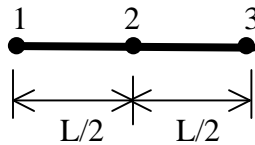
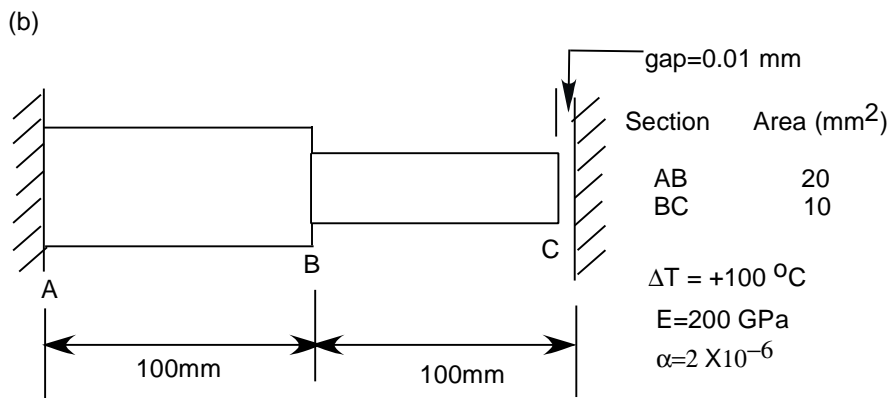
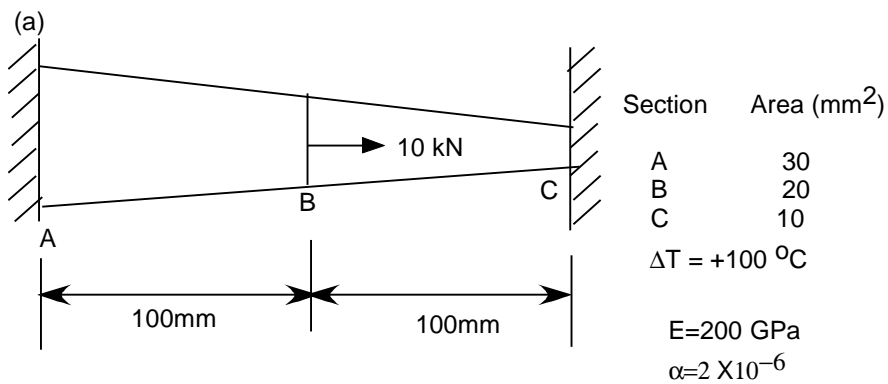


Home work 3  
 Design using FEM (EML 4536)  
 Due: Sep 18 2004

1. Assuming a quadratic one-dimensional displacement function, determine the interpolation function matrix  $[N]$  (shape function) for a three node bar element shown below.  $L$  is the length of the element.



2. Analyze the bar shown below for displacement at B and average stresses in bar AB and bar BC



3. Analyze the wall bracket shown in the figure and calculate the forces and stresses in all the members. All joints are pin jointed. Assume  $E=200 \text{ GPa}$

