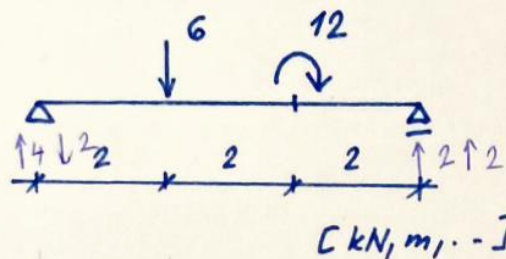
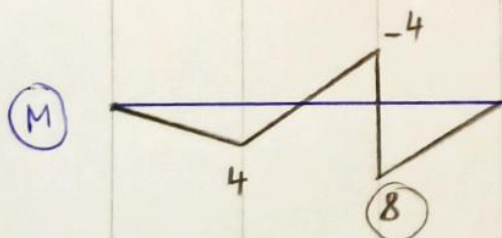
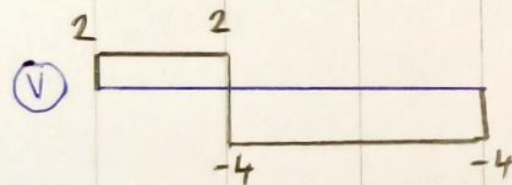


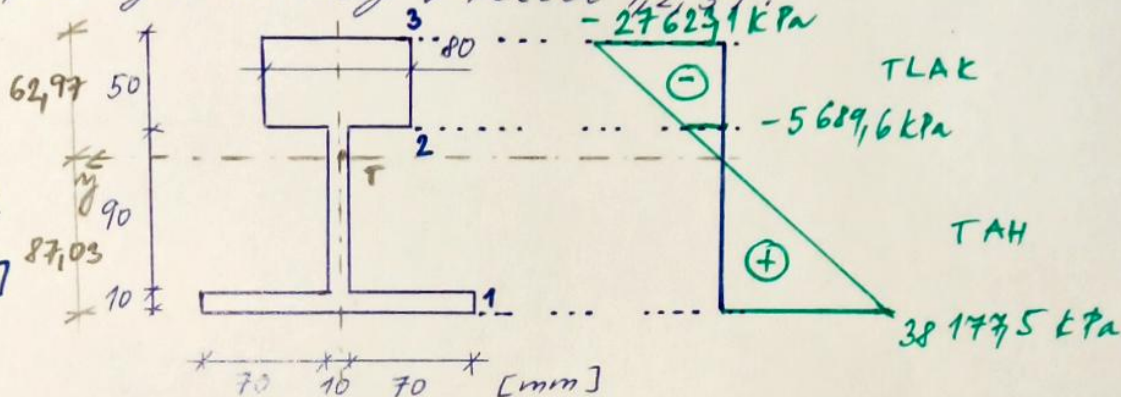
V místě max. namáhání vykreslete průběh normálového napětí po průřezu (vypočítejte hodnoty v řázech 1, 2, 3)



[kN, m, ...]



$$M_{max} = 8 \text{ kNm}$$



$$z_T = \frac{150 \cdot 10 \cdot 5 + 10 \cdot 90 \cdot 55 + 80 \cdot 50 \cdot 125}{150 \cdot 10 + 10 \cdot 90 + 80 \cdot 50} = 87,03 \text{ mm}$$

$$I_y = \frac{1}{12} \cdot 150 \cdot 10^3 + 150 \cdot 10 \cdot 87,03^2 + \frac{1}{12} \cdot 10 \cdot 90^3 + 10 \cdot 90 \cdot 32,03^2 + \frac{1}{12} \cdot 80 \cdot 50^3 + 80 \cdot 50 \cdot 37,97^2$$

$$I_y = 18,236 \, 927 \cdot 10^6 \text{ mm}^4$$

$$\sigma_1 = \frac{8}{18,236 \, 927 \cdot 10^{-6}} \cdot (87,03 \cdot 10^{-3}) = 38177,5 \text{ kPa}$$

$$\sigma_2 = \frac{8}{18,236 \, 927 \cdot 10^{-6}} \cdot (-12,97 \cdot 10^{-3}) = -5689,6 \text{ kPa}$$

$$\sigma_3 = \frac{8}{18,236 \, 927 \cdot 10^{-6}} \cdot (-62,97 \cdot 10^{-3}) = -27623,1 \text{ kPa}$$