

ODREĐUJEM W_1 i W_2

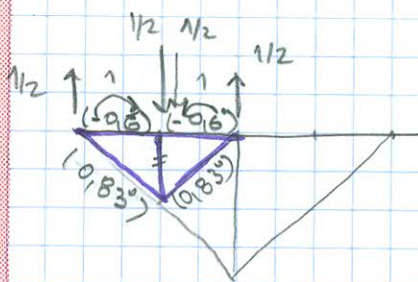
$$W = \int \frac{N \bar{S}}{EI} ds = \frac{1}{EI} \cdot \int \frac{EI}{EF} N \bar{S} ds$$



$$\frac{EI}{EF} = \frac{1/12 \cdot 0,8 \cdot 0,8^4}{0,3^2 \cdot 120} = \frac{4,096}{36}$$

zato je $0,3 \cdot 0,8^4$ a ne $0,3 \cdot 0,3^4$

(0,8³)



$\bar{S}^{(1)}$

$$W_1^* = \int \frac{4,096}{36} \cdot N \bar{S}^{(1)} ds$$

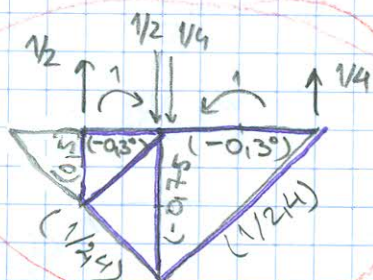
$$S_1 = \frac{1 \cdot 1}{2 \cdot \cos \alpha} \quad \cos \alpha = \frac{1,5}{2,5} = \frac{3}{5} \quad \alpha = \frac{1,5}{2}$$

$$S_1 = \frac{1 \cdot 5}{2 \cdot 3} = \frac{5}{6} = 0,833$$

$$O_1 = -S_1 \cdot \sin \alpha = -0,833 \cdot \frac{2}{2,5} = -0,666$$

$$W_1^* = \frac{4,096}{36} \cdot [2 \cdot 66,6 \cdot (-0,666) \cdot 2 + 2,5 \cdot (83,3) \cdot 0,833]$$

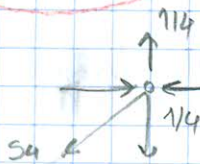
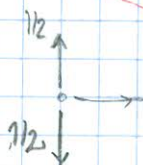
$$= -39,9802$$



$$S_4 = \frac{1 \cdot 1}{4 \cdot \cos \alpha} = \frac{1 \cdot 5}{4 \cdot 3} = \frac{5}{12} = \frac{1}{2,4}$$

$$O_4 = -\frac{1}{2,4} \cdot \sin \alpha = -\frac{1}{2,4} \cdot \frac{2}{2,5} = -0,333$$

Kada je sila u stupu pozitivna



$S_4 \cdot \sin \alpha$

$$W_2^* = \frac{4,096}{36} \cdot [2 \cdot (-0,333) \cdot 66,6 +$$

$$+ 4 \cdot (-0,333) \cdot 66,6 + 5 \cdot \frac{1}{2,4} \cdot (-83,3) + 2,5 \cdot \frac{1}{2,4} \cdot (-83,3)]$$

$$W_2^* = -44,8$$

