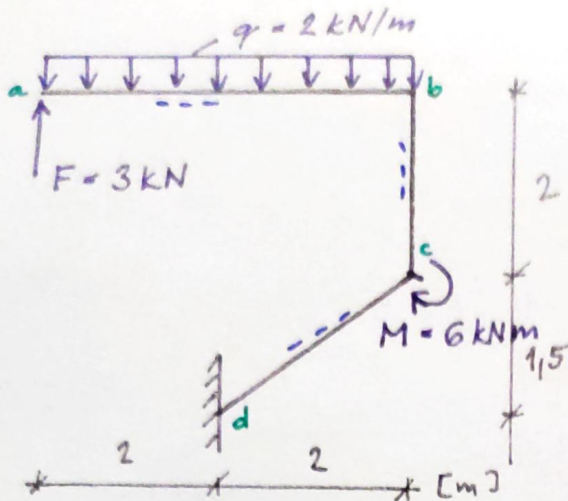




T2 - VYKRESLOVÁNÍ:

Jméno:

Skupina:

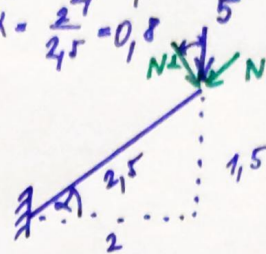
ŘEŠENÍ:

$$\sin \alpha = \frac{1.5}{2.5} = 0.6$$

$$\cos \alpha = \frac{2}{2.5} = 0.8$$

$$N^+ = N \cdot \cos \alpha$$

$$N'' = N \cdot \sin \alpha$$



$$N_{ab} = N_{ba} = 0$$

$$N_{bc} = F - q \cdot 4 = 3 - 2 \cdot 4 = -5 \text{ kN}$$

$$N_{cb} = N_{bc} = -5 \text{ kN}$$

$$N_{cd} = N_{dc} = -N'' = -5 \cdot 0.6 = -3 \text{ kN}$$

$$V_{ab} = F = 3 \text{ kN}$$

$$V_{ba} = F - q \cdot 4 = 3 - 2 \cdot 4 = -5 \text{ kN}$$

$$V_{bc} = V_{cb} = 0$$

$$V_{cd} = V_{dc} = +N^+ = 5 \cdot 0.8 = 4 \text{ kN}$$

$$V_p = 0 : F - q \cdot x_p = 0$$

$$x_p = \frac{F}{q} = \frac{3}{2} = 1.5 \text{ m}$$

$$M_{ab} = 0$$

$$M_{ba} = F \cdot 4 - q \cdot 4 \cdot 2 = -4 \text{ kNm}$$

$$M_{x_p} = F \cdot x_p - q \cdot x_p \cdot \frac{x_p}{2} =$$

$$= 3 \cdot 1.5 - 2 \cdot \frac{1.5^2}{2} = 2.25 \text{ kNm}$$

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

$$M_{bc} = M_{ba} = -4 \text{ kNm} = M_{cb}$$

$$M_{cd} = F \cdot 4 - q \cdot 4 \cdot 2 + M = 2 \text{ kNm}$$

$$M_{dc} = F \cdot 2 - q \cdot 4 \cdot 0 + 6 = 12 \text{ kNm}$$

