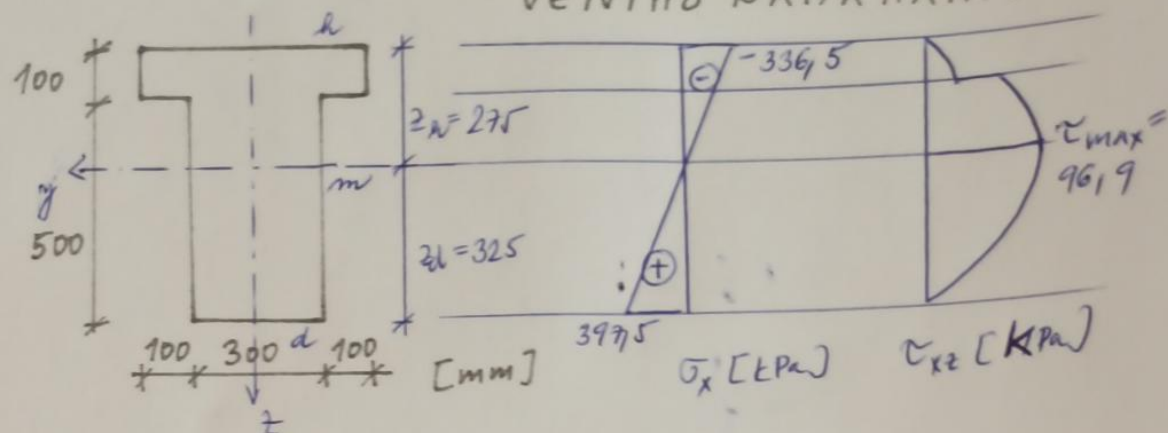
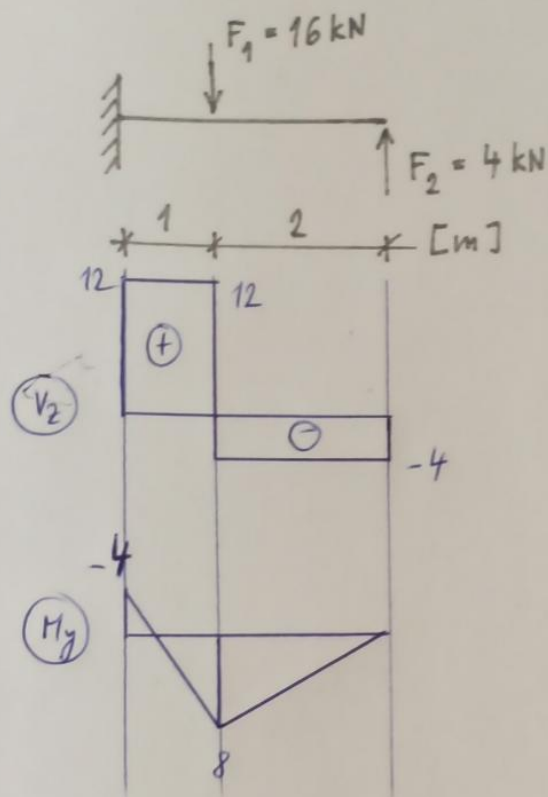


VYKRESLI σ_x a τ_{xz} PO PRŮŘEZU. SPOČITEJ σ_x a τ_{max} V MÍSTECH NEJVĚTŠÍHO NAMÁHÁNÍ.



$$z_L = \frac{300 \cdot 500 \cdot 250 + 500 \cdot 600 \cdot 550}{300 \cdot 500 + 500 \cdot 600} = 325 \text{ mm}$$

$$I_y = \frac{1}{12} \cdot 300 \cdot 500^3 + 300 \cdot 500 \cdot 75^2 + \frac{1}{12} \cdot 500 \cdot 100^3 + 500 \cdot 100 \cdot 225^2$$

$$I_y = 6,5416 \cdot 10^{-3} \text{ m}^4$$

$$\sigma_x: M_y = 8 \text{ kNm}$$

$$\sigma_x = \frac{M_y}{I_y} \cdot z$$

$$\sigma_{x,d} = \frac{8}{6,5416 \cdot 10^{-3}} \cdot 0,325 = 397,5 \text{ kPa}$$

$$\sigma_{x,h} = \frac{8}{6,5416 \cdot 10^{-3}} \cdot (-0,275) = -336,3 \text{ kPa}$$

$$\tau_{xz}: V_2 = 12 \text{ kN}$$

$$\tau_{xz,m} = \frac{V_2 \cdot \bar{y}}{I_y \cdot b} = \frac{12 \cdot (0,3 \cdot 0,325 \cdot \frac{0,325}{2})}{6,5416 \cdot 10^{-3} \cdot 0,3} = 96,9 \text{ kPa}$$