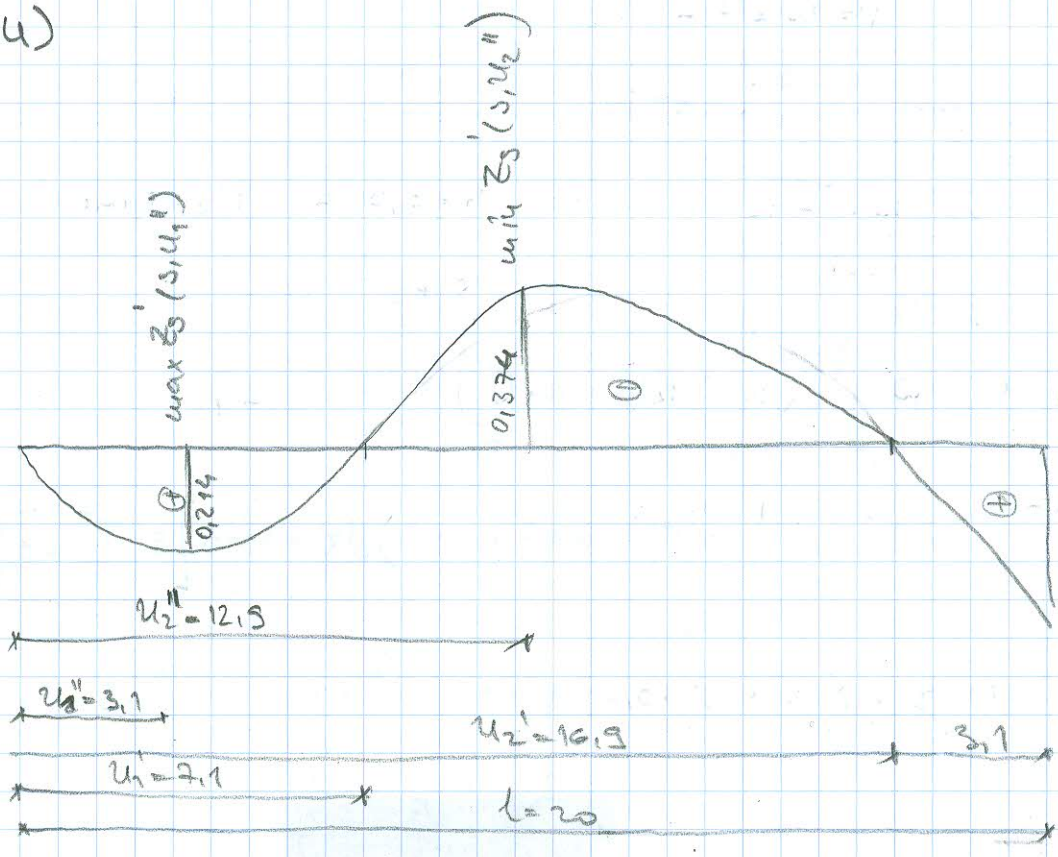
* Nule od Z_S daju nule f-je tj. prelaze
* Nule od Z_S' daju max vrednosti f-je, tj. odstojanje na kom su max vrednosti f-je i računam ordinate u.l.

$Z'(S,U)$



* Nule ove f-je $Z'(S,U)$ su mi U_1' i U_2' a max vrednosti, tj. odstojanja max vrednosti su mi U_1'' i U_2'' a ordinate se dobijaju kada se u f-ju $Z'(S,U)$ uvrste U_1'' i U_2''

1) KRITERIJUM ZA NEPOVOLJAN POLOŽAJ

$Z(S,U_1) = Z(S,U_2)$

$p=20\,kN/m$
$\max Z_S$

$\xi_1 = \xi \qquad \xi_2 = \xi + \frac{4}{20} = \xi + \frac{1}{5}$

$Z(S,U) = \xi^2(5\xi^2 - 8\xi + 3)$

$$\xi^2(5\xi^2-8\xi+3) = \left(\xi+\tfrac{1}{5}\right)^2\left(5\left(\xi+\tfrac{1}{5}\right)^2 - 8\left(\xi+\tfrac{1}{5}\right)+3\right)$$

$$5\xi^4 - 8\xi^3 + 3\xi^2 = \left(\xi^2 + 2\xi\cdot\tfrac{1}{5} + \tfrac{1}{25}\right)\left(5\xi^2 + 2\xi + \tfrac{1}{5} - 8\xi - \tfrac{8}{5} + 3\right)$$

$$= \left(\xi^2 + \tfrac{2}{5}\xi + \tfrac{1}{25}\right)\left(5\xi^2 - 6\xi + \tfrac{8}{5}\right)$$

$$= \left(5\xi^4 - 6\xi^3 + \tfrac{8}{5}\xi^2 + 2\xi^3 - \tfrac{12}{5}\xi^2 + \tfrac{16}{25}\xi + \tfrac{1}{5}\xi^2 - \tfrac{6}{25}\xi + \tfrac{8}{125}\right)$$

$$= 4\xi^3 - \tfrac{18}{5}\xi^2 + \tfrac{10}{25}\xi + \tfrac{8}{125} = 0 \;/\cdot\tfrac{125}{2}$$

$$= 250\xi^2 - 225\xi^2 + 25\xi + 4 = 0$$