CE 425 Introduction to Finite Elements
Assignment # 7 (due Dec 29, 2014 till 10:00)

a. Develop a 3-node finite element approximation to solve the problem shown below using 2 elements.
b. Solve the same problem using 4 truss elements using the direct stiffness method.
c. Compare your results. Plot displacement and stress as a function of x.
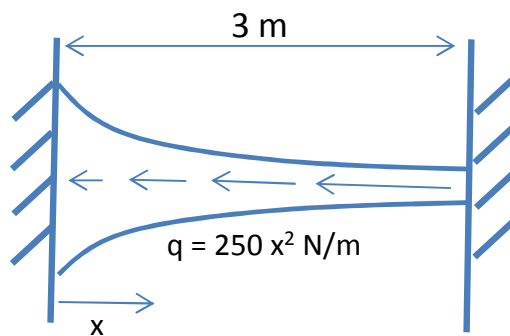
Linearly elastic bar
E = 3 GPa.
Area = $0.0002\ e^{-0.3x}\ m^2$

3 m

$q = 250\ x^2\ N/m$

x