

Assignment # 2 and 3

Due date: Week of 9-26-2016

Question 1 (8 Marks)

Use the Moment-Area Method to determine the slopes and deflections at points B and C of the beam shown in Figure (1).

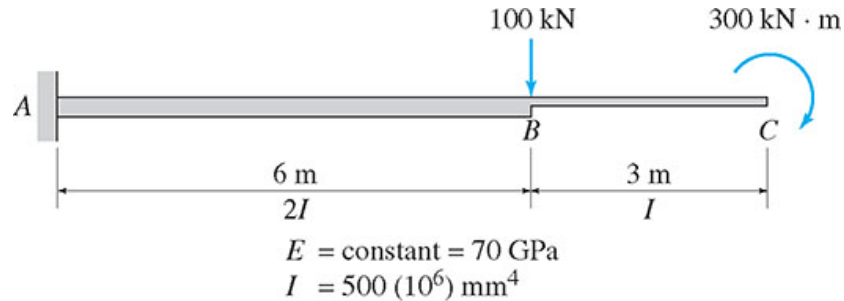


Figure (1)

Question 2 (12 Marks)

Determine the smallest moment of inertia I required for the beam in Figure (2), so that the maximum deflection does not exceed the limit of $1/360$ of the beam span (i.e. $\Delta_{max} \leq L/360$).

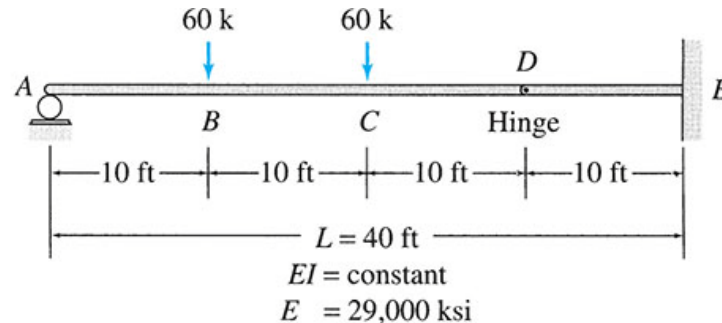


Figure (2)

Question 3 (8 Marks)

Solve the problem in Question 1 above (the beam shown in Figure 1) using the Conjugate Beam Method.

Question 4 (12 Marks)

Solve the problem in Question 2 above (the beam shown in Figure 2) using the Conjugate Beam Method.