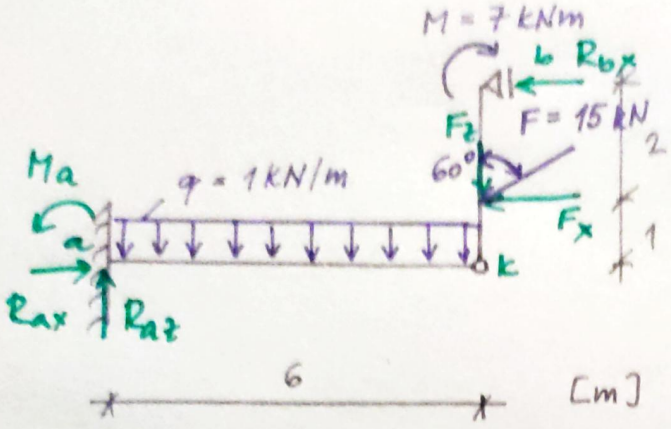
T1-0 : REAKCE

Jméno:

Skupina:



$F_x = F \cdot \sin 60° = 12{,}99 \doteq 13\ kN$

$F_z = F \cdot \cos 60° = 7{,}5\ kN$

$\oplus\downarrow \Sigma F_{iz} = 0: \quad -R_{az} + q \cdot 6 + F_z = 0$

$R_{az} = 1 \cdot 6 + 7{,}5 = \underline{13{,}5\ kN} \quad (\uparrow)$

$\oplus\circlearrowleft_C \Sigma M_{iC}^{P} = 0: \quad -M + R_{bx} \cdot 3 + F_x \cdot 1 = 0$

$R_{bx} = \frac{1}{3}(7 - 13 \cdot 1) = \underline{-2\ kN} \quad (\rightarrow)$

$\oplus\rightarrow \Sigma F_{ix} = 0: \quad R_{ax} - F_x - R_{bx} = 0$

$R_{ax} = 13 + (-2) = \underline{11\ kN} \quad (\rightarrow)$

$\oplus\circlearrowleft_C \Sigma M_{ia} = 0: \quad M_a - q \cdot 6 \cdot 3 + F_x \cdot 1 - F_z \cdot 6 + R_{bx} \cdot 3 - M = 0$

$M_a = 1 \cdot 6 \cdot 3 - 13 \cdot 1 + 7{,}5 \cdot 6 - (-2) \cdot 3 + 7 =$

$= \underline{63\ kNm} \quad (\circlearrowleft)$

$\oplus\circlearrowleft_K: 0 \ \Sigma M_{iK}^{L} = 0: \quad M_a + q \cdot 6 \cdot 3 - R_{az} \cdot 6 = 0$

$63 + 1 \cdot 6 \cdot 3 - 13{,}5 \cdot 6 = 0 \quad \checkmark$