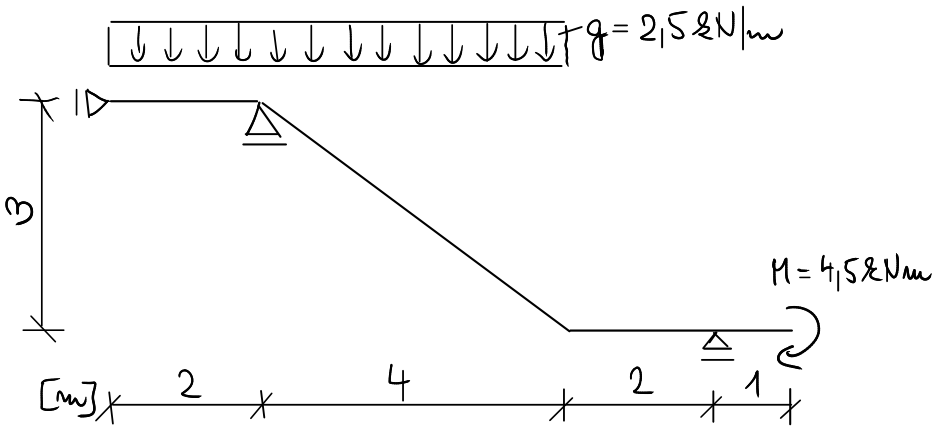
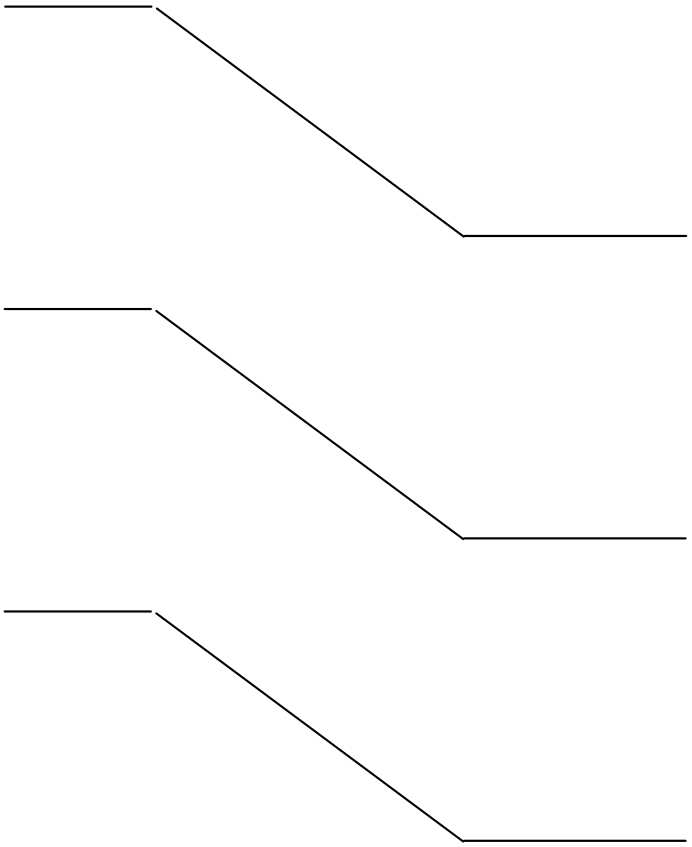
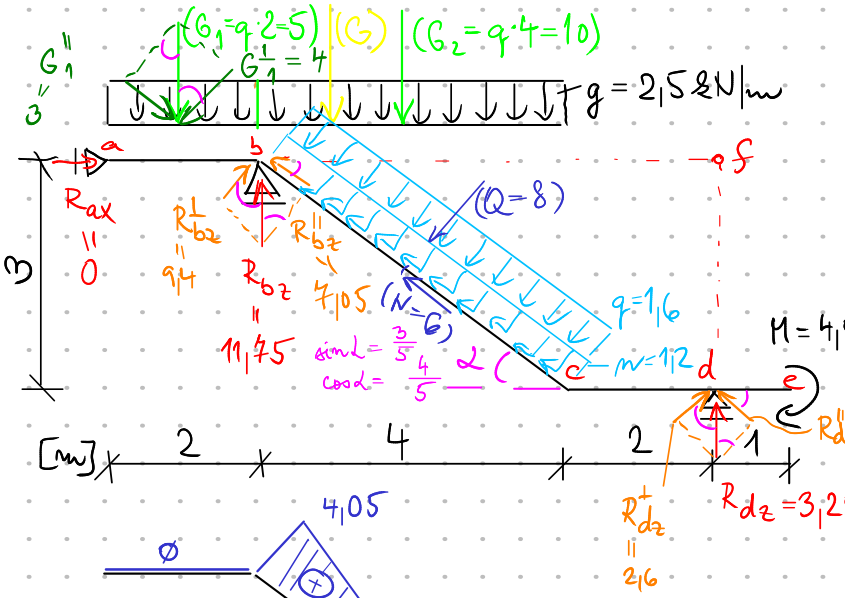
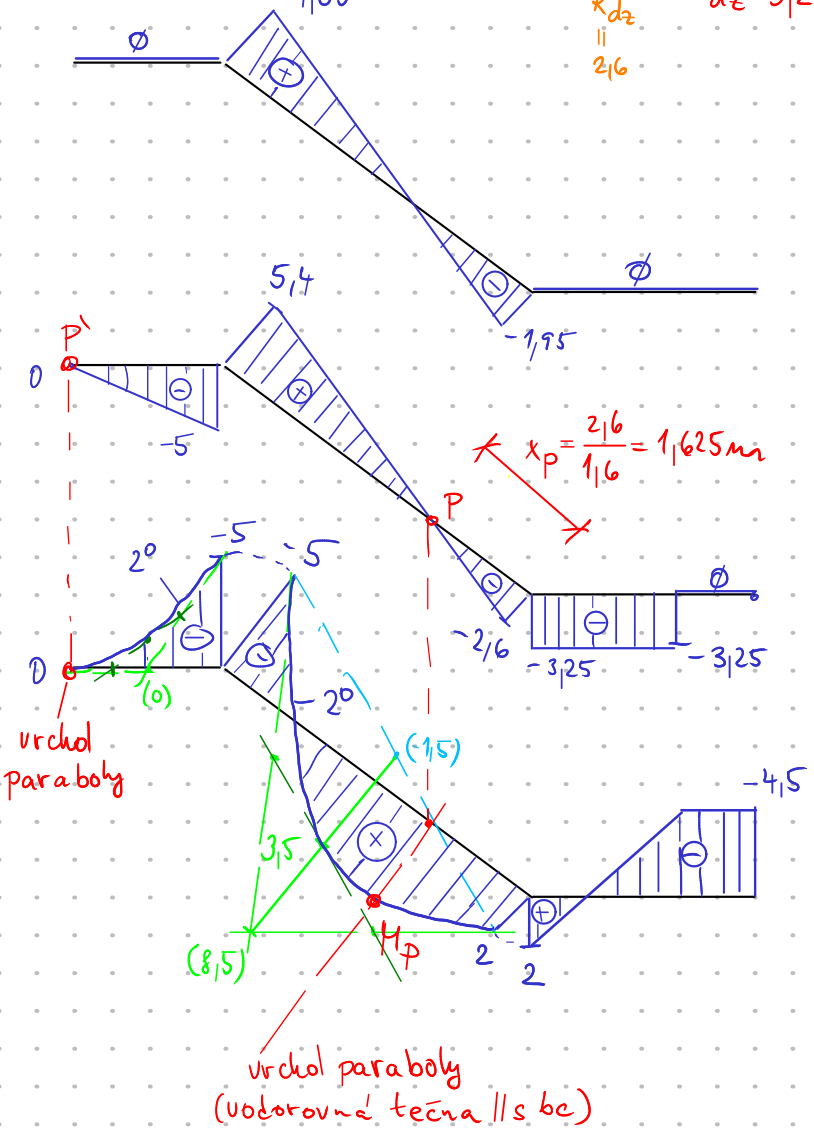

q = 2,5 kN/m
3
M = 4,5 kNm
[m]
2
4
2
1







Reakce:

$\Sigma F_{xi} = 0 \oplus \rightarrow$

$R_{ax} = 0\,kN$

$\Sigma M_{bi} = 0 \oplus \circlearrowleft$

$-g\cdot 6\cdot 1 + R_{dz}\cdot 6 - M = 0$

$R_{dz} = 3{,}25\,kN$

$\Sigma M_{fi} = 0 \oplus \circlearrowright$

$R_{bz}\cdot 6 - g\cdot 6\cdot 5 + M = 0$

$R_{bz} = 11{,}75\,kN$

kontrola: $\Sigma F_{zi} = 0 \oplus \uparrow$

$R_{dz} + R_{bz} - g\cdot 6 = 0$ ✓

Rozklad:

$R_{bz}^{\perp} = R_{bz}\cos\alpha = 9{,}4\,kN$

$R_{bz}^{\parallel} = R_{bz}\sin\alpha = 7{,}05\,kN$

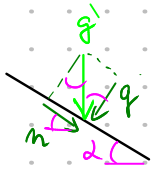
$R_{dz}^{\perp} = R_{dz}\cdot\cos\alpha = 2{,}6\,kN$

$R_{dz}^{\parallel} = R_{dz}\sin\alpha = 1{,}95\,kN$

$G_1^{\perp} = G_1\cos\alpha = 4\,kN$

$G_1^{\parallel} = G_1\sin\alpha = 3\,kN$

$q' = \frac{g\cdot 4}{l_{bc}} = \frac{2{,}5\cdot 4}{5} = 2\,kN/m$



$q = q'\cos\alpha = 1{,}6\,kN/m$

$n = q'\sin\alpha = 1{,}2\,kN/m$

$Q = q\cdot l_{bc} = 8\,kN$

$N = n\cdot l_{bc} = 6\,kN$

$\frac{1}{8}ql_{bc}^2 = \frac{1}{8}1{,}6\cdot 5^2 = 5\,kNm$

$M_P^P = M_{pred}^P - \int_{x_P} V\,dx = 2 - \frac{1}{2}(-2{,}6)\cdot x_P = 4{,}1125\,kNm$

$M_P^P = M_c - V_{cb}\cdot x_P - q\frac{x_P^2}{2} = 4{,}1125\,kNm$