Tutorial Sheet #8

Assigned on Thursday, October 08

1. Using the *Direct Stiffness Approach*, obtain the axial forces in the truss shown in **Figure 1**, when the temperature in member BD is increased by 50° C. For all members, assume $A = 20$ cm^2, $E = 2\times10^5$ MPa, and $\alpha = 1/(75000°$ C).

2. Using the *Direct Stiffness Approach*, obtain the axial forces in the truss shown in **Figure 2**, if the member BC is fabricated 0.02 m too short before being placed in the truss. Assume $AE = 400$ kN for all members.

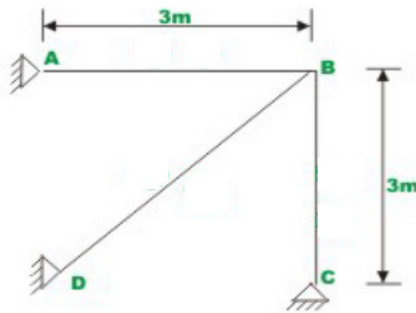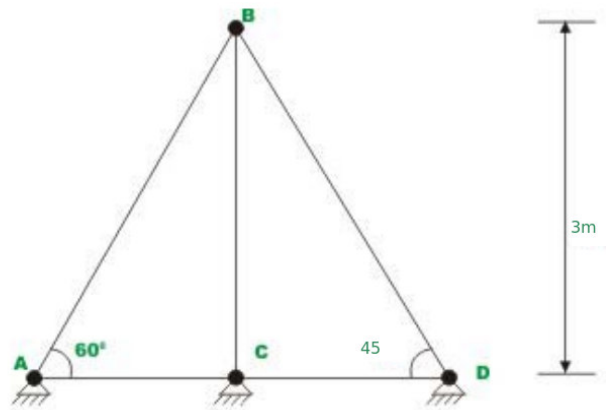**Figure 1**   **Figure 2**