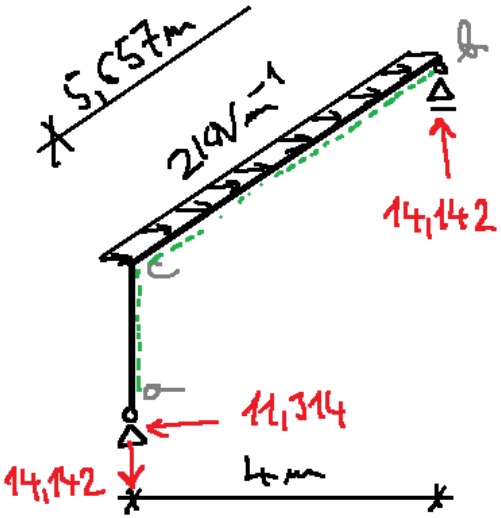
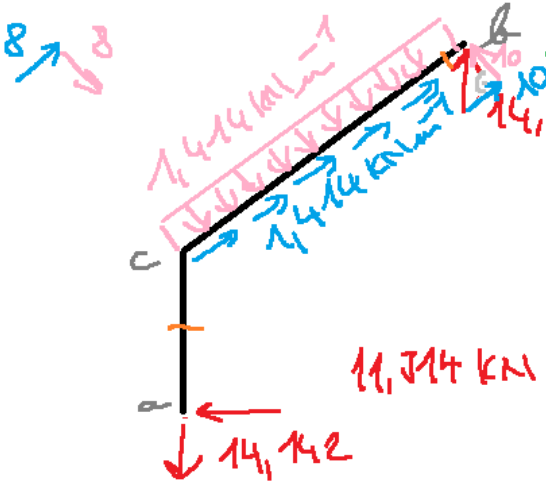
ZÁKLADY STAVEBNÍ MECHANIKY

BDA001

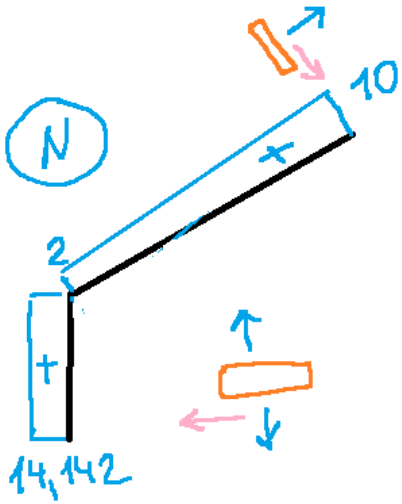
Rovinný lomený nosník se šikmými pruty, reakce a diagramy vnitřních sil a momentů

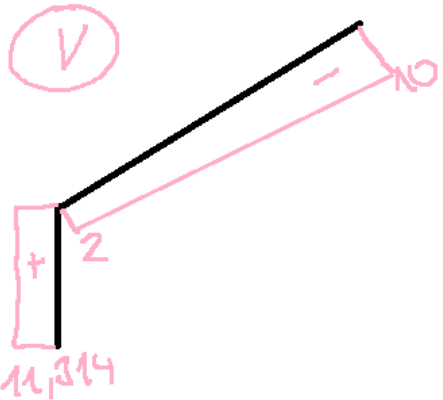
Zdeněk Kala

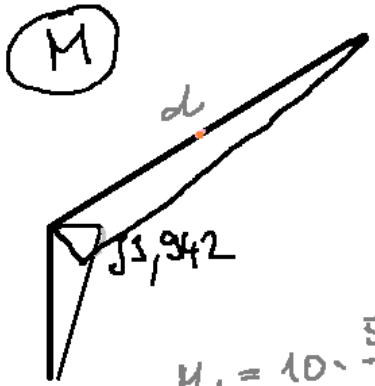




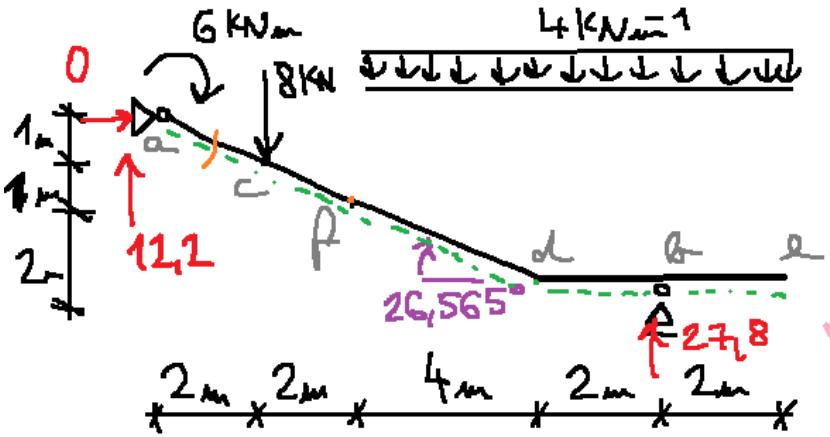
$\Sigma M_a = 0 \quad -11{,}314 \cdot 5 + R_d \cdot 4 = 0$







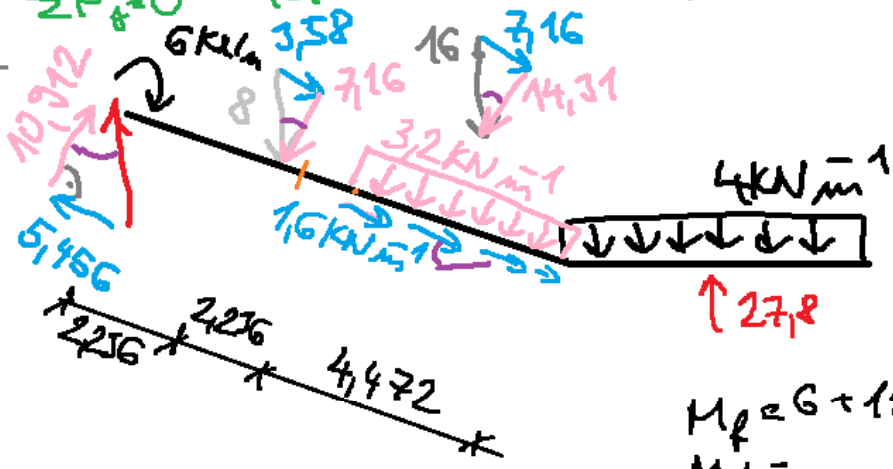
$$M_d = 10 \cdot \frac{5{,}657}{2} - 1{,}414 \cdot \frac{5{,}657}{2} \cdot \frac{5{,}657}{4}$$
$$= 22{,}63 \text{ kN m}$$

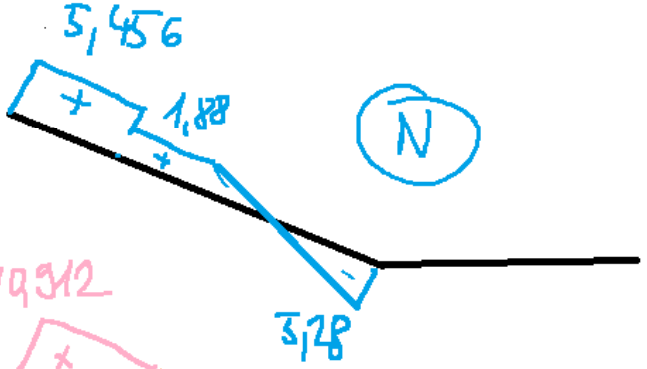


$\Sigma M_a = 0 \quad -6 - 8 \cdot 2 - 4 \cdot 8 \cdot 8 + R_g \cdot 10 = 0 \quad R_g = 27{,}8\ kN$

$\Sigma M_g = 0 \quad -6 - R_a \cdot 10 + 8 \cdot 8 + 32 \cdot 2 = 0 \quad R_a = 12{,}2\ kN$

$\Sigma F_g = 0 \quad 12{,}2 - 8 - 4 \cdot 8 + 27{,}8 = 0$ ✓





$M_f = 6 + 12{,}2 \cdot 4 - 8 \cdot 2 = 38{,}8$

$M_d =$

$M_g = 10{,}912 \cdot (2{,}236 + 2{,}236 + 1{,}175) - 7{,}16 \cdot (2{,}236 + 1{,}175) - 3{,}2 \cdot (1{,}175 \cdot \frac{1{,}175}{2}) + 6 = \underline{41\ kNm}$