

NAME: _____ SSN: _____

(1) Draw the bending-moment diagram for the L-frame shown in Figure 1. Determine the vertical and horizontal displacements of joint C by any method. The members are made of Oak ($E = 12 \text{ GPa}$) and have $10 \text{ cm} \times 10 \text{ cm}$ cross-section. The uniformly distributed load is 50 N/m and the lengths of AB and BC are, respectively, 4 m and 2 m .

(2) Analyze the problem shown in Figure 2 and determine the horizontal reaction at C. You may use any method.

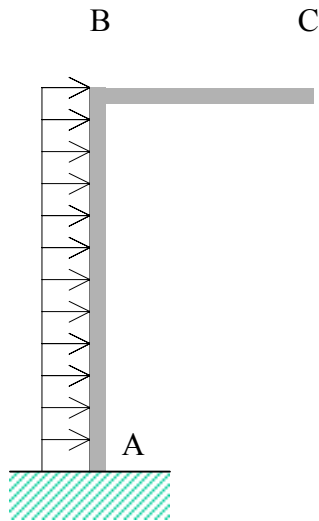


Figure 1

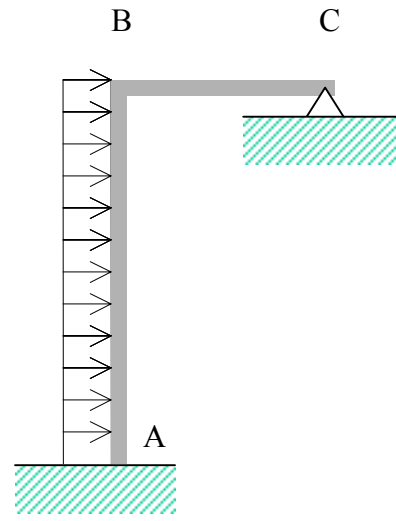


Figure 2

(3) Determine the magnitude of P in kN that must be applied at B to push BC to the right a distance of $500/EI \text{ m}$. You may use any method.

(4) Draw the complete bending-moment diagram for the problem shown in Figure 4.

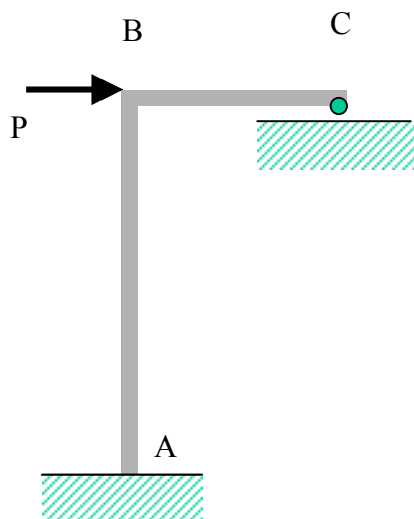


Figure 3

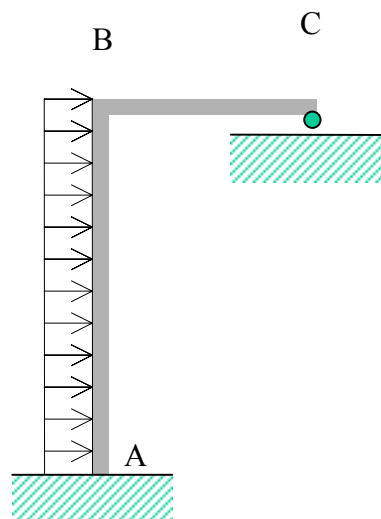


Figure 4