

CIVL4122/6122: Structural Analysis II

Instructor: Dr. Adel E. Abdelnaby, P.E.

106C Engineering Science BLDG

bdelnaby@memphis.edu

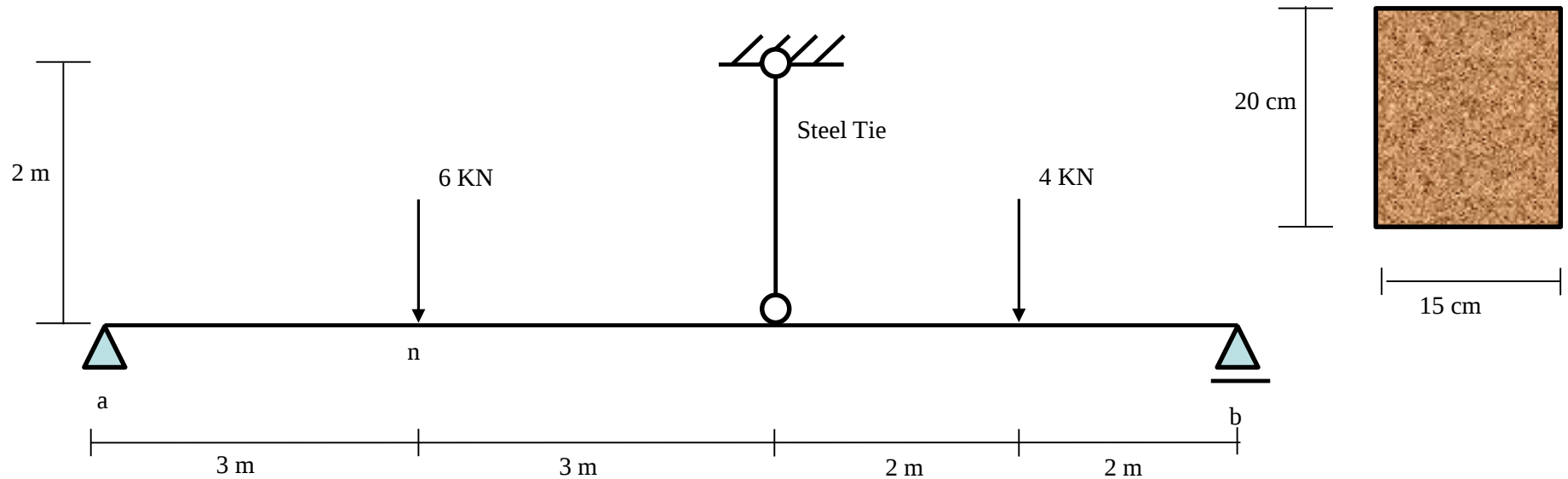
(901) 678 - 4633

Department of Civil Engineering

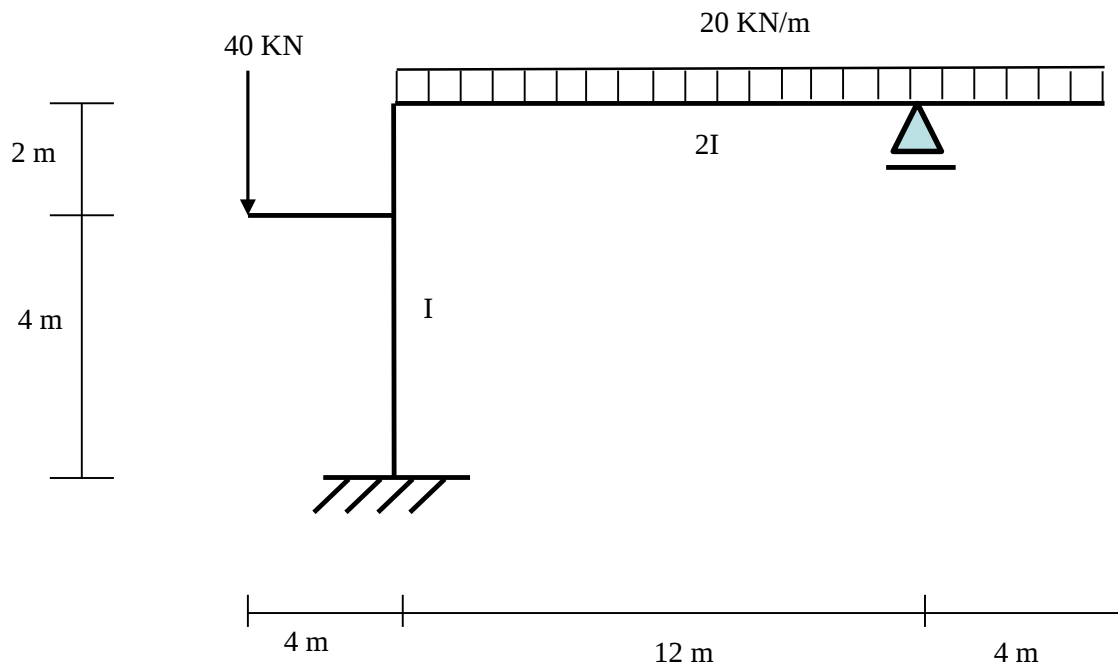
University of Memphis

Homework # 4 (due March 22)

Problem 1. Determine the tension in the steel tie (diameter $3/8$ inch, $E = 20,000 \text{ KN/cm}^2$) and draw the bending moment diagram for the timber beam of given cross section ($E = 1,000 \text{ KN/cm}^2$). Hence calculate the vertical deflection at point n, v_n .



Problem 2. Draw the bending moment, normal force and shear force diagrams for the shown frame. Please note that the inertia of the beam is twice the column's inertia.



Problem 1. For the shown truss, determine the forces in all members due to the applied loads. $EA = 300,000 \text{ KN}$

