

## Homework No. 1

Determine displacements  $u(x)$  and axial forces  $N(x)$  using FEM. Discretize the structure:

- a) by one element with linear approximation functions
- b) by two elements with linear approximation functions
- c) by one element with quadratic approximation functions

Compare solutions with the analytical one.  $EA = 1$ , coefficients  $a = 1.5$ ,  $b = 1.5$

Calculate displacement  $u$  and axial force  $N$  at point  $x = 1.5$  m for all cases.

