1982. 08. NF
c_1 c_2 c_3

$c_1 = 8$
$c_2 = 1$
$c_3 = 7$

$\xi_1 = [0{,}3 + 0{,}1 \cdot 8] = 1{,}1\,m$

$\xi_2 = [0{,}4 + 0{,}1 \cdot (1+7)] = 1{,}2\,m$

$\xi_3 = [0{,}2 + 0{,}1 \cdot 7] = 0{,}9\,m$

$\xi_4 = [0{,}4 + 0{,}1 \cdot (8+1)] = 1{,}3\,m$

$\xi_5 = [0{,}3 + 0{,}2 \cdot 1] = 0{,}5\,m$

$F_1 = [4 + 2 \cdot (8+1)] = 22\,\Omega N$

$|F_2| = [8 + 2 * (8+7)] = 38\,\Omega N$

$\alpha = (30 + 15 \cdot 1) = 45°$

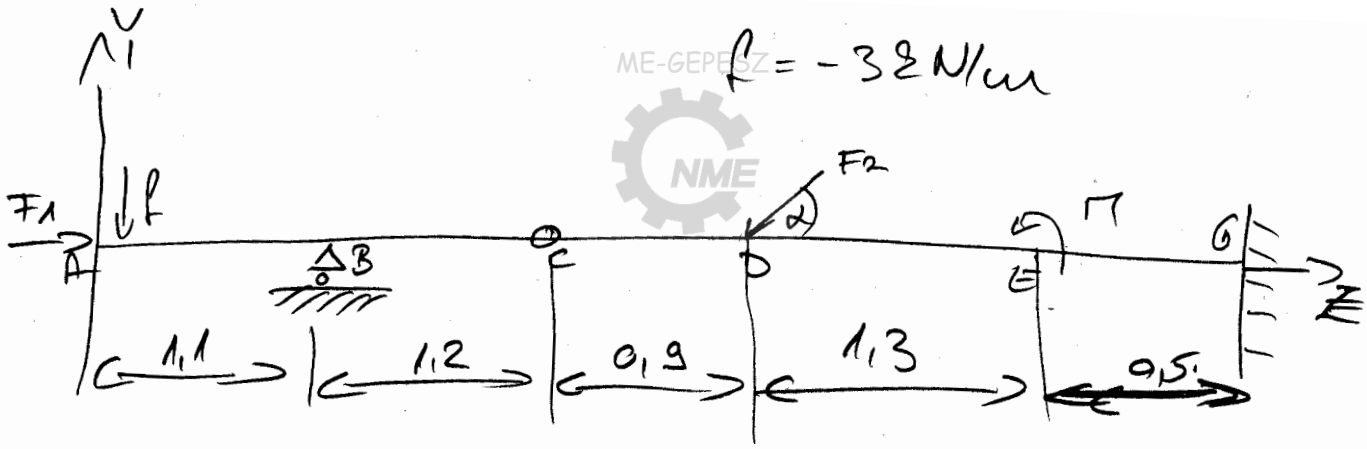
$f = [-(1 + 2 \cdot 1) = -3\,\Omega N/m$

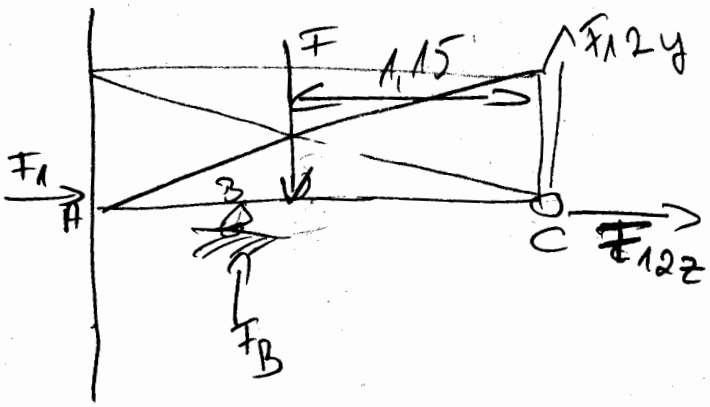
$M = [-(12 + 2 \cdot 7) = -26\,\Omega Nm$

$\xi_1 = 1{,}1\,m$ ✓
$\xi_2 = 1{,}2\,m$ ✓
$\xi_3 = 0{,}9\,m$ ✓
$\xi_4 = 1{,}3\,m$ ✓
$\xi_5 = 0{,}5\,m$ ✓

$F_1 = 22\,\Omega N$ ✓
$|F_2| = 38\,\Omega N$ ✓

$\alpha = 45°$ ✓
$f = -3\,\Omega N/m$ ✓
$M = -26\,\Omega Nm$ ✓





F_B
F_G
F_{12}
M_G
?
0

$F = f \cdot (1,1 + 1,2) = 2,3 \cdot (-3) = -6,9\,kN$

$$M_C \overset{CS+}{=} -1,2 \cdot F_B + 1,15 \cdot F = 0$$

$$-1,2 \cdot F_B + 1,15 \cdot 6,9 = 0$$

$$-1,2 \cdot F_B + 7,935 = 0$$

$$F_B = 6,6125\,kN$$

$$\sum F_{Zi} = F_1 + F_{12Z} = 0$$

$$22 + F_{12Z} = 0$$

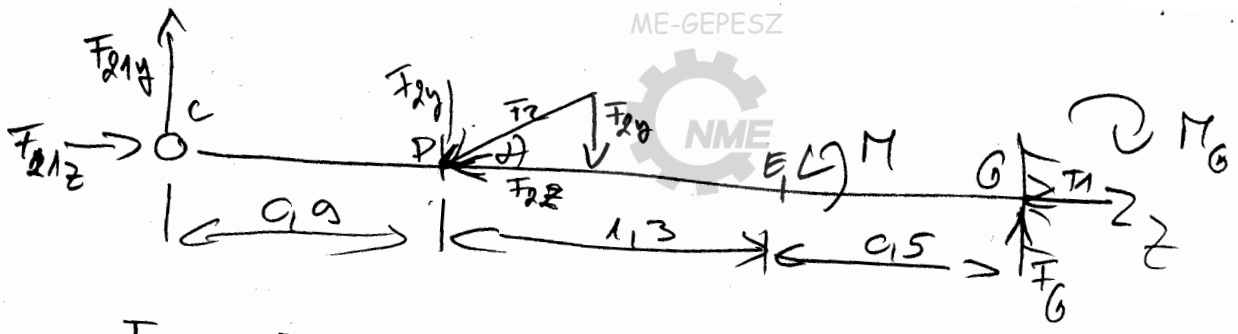
$$F_{12Z} = -22\,kN$$

$$\sum F_{Yi} = F_B - F + F_{12y} = 0$$

$$6,6125 - 6,9 + F_{12y} = 0$$

$$-0,2875 + F_{12y} = 0$$

$$F_{12y} = 0,2875\,kN$$



$F_{2y} = F_2 \cdot \sin\alpha = 38 \cdot \sin 45° = \underline{26,87\ kN}$

$F_{2z} = F_2 \cdot \cos\alpha = 38 \cdot \cos 45° = \underline{26,87\ kN}$

$$M_G \circlearrowright = F_{12y} \cdot \underbrace{2,7}_{0,9+1,3+0,5} + \overbrace{26,87}^{F_{2y}} \cdot \underbrace{1,8}_{1,3+0,5} + 26 =$$

$$= 0,2875 \cdot 2,7 + 26,87 \cdot 1,8 + 26 = \underline{75,14225\ kNm}$$

$$\sum F_{Zi} = F_1 - F_{2z} + F_G = 0$$

$$22 - 26,87 + F_G = 0$$

$$-4,87 + F_G = 0$$

$$F_G = \underline{4,87\ kN}$$

$$\sum F_{Yi} = F_{21y} + F_{2y} = 0,2875 + 26,87 = \underline{27,1575\ kN}$$