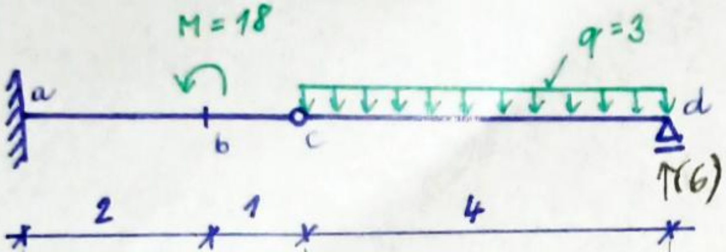
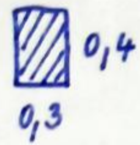
Určete w_b a φ_d



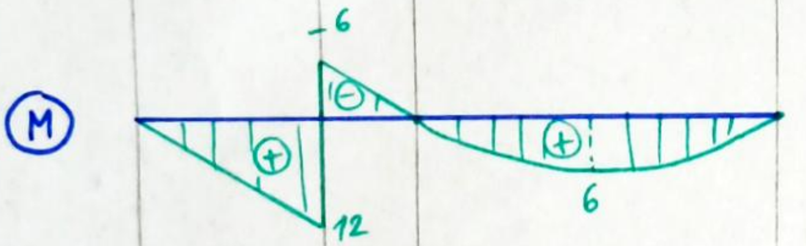
$E = 20\ \text{GPa}$



[kN, m, ...]

$EI = 20 \cdot 10^6 \cdot \frac{1}{12} \cdot 0{,}3 \cdot 0{,}4^3$

$EI = 32000\ \text{kPa} \cdot m^4$

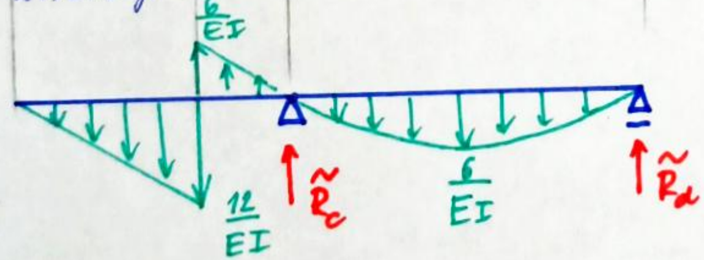


$$\underline{\underline{w_b}} = \tilde{M}_b = -\frac{1}{2} \cdot 2 \cdot \frac{12}{EI} \cdot \frac{1}{3} \cdot 2 =$$

$$= -\frac{1}{2} \cdot 2 \cdot \frac{12}{32000} \cdot \frac{1}{3} \cdot 2 = \underline{\underline{-2{,}5 \cdot 10^{-4}\ m}}$$

$$\underline{\underline{\varphi_d}} = \tilde{V}_d = -\tilde{R}_d = \underline{\underline{-1{,}09375 \cdot 10^{-4}\ \text{rad}}}$$

Mohrova analogie:



$$\sum \tilde{M}_{ic} = 0:$$

$$\frac{1}{2} \cdot \frac{12}{EI} \cdot 2 \cdot \left(1 + \frac{1}{3} \cdot 2\right) - \frac{1}{2} \cdot \frac{6}{EI} \cdot 1 \cdot \frac{2}{3} \cdot 1 -$$

$$- \frac{2}{3} \cdot \frac{6}{EI} \cdot 4 \cdot 2 + \tilde{R}_d \cdot 4 = 0$$

$$\underline{\tilde{R}_d = 1{,}09375 \cdot 10^{-4}\ [\text{rad}]}$$