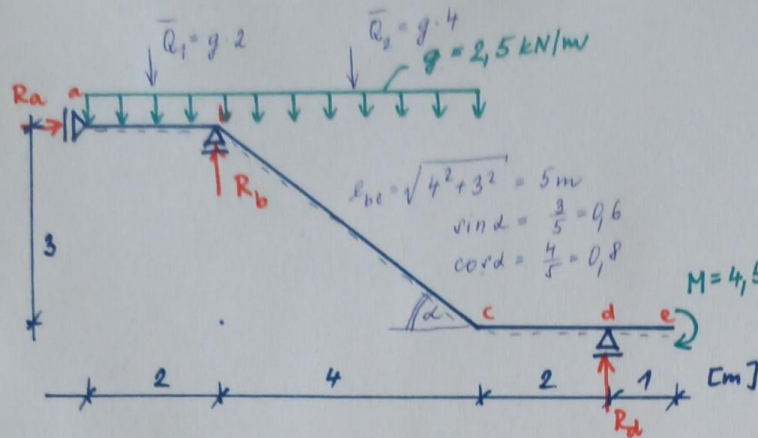




$$\textcircled{1} \sum F_{ix} = 0: R_a = 0$$

$$\textcircled{1} \sum M_{ib} = 0: q \cdot 2 \cdot 1 - q \cdot 4 \cdot 2 + R_d \cdot 6 - M = 0$$

$$\Rightarrow R_d = \frac{-2,5 \cdot 2 \cdot 1 + 2,5 \cdot 4 \cdot 2 + 4,5}{6}$$

$$R_d = 3,25 \text{ kN} (\uparrow)$$

$$\textcircled{1} \sum M_{id} = 0: -M + q \cdot 6 \cdot 5 - R_b \cdot 6 - R_a \cdot 3 = 0$$

$$\Rightarrow R_b = \frac{-4,5 + 2,5 \cdot 6 \cdot 5 - 0 \cdot 3}{6}$$

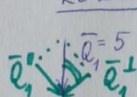
$$R_b = 11,75 \text{ kN} (\uparrow)$$

$$KO: \sum F_{iz} = 0 \uparrow \oplus:$$

$$R_b + R_d - q \cdot 6 = 0$$

$$11,75 + 3,25 - 2,5 \cdot 6 = 0 \checkmark$$

ROZKLADY:



$$\bar{q}_1^\perp = \bar{q}_1 \cdot \cos \alpha = 4 \text{ kN}$$

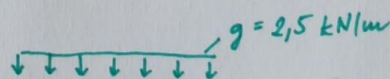
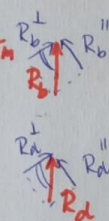
$$\bar{q}_1'' = \bar{q}_1 \cdot \sin \alpha = 3 \text{ kN}$$

$$R_b^\perp = R_b \cdot \cos \alpha = 9,4 \text{ kN}$$

$$R_b'' = R_b \cdot \sin \alpha = 7,05 \text{ kN}$$

$$R_d^\perp = R_d \cdot \cos \alpha = 2,6 \text{ kN}$$

$$R_d'' = R_d \cdot \sin \alpha = 1,95 \text{ kN}$$



$$q \cdot 4 = q' \cdot 5$$

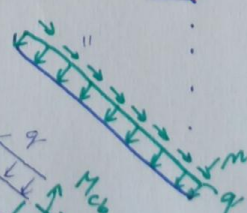
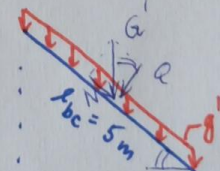
$$q' = \frac{2,5 \cdot 4}{5} = 2 \text{ kN/m}$$

$$Q = \bar{q}_1 \cdot \cos \alpha$$

$$N = \bar{q}_1 \cdot \sin \alpha$$

$$q = 2 \cdot 0,8 = 1,6 \text{ kN/m}$$

$$n = 2 \cdot 0,6 = 1,2 \text{ kN/m}$$



(*)

$$f = \frac{1}{8} q l^2 = \frac{1}{8} q x^2 = \frac{1}{8} \cdot 1,6 \cdot 5^2 = \frac{1}{8} \cdot 2,5 \cdot 4^2 = 5 \text{ kNm}$$

$$M_p^P = M_{cb} - \int V dx$$

$$= 2 - \frac{1}{2} \cdot (-2,6) \cdot 1,625 = 4,1125 \text{ kNm}$$

nebo

$$M_p^P = -M + R_d \cdot (2 + 1,3) - q \cdot 1,3 \cdot \frac{1,3}{2} = 4,1125 \text{ kNm}$$

nebo

$$(*) M_p^P = -V_{cb} \cdot x_p - q \cdot x_p \cdot \frac{x_p}{2} + M_{cb} = -(-2,6) \cdot 1,625 - 1,6 \cdot 1,625^2 \cdot \frac{1}{2} + 2 = 4,1125 \text{ kNm}$$

