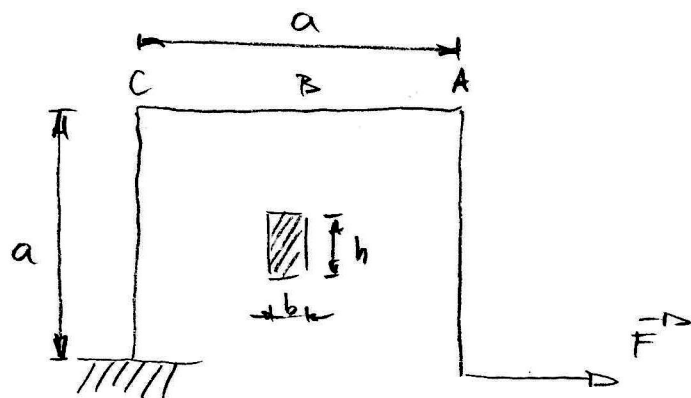
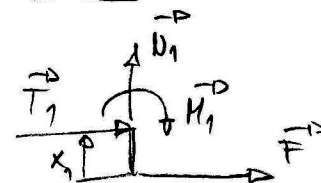


Př: Státní bezpečnost vzhledem k MS pružnosti.



Dáno: a, b, h, F, δ_k
Určete: k

1. WÜ:

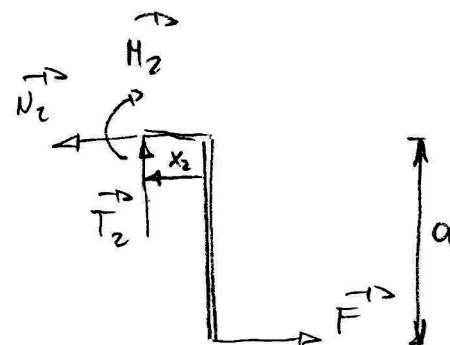


$$x_1 \in (0, a)$$

$$N_1 = 0$$

$$T_1 = -F$$

$$H_1 = F \cdot x_1$$

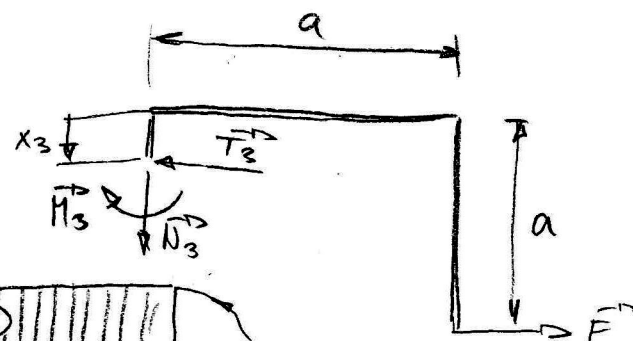
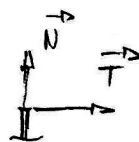
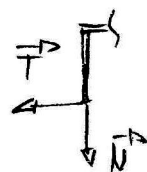
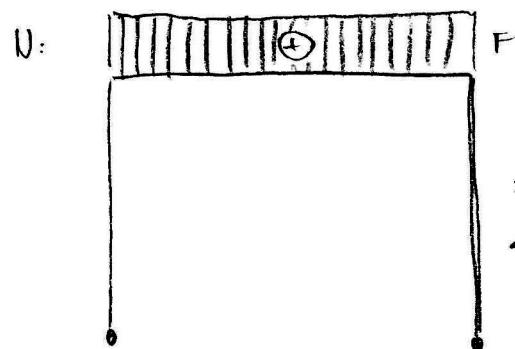


$$x_2 \in (0, a)$$

$$N_2 = F$$

$$T_2 = 0$$

$$H_2 = F \cdot a$$

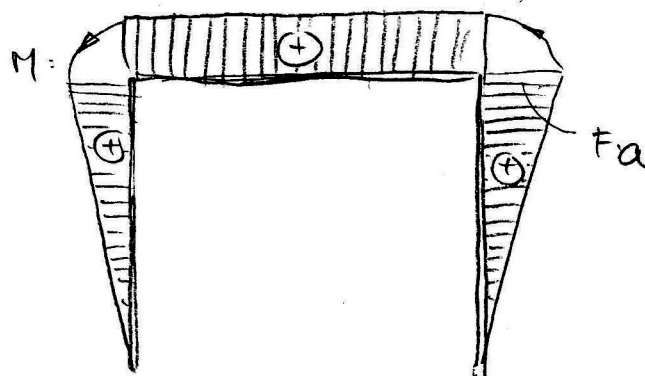
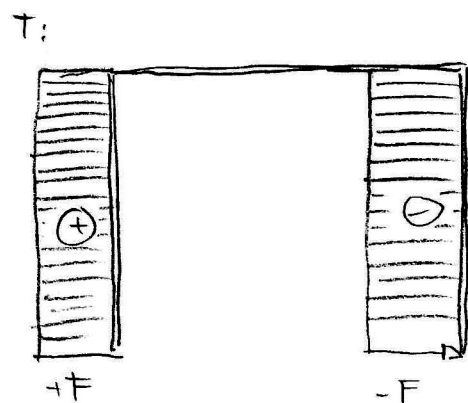


$$x_3 \in (0, a)$$

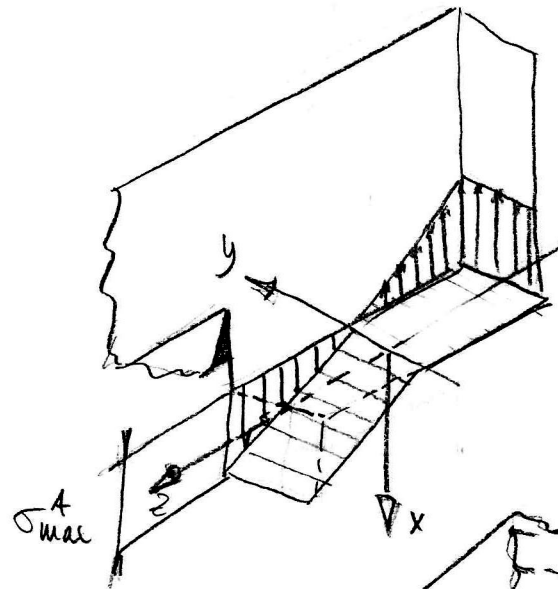
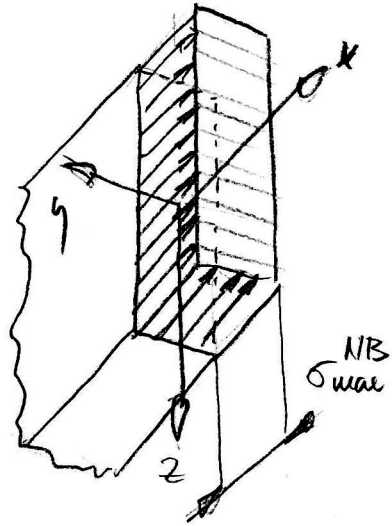
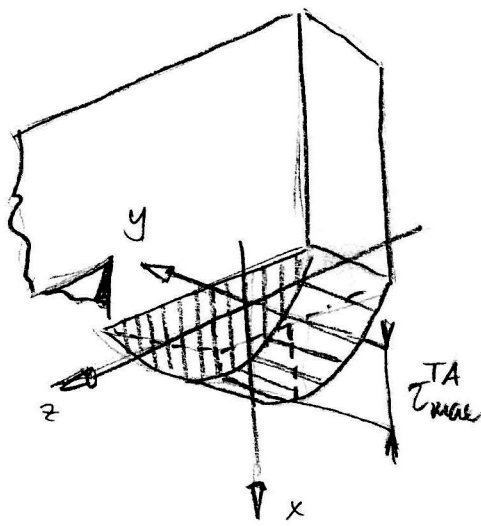
$$N_3 = 0$$

$$T_3 = F$$

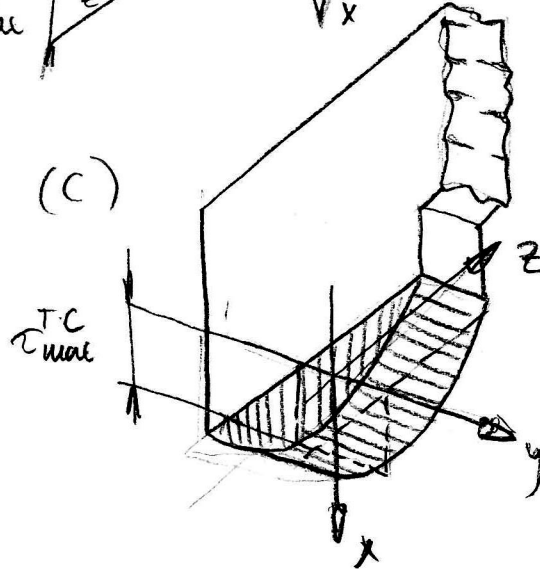
$$H_3 = F \cdot (a - x_3)$$



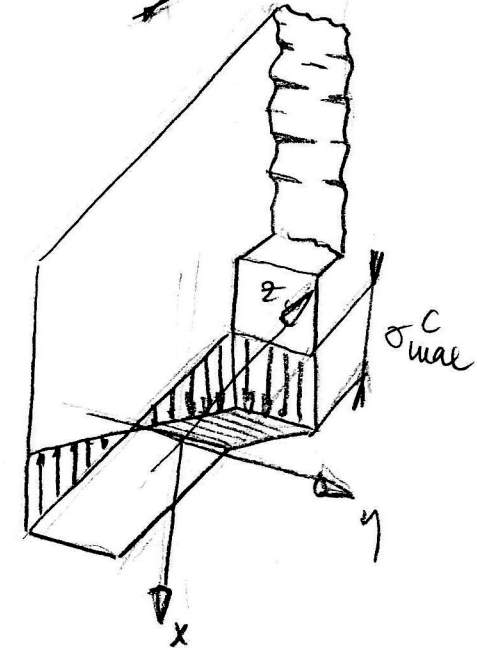
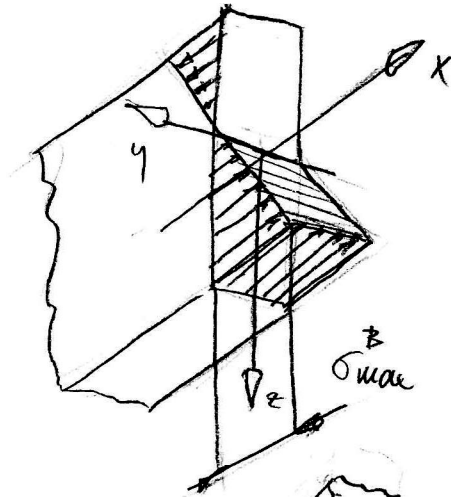
(A)



(C)



(B)

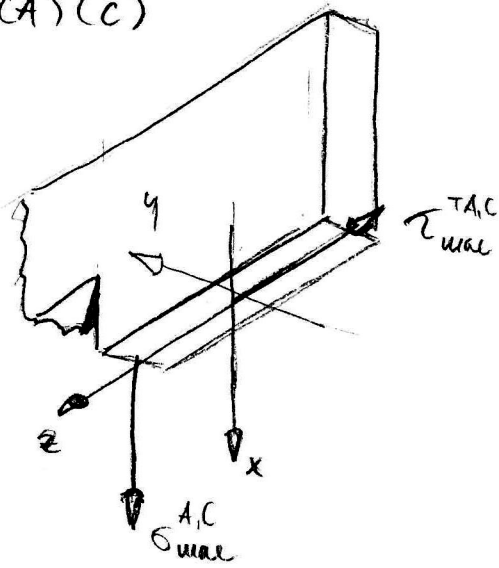


$$\tau_{max}^{TA} = \tau_{max}^{TC} = \frac{3}{2} \frac{T}{S} = \frac{3}{2} \frac{F}{b \cdot h}$$

$$\sigma_{max}^A = \sigma_{max}^C = \sigma_{max}^B = \frac{M_{1max}}{W_0} = \frac{M_2}{W_0} = \frac{M_{3max}}{W_0} = \frac{F \cdot a}{\frac{1}{6} b h^2} = \frac{6 F \cdot a}{b \cdot h^2}$$

$$\sigma_{max}^{NB} = \frac{N_2}{S} = \frac{F}{b \cdot h}$$

(A) (C)



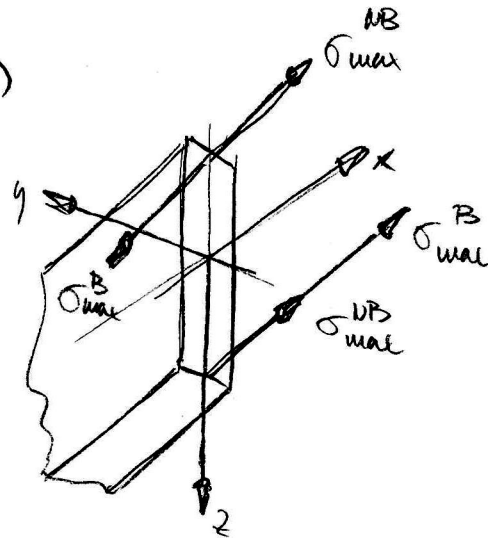
$$k^{A,C} = \min \left\{ \frac{\sigma_k}{\sigma_{wall}^{A,C}}, \frac{\sigma_k}{2\tau_{wall}^{A,C}} \right\}$$



$$k = \min \{ k^{A,C}, k^B \}$$



(B)



$$k^B = \frac{\sigma_k}{\sigma_{wall}^{NB} + \sigma_{wall}^B}$$