

Deflections of Beams:
Work-Energy Methods
Deflection of Truss Structures

Chapter 7 of Kassimali 5th Ed.

Problem 7.7 Use the virtual work method to determine the vertical deflection at joint C of the truss shown in Fig P7.7

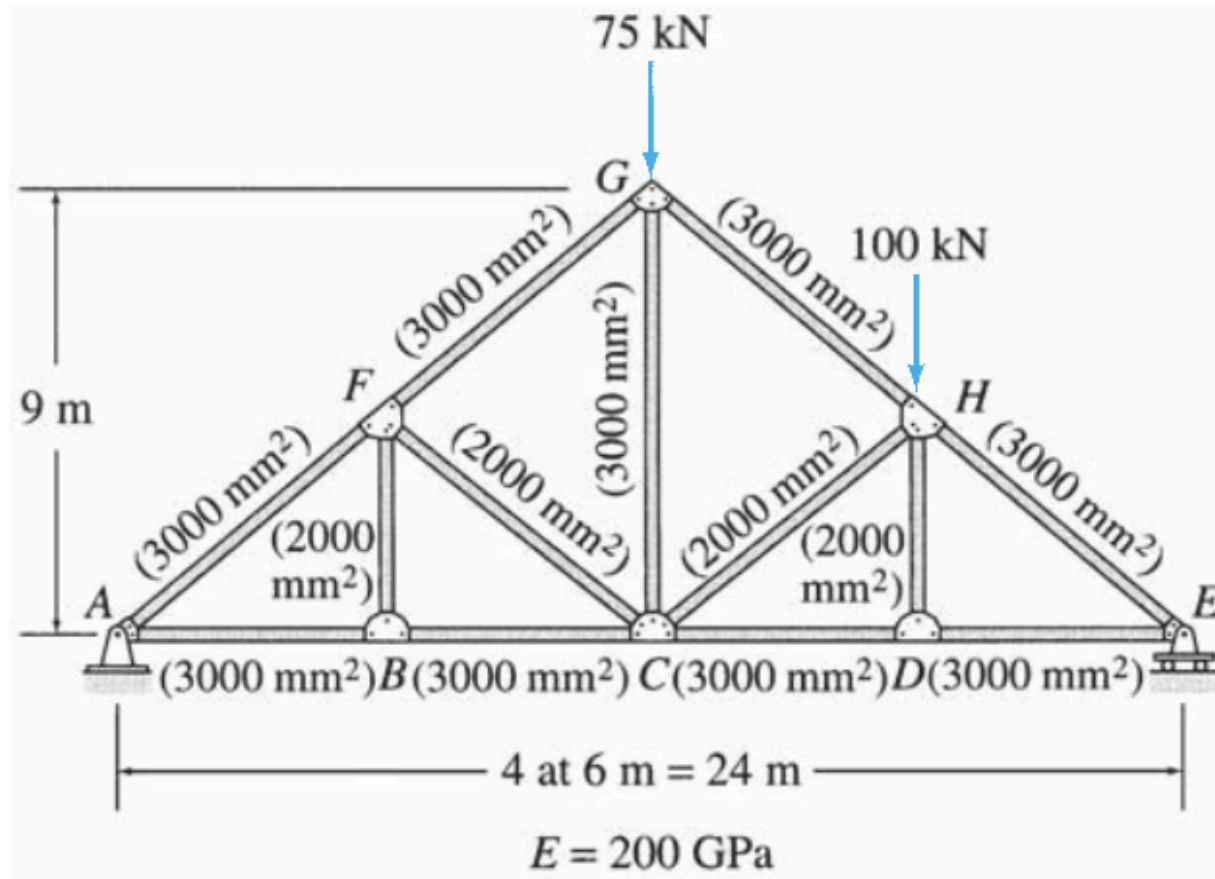
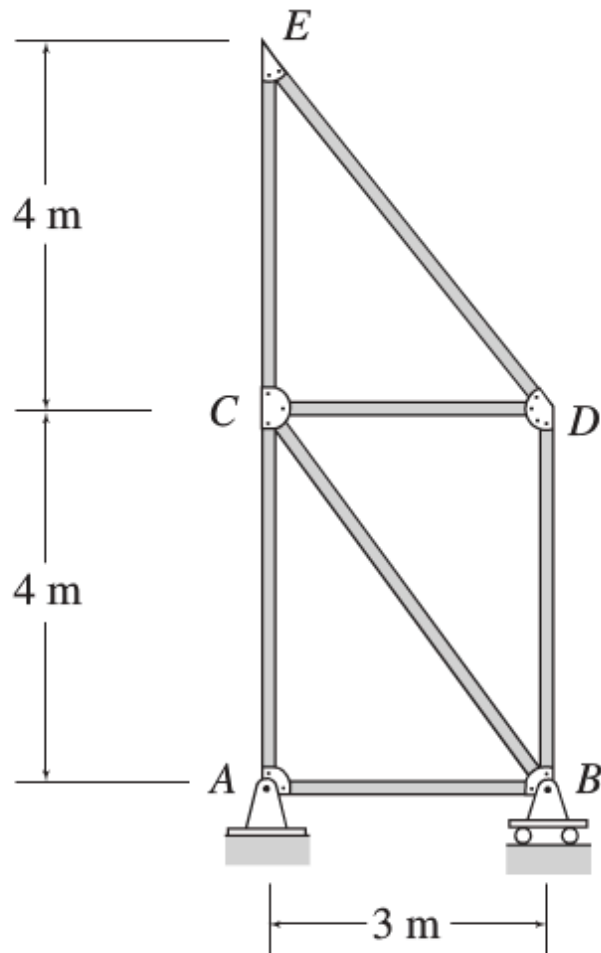


FIG. P7.7

Problem 7.16 and 7.18



$$\alpha = 1.2 (10^{-5})/^{\circ}\text{C}$$

7.16 Determine the horizontal deflection at joint E of the truss shown in Fig. P7.16 due to a temperature increase of 50°C in members AC and CE . Use the method of virtual work.

7.18 Determine the horizontal deflection at joint E of the truss shown in Fig. P7.16 if member BC is 18 mm too long and member CE is 15 mm too short. Use the method of virtual work.

FIG. P7.16, P7.18