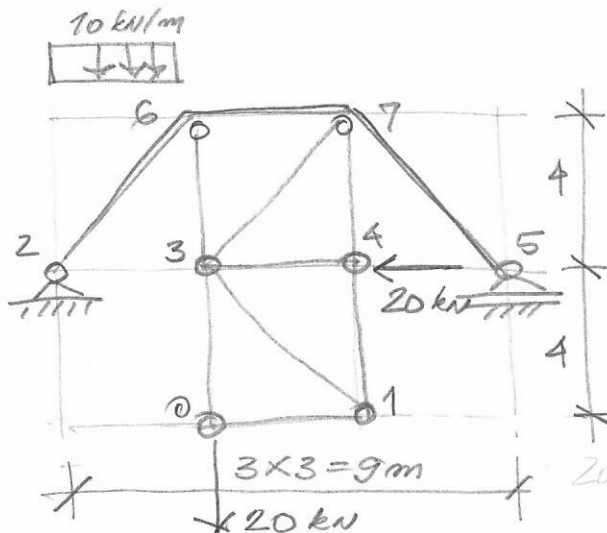


18.06.2021.

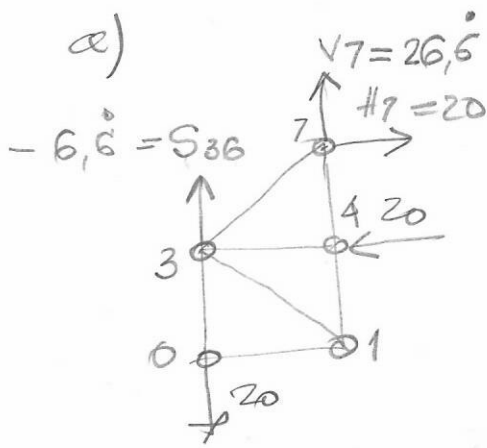
TEHNIČKA MEHANIKA 1

ZA NOSAČ I OPREKOVANJE NA SKICI TREBA:



- a) ODREDITI REAKCIJE  
20 OSLOMAGA I SILE  
VEZA IZMEĐU KRUTIH  
PROČA
- b) NA PUNOM DEKONSTRUKCIJA  
30 NACRTATI DIJAGRAME  
PRESEČNIH SILA
- c) NA STAPU 2-6 ISPISATI  
20 FUNKCIJE PRESEČNIH SILA

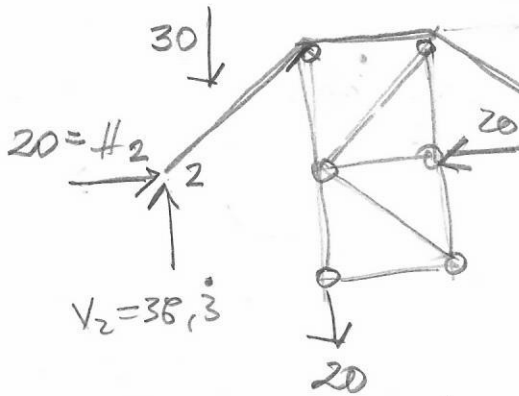
- 20 d) SILE U STAPOVIMA  $S_{34}$ ,  $S_{36}$  I  $S_{47}$  ODREDITI  
METODAMA PRESEKA
- 10 e) SILU U STAPU  $S_{37}$  ODREDITI METODOM VIRTA  
RADA



$$\sum M_1 = 3(S_{36} - 20) + 4 \cdot 20 = 0 \quad S_{36} = -6,6 \text{ kN}$$

$$\sum V = V_7 - 6,6 - 20 = 0 \quad V_7 = 26,6$$

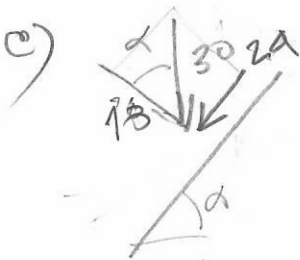
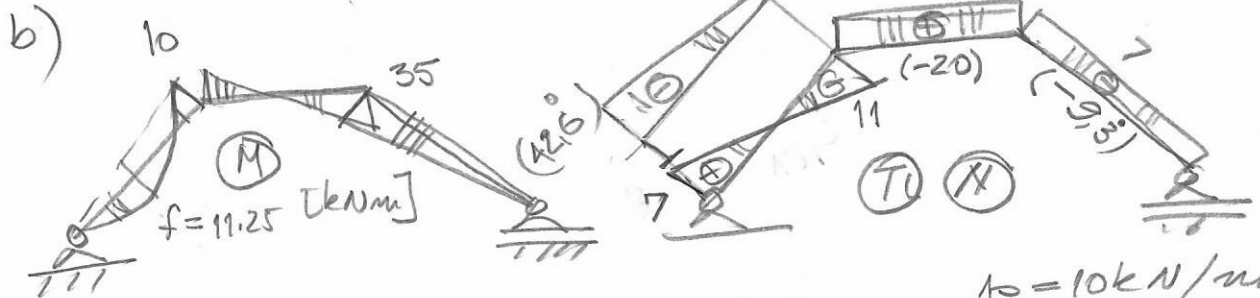
$$\sum H = H_7 - 20 = 0 \quad H_7 = 20$$



$$\sum H = H_2 - 20 = 0 \quad H_2 = 20 \text{ kN}$$

$$\sum M_2 = 9V_5 - 3 \cdot 20 - 1,5 \cdot 30 = 0 \quad V_5 = 11,6 \text{ kN}$$

$$\sum V = V_2 - 30 - 20 + 11,6 = 0 \quad V_2 = 38,3 \text{ kN}$$



$$R = 3 \cdot 10 = 30$$

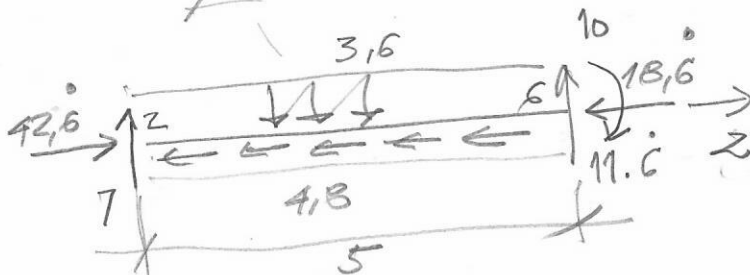
$$R_{\perp} = 30 \cdot 0,6 = 18 \text{ kN}$$

$$R_{\parallel} = 30 \cdot 0,8 = 24 \text{ kN}$$

$$f = 10 \text{ kN/m}$$

$$P_{\perp} = \frac{18}{5} = 3,6 \text{ kNm}$$

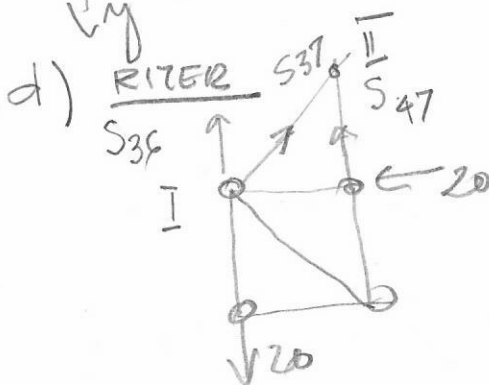
$$P_{\parallel} = \frac{24}{5} = 4,8 \text{ kN}$$



$$N(z) = 42,6 - 4,8z$$

$$T_y(z) = 7 - 3,6z$$

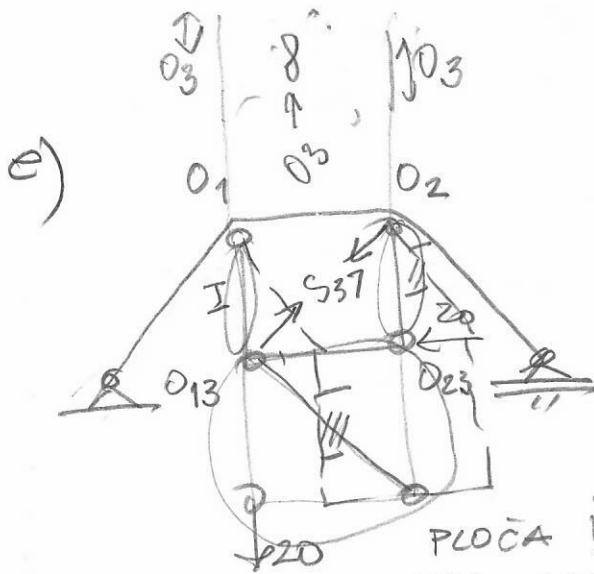
$$M_x(z) = 7z - 3,6 \frac{z^2}{2}$$



$$\sum M_I = S_{47} \cdot 3 = 0 \quad S_{47} = 0$$

$$\sum M_{II} = 3(S_{36} - 20) + 20 \cdot 4 = 0 \quad S_{36} = -6,6 \text{ kN}$$

$$\sum H = S_{37} \cdot 0,6 - 20 = 0 \quad S_{37} = 33,3 \text{ kN}$$



$$\delta y_1 = \delta y_2$$

$$\delta y_3 = 0$$

PLOČA III POMERA SE HORIZONTALNO  
JER JOJ JE POL NA VERTIKALI  
U BESKONACNOSTI

$$\delta A = S_{37} \cdot 0,6 \cdot 4 \delta y_1 - 20 \cdot 4 \delta y_2 = 0$$

$$4 \delta y_1 [0,6 S_{37} - 20] = 0$$

$$S_{37} = 33,3 \text{ kN}$$

d) KULMANU III K

