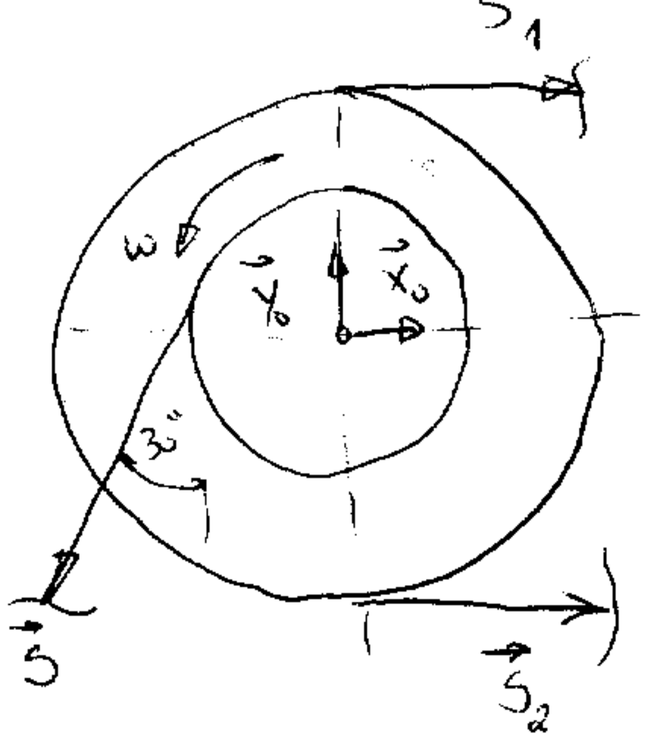
2. zadatak grupa B.

$S = 253,3\,N$ iz sistema tereta na strmoj ravni (vidi pod A)



$$S_1 = S_2 \cdot e^{\mu_2 \alpha}$$

$$\alpha = \tilde{\pi}\ [rad]$$

$$S_1 = S_2 \cdot e^{\mu_2 \cdot \tilde{\pi}}$$

$$\overset{+}{\circlearrowleft} \Sigma M_0 = 0 \quad + S \cdot r + S_2 \cdot R - S_1 \cdot R = 0$$

$$S \cdot r + S_2 \cdot R - S_2 \cdot e^{\mu_2 \cdot \tilde{\pi}} \cdot R = 0$$

$$S_2 (e^{\mu_2 \cdot \tilde{\pi}} - 1) R = S \cdot r$$

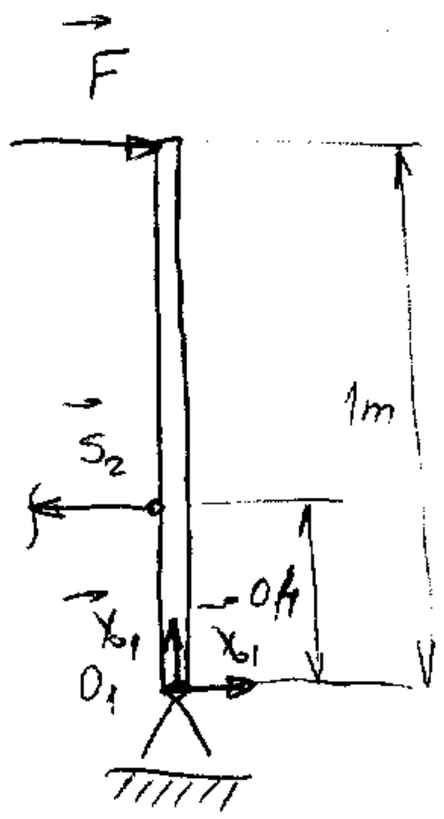
$$S_2 = \frac{S \cdot r}{(e^{\mu_2 \cdot \tilde{\pi}} - 1) \cdot R}$$

$$S_2 = \frac{253,3 \cdot 0,2}{(e^{0,3 \cdot \tilde{\pi}} - 1) \cdot 0,4}$$

$$e^{0,3\tilde{\pi}} = 2,566$$

$$S_2 = \frac{253,3 \cdot 0,2}{2,566 \cdot 0,4}$$

$$S_2 = 49,35\,N$$



$$\overset{+}{\circlearrowleft} \Sigma M_{O_1} = 0$$

$$S_2 \cdot 0,4 - F \cdot 1 = 0$$

$$F = S_2 \cdot 0,4\,N$$

$$F = 49,35 \cdot 0,4$$

$$= 19,74\,N$$