 0,8 = 5,6 \text{ kN}$$

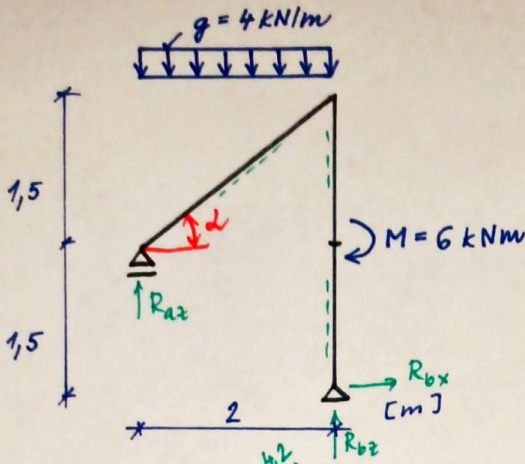
$$R_{az}^L = R_{ax} \cdot \sin \alpha = 7 \cdot 0,6 = 4,2 \text{ kN}$$



$$R_{bx}^L = R_{bx} \cdot \cos \alpha = 3 \cdot 0,8 = 2,4 \text{ kN}$$

$$R_{bz}^L = R_{bx} \cdot \sin \alpha = 3 \cdot 0,6 = 1,8 \text{ kN}$$





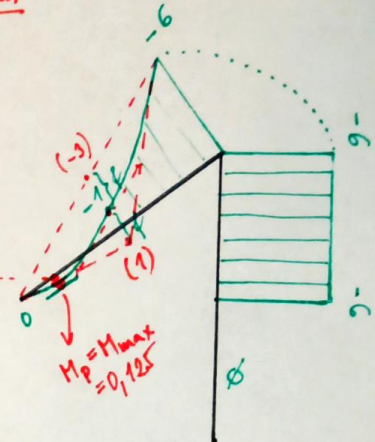
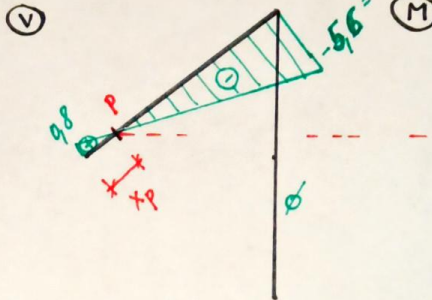
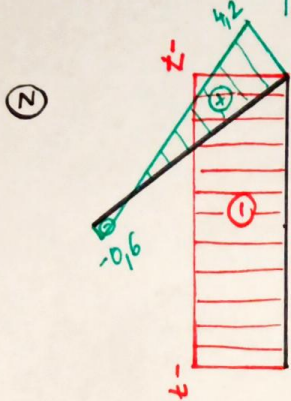
$$V_P^L = 0: R_{ax}^L - q \cdot x_P = 0$$

$$x_P = \frac{R_{ax}^L}{q} = \frac{q \cdot l}{q} = \frac{q \cdot l}{2 \cdot q} = 0,3125 \text{ m}$$

$$VTP^L = R_{ax} \cdot 1 = 1 \cdot 1 = 1$$

$$f = \frac{1}{8} q l^2 = \frac{1}{8} \cdot 4 \cdot 2,5^2 = 2$$

$$M_{max} = M_P^L = R_{ax}^L \cdot x_P - q \cdot \frac{x_P^2}{2} = 4 \cdot 0,3125 - 4 \cdot \frac{0,3125^2}{2} = 0,125 \text{ kNm}$$



$$\oplus \sum F_{ix} = 0: R_{bx} = 0$$

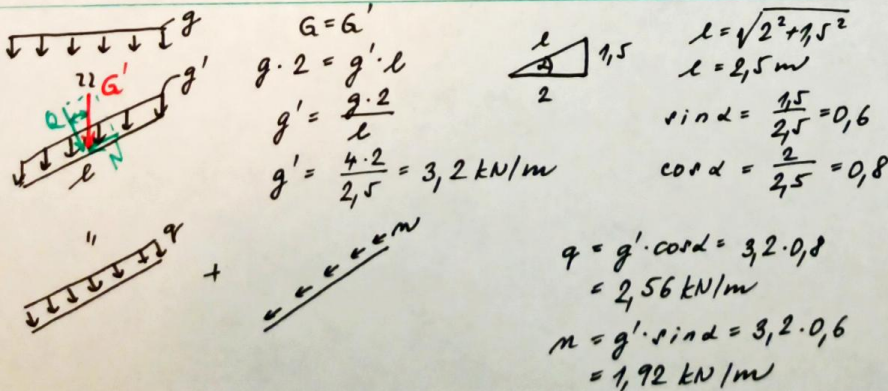
$$\oplus \sum M_{ia} = 0: -q \cdot 2 \cdot 1 - M + R_{bz} \cdot 2 + R_{bx} \cdot 1,5 = 0$$

$$R_{bz} = \frac{4 \cdot 2 \cdot 1 + 6 - 0 \cdot 1,5}{2} = 7 \text{ kN}$$

$$\oplus \sum M_{ib} = 0: -R_{ax} \cdot 2 + q \cdot 2 \cdot 1 - M = 0$$

$$R_{ax} = \frac{4 \cdot 2 \cdot 1 - 6}{2} = 1 \text{ kN}$$

$$K: \sum F_{iz} = 0: R_{ax} - q \cdot 2 + R_{bz} = 0 \rightarrow 1 - 4 \cdot 2 + 7 = 0 \checkmark$$



$$R_{ax}'' = R_{ax} \cdot \cos \alpha = 1 \cdot 0,8 = 0,8 \text{ kN}$$

$$R_{ax}' = R_{ax} \cdot \sin \alpha = 1 \cdot 0,6 = 0,6 \text{ kN}$$

$$R_{bz}' = R_{bz} \cdot \cos \alpha = 7 \cdot 0,8 = 5,6 \text{ kN}$$

$$R_{bz}'' = R_{bz} \cdot \sin \alpha = 7 \cdot 0,6 = 4,2 \text{ kN}$$