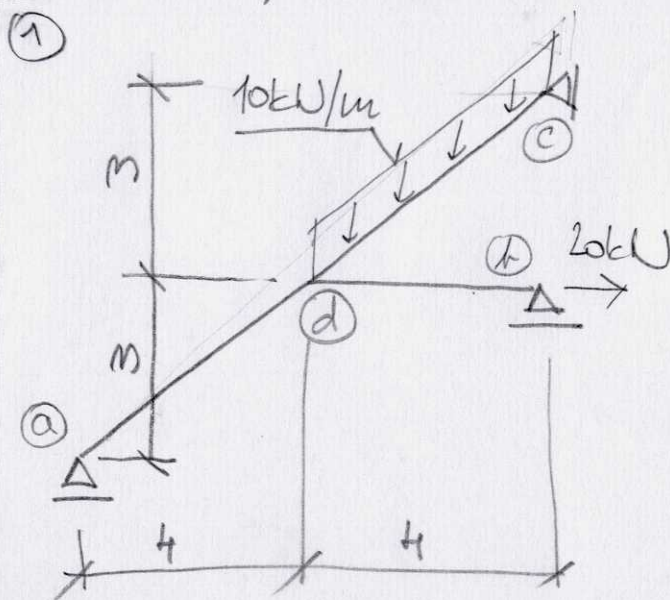
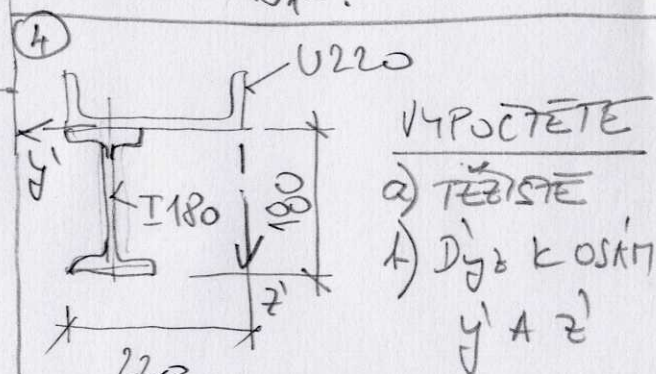
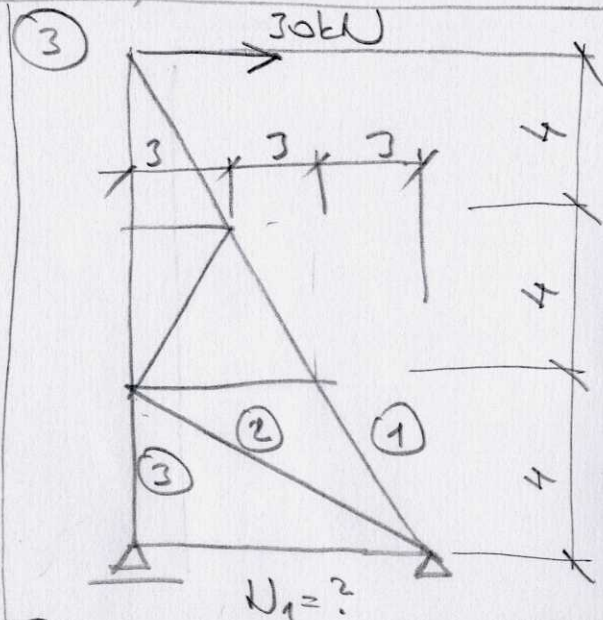
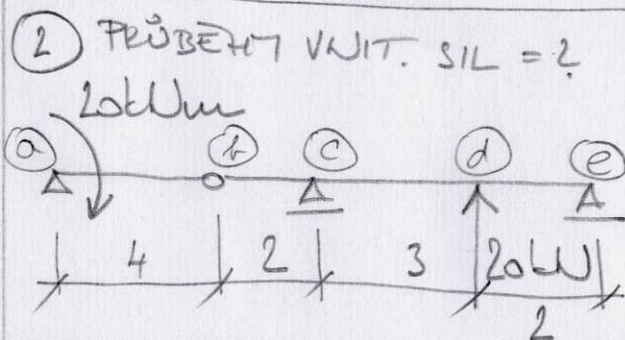




PRŮBĚHY VNIT. SIL = 2



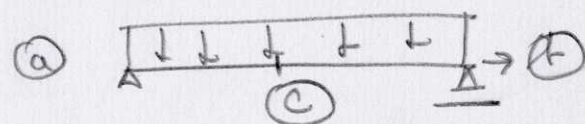
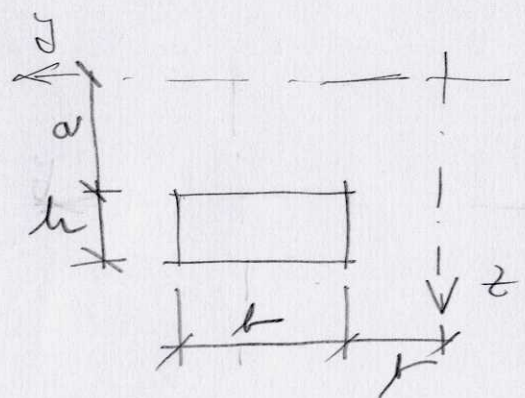
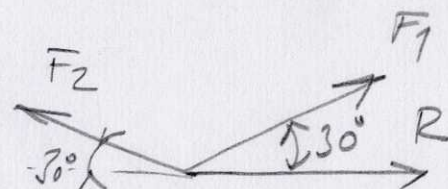
TEORIE:

① NAPIŠTE DIFERENCIÁLNÍ PODMÍNKU ROVNOVÁHY PRO MOMENTY. CO BÍKA O EXTRÉMIU (M)?

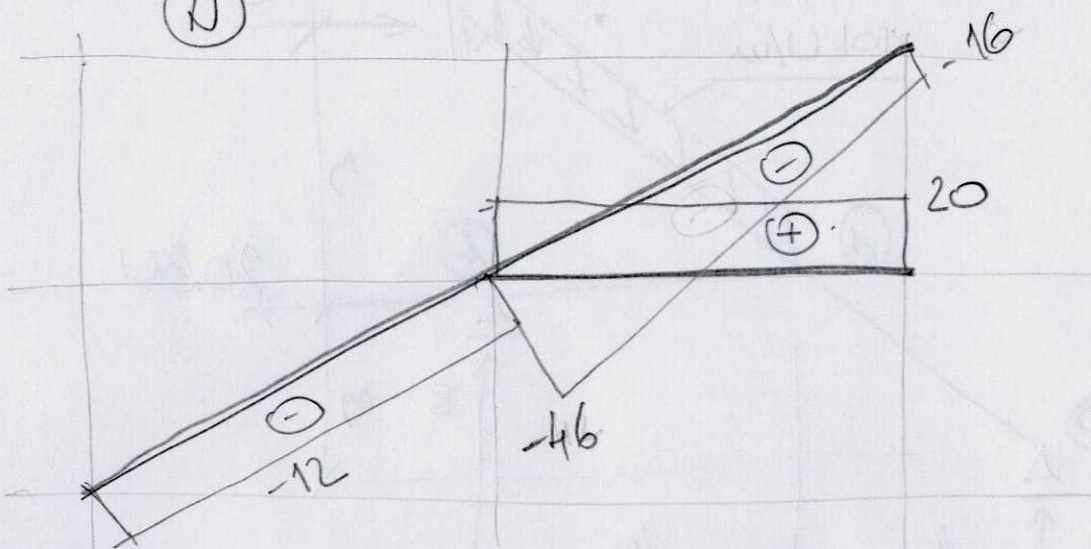
② POMOCÍ PODM. EKVIVAL. ROZLOŽTE SILU R DO SLOŽEK F_1 A F_2

③ NAPIŠTE OBECNÍ VZOREC PRO MOM. SETRV. I_y . JAK VÝPOČÍTATE I_y PRO OBDELNÍK PODLE OBR.?

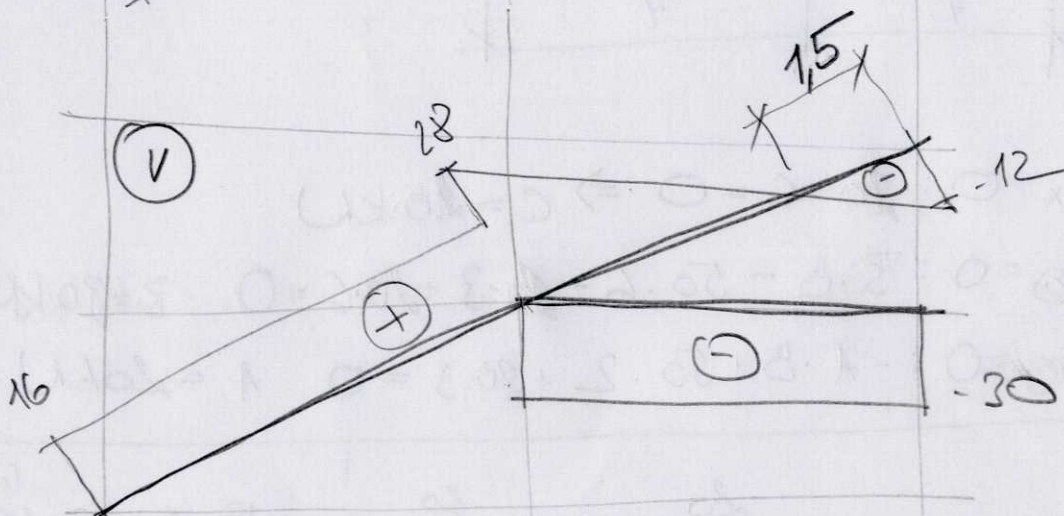
④ DEFINUJTE VNITŘNÍ SILY V BODĚ C. CO VNADĚVÍ? CO ZAJISTUVÍ?



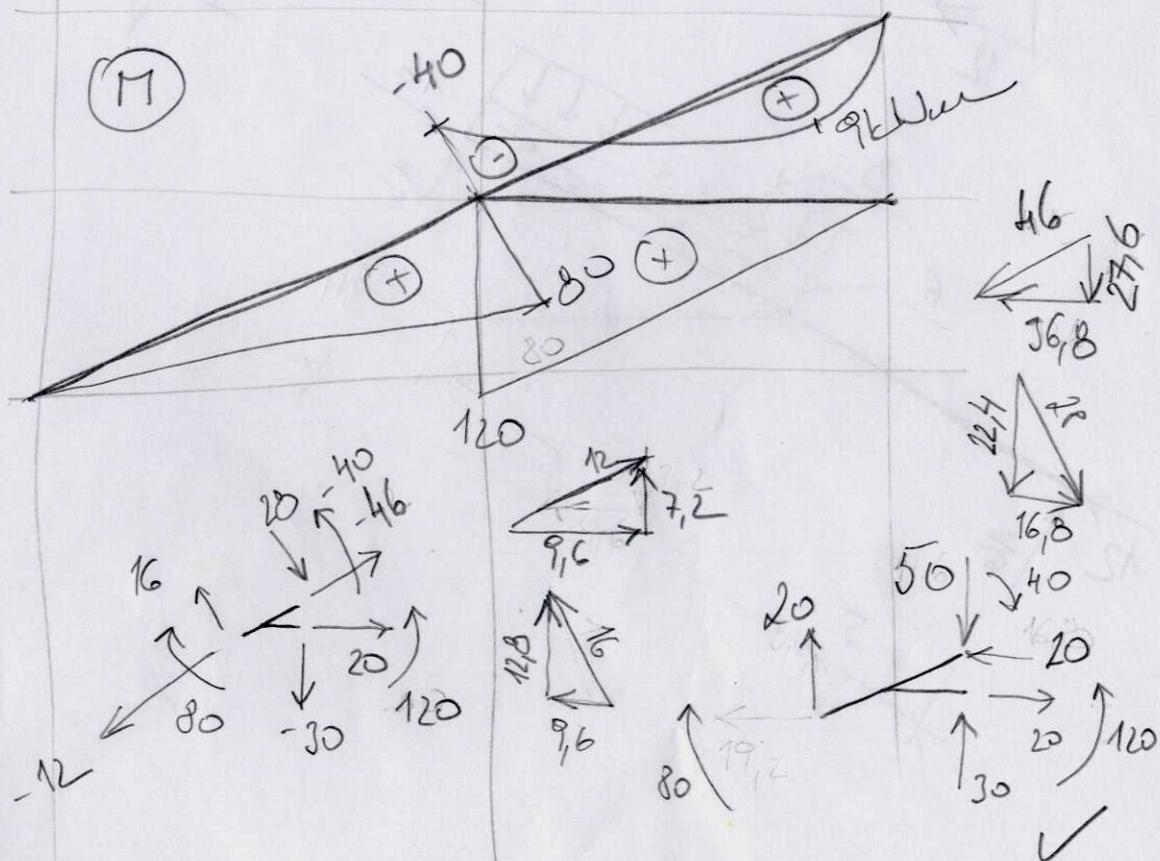
②

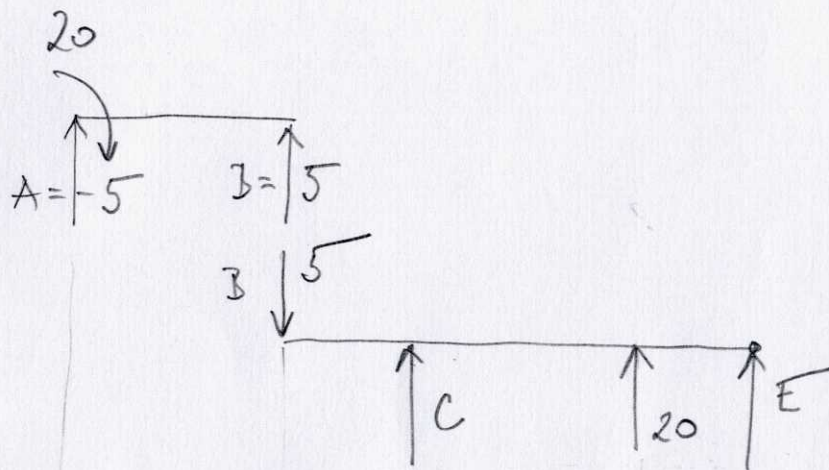
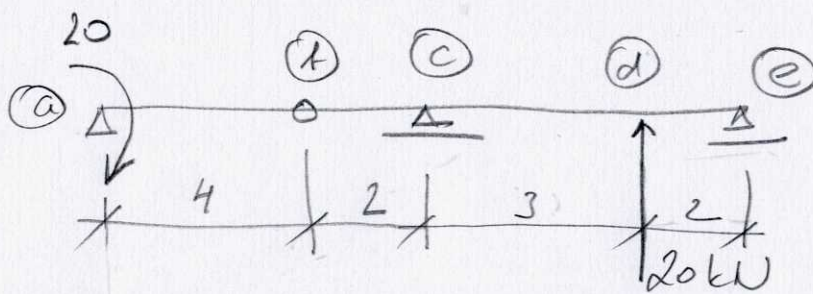


⑤



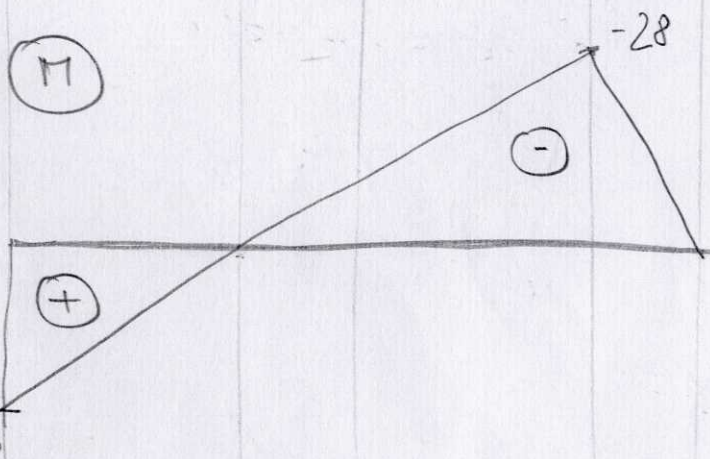
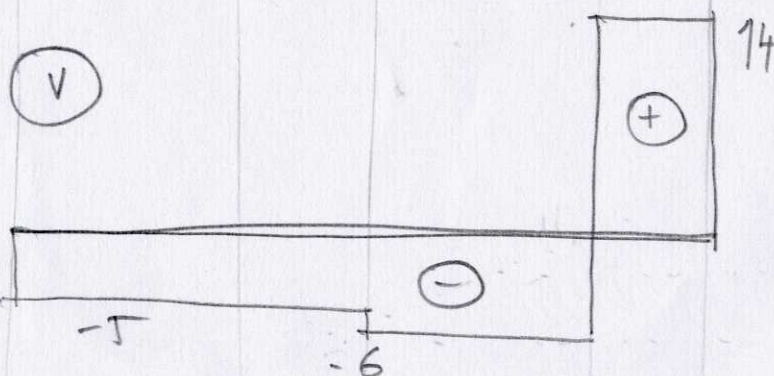
⑦

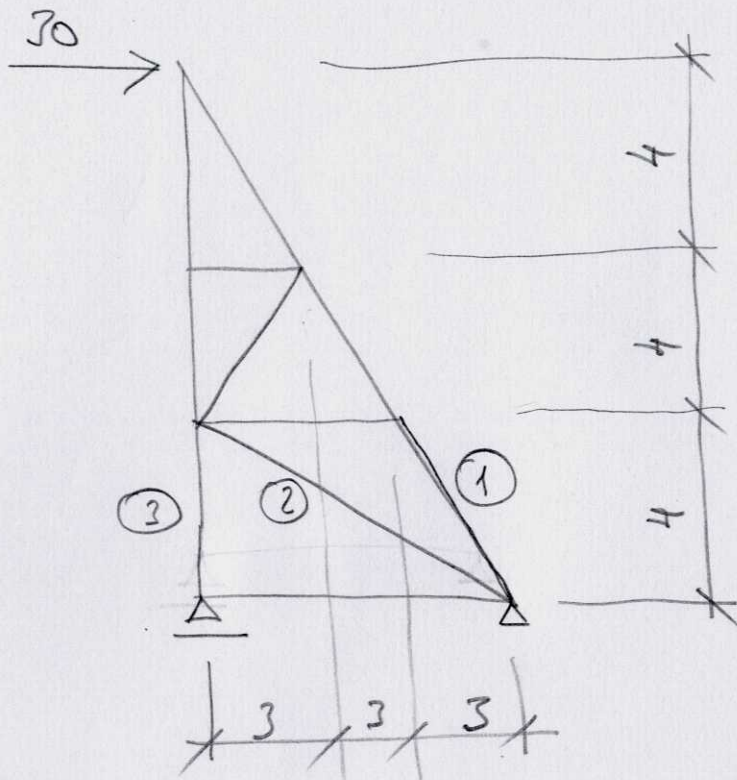




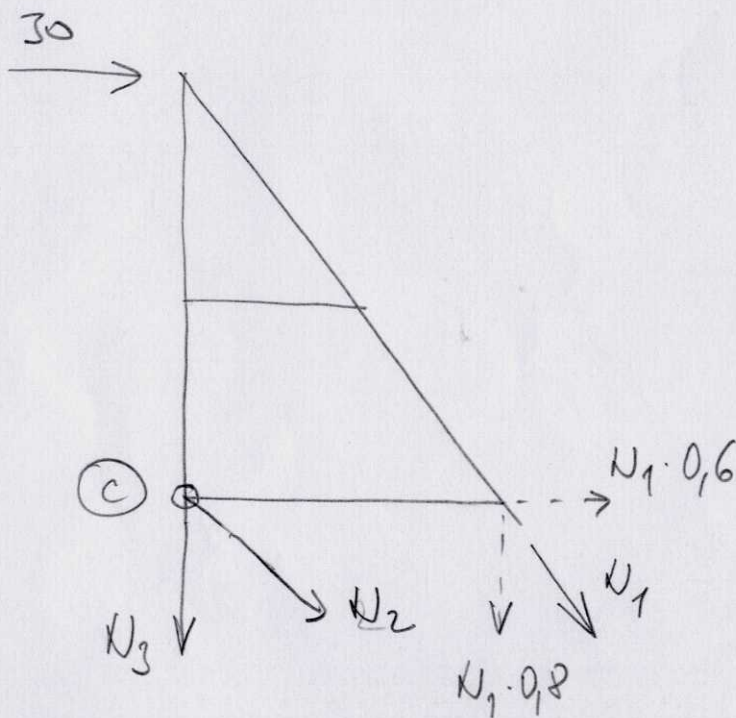
$$\sum M_i @ b = 0 : C \cdot 5 + 20 \cdot 2 - 5 \cdot 7 = 0 \Rightarrow C = -1$$

$$\sum M_i @ c = 0 : 5 \cdot 2 + 20 \cdot 3 + E \cdot 5 = 0 \Rightarrow E = -14$$





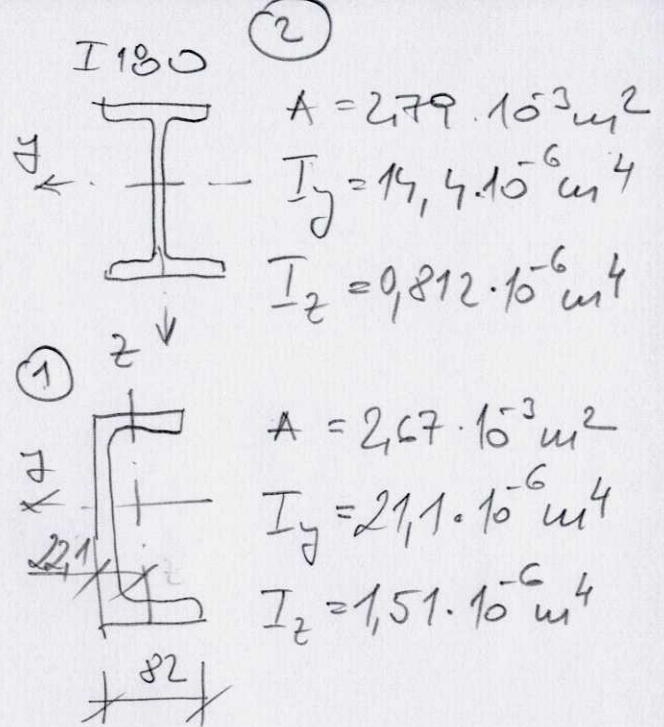
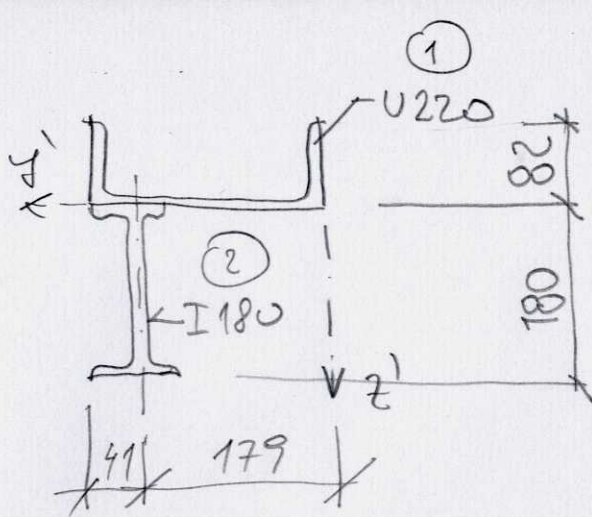
$$N_1 = ?$$



$$\sum M_i @ = 0 :$$

$$0,8 \cdot N_1 + 30 \cdot 8 = 0$$

$$N_1 = -50 \text{ kN}$$



$$A = 5,46 \cdot 10^{-3} \text{ m}^2$$

$$S_{y1} = 2,67 \cdot 10^{-3} \cdot 0,0221 = -5,9007 \cdot 10^{-5} \text{ m}^3$$

$$S_{y2} = 2,79 \cdot 10^{-3} \cdot 0,09 = 2,511 \cdot 10^{-4} \text{ m}^3$$

$$z_c = \frac{S_y}{A} = 0,0353 \text{ m}$$

$$S_y = 1,92093 \cdot 10^{-4}$$

$$S_{z1} = 2,67 \cdot 10^{-3} \cdot 0,11 = 2,937 \cdot 10^{-4} \text{ m}^3$$

$$S_{z2} = 2,79 \cdot 10^{-3} \cdot 0,179 = 4,9941 \cdot 10^{-4} \text{ m}^3$$

$$y_c = \frac{S_z}{A} = 0,14526 \text{ m}$$

$$S_z = 7,9311 \cdot 10^{-4} \text{ m}^3$$

$$D_{yz,1} = 2,67 \cdot 10^{-3} \cdot (-0,0221) \cdot 0,11 = -6,49677 \cdot 10^{-6} \text{ m}^4$$

$$D_{yz,2} = 2,79 \cdot 10^{-3} \cdot 0,09 \cdot 0,179 = 4,49469 \cdot 10^{-5} \text{ m}^4$$

$$D_{yz} = -3,84561 \cdot 10^{-5} \text{ m}^4$$