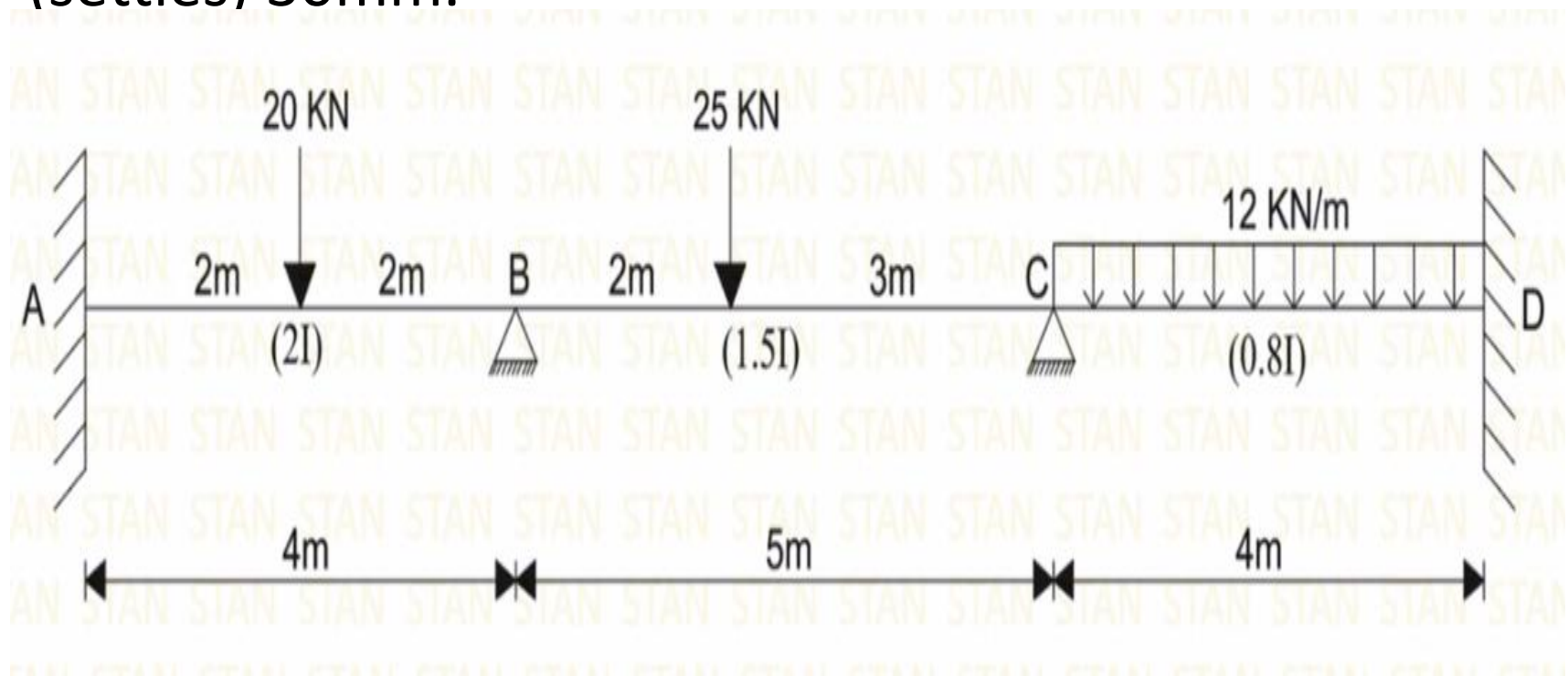


Assignment on Theory of Structures II

Deadline for Submission: June 10, 2022

Assignment 1: Slope Deflection - Beam

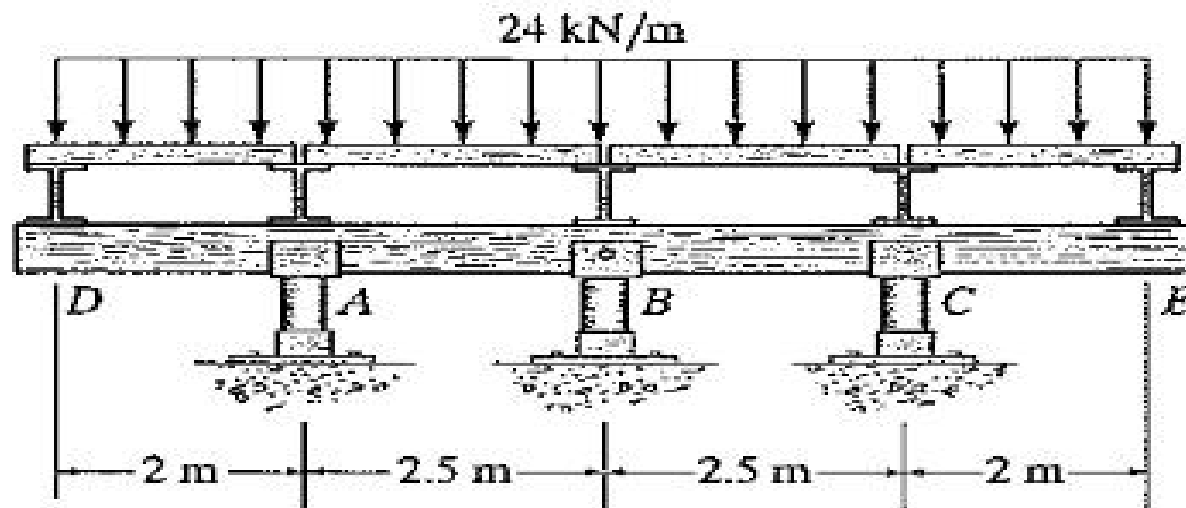
Analyze the following beam using slope deflection Method. E is Constant. The support at C is displaced (settles) 30mm.



Assignment 2: Moment Distribution -Beam

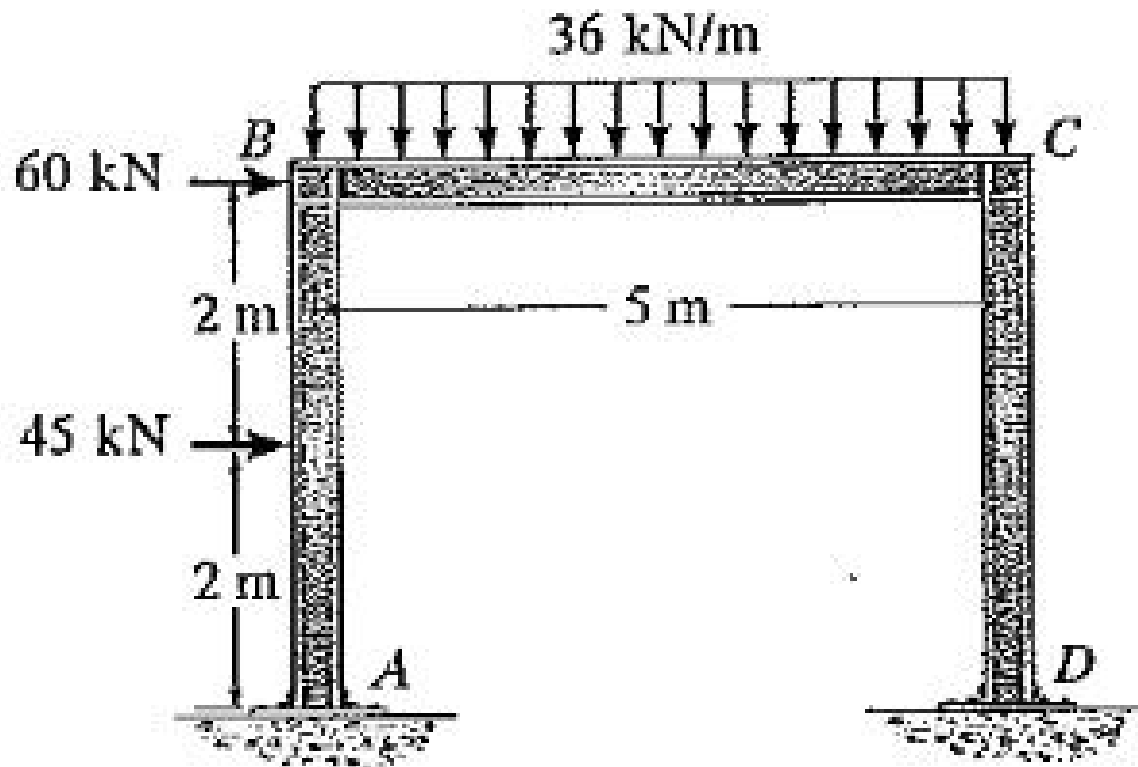
Determine the moments at A, B and C and then draw the moment diagram for the girder DE. EI is constant

Hint: Assume the support at B is a pin and A and C are rollers. The distributed load rests on simply supported floor boards that transmit the load to the floor beams.)



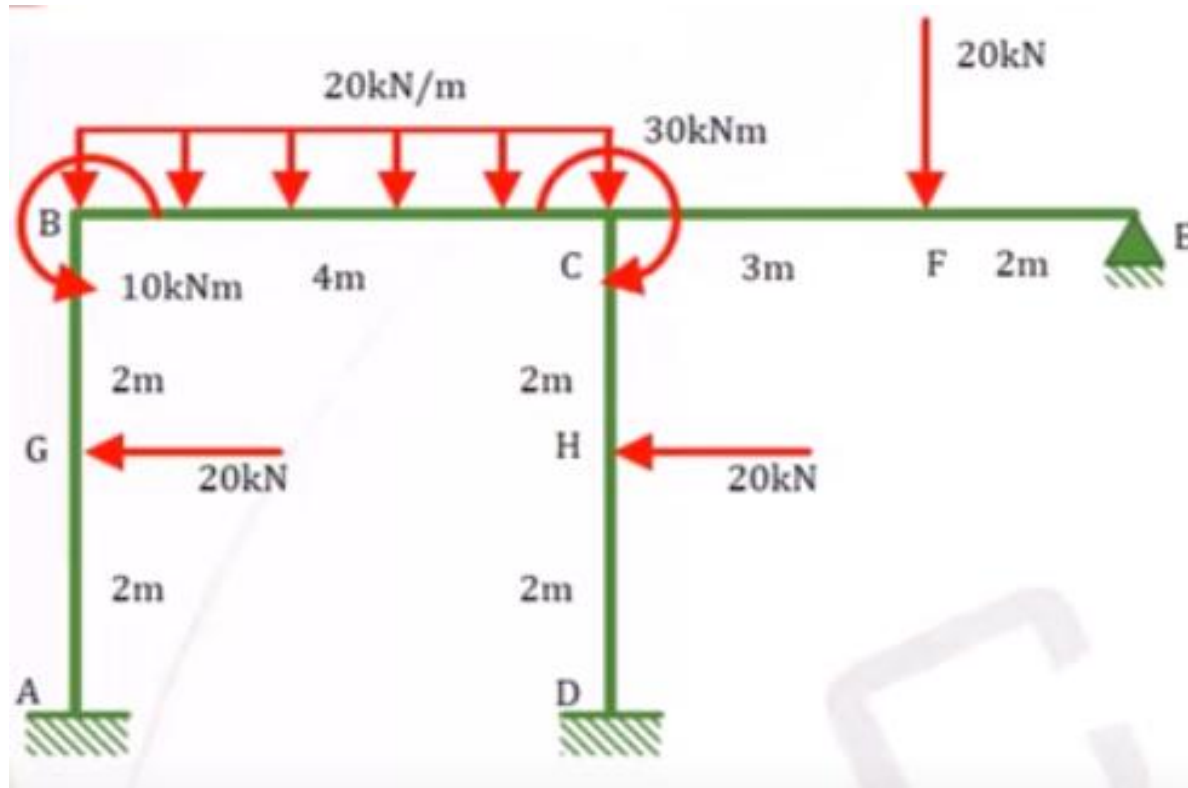
Assignment 3: Moment Distribution -Frame

Determine the moments at the ends of each member of the frame. The members are fixed connected at the supports and joints. EI is the same for each member.



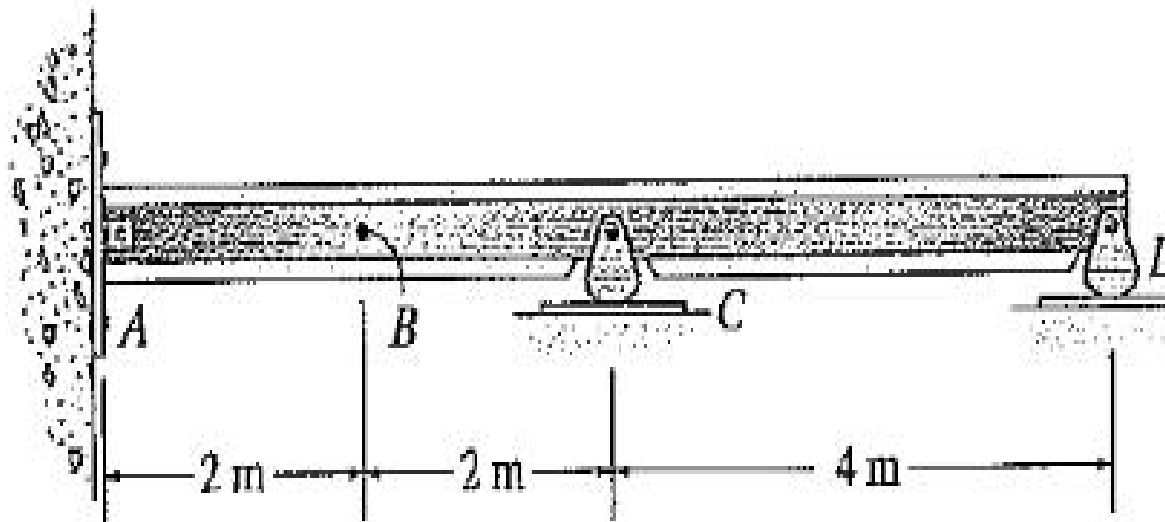
Assignment 4: Kani's Method

Determine the moments at the ends of each member of the frame. The members are fixed connected at the supports and joints. EI is the same for each member.



Assignment 5: Influence Line - Beam

Sketch the influence for the moment at B. If a uniform live load of 6 kN/m is placed on the beam, determine the maximum positive moment at B. Assume the beam is pinned at A. EI is constant



Assignment 6: Stiffness Method - Truss

Determine the stiffness matrix K and the forces in members 1 and 5 for the truss below. AE is constant

