

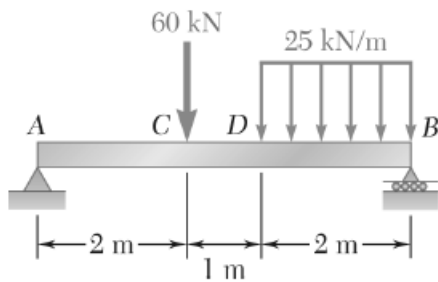
## ES221 ENGINEERING MECHANICS I

### Additional Problems-Set IX

**Due Date: 22.12.2020**

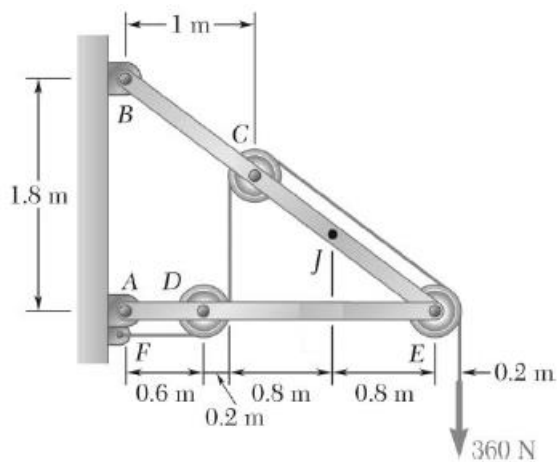
Q1) (25 pts)

For the beam and loading shown, determine the internal forces to the right of point D.

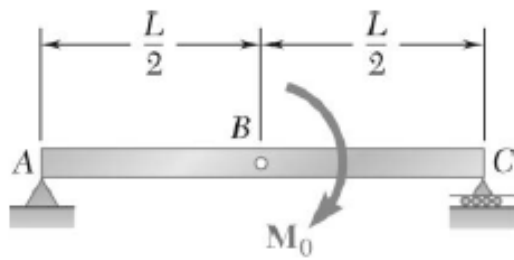


Q2) (25 pts)

Knowing that the radius of each pulley is 200 mm and neglecting friction, determine the internal forces at Point J of the frame shown.

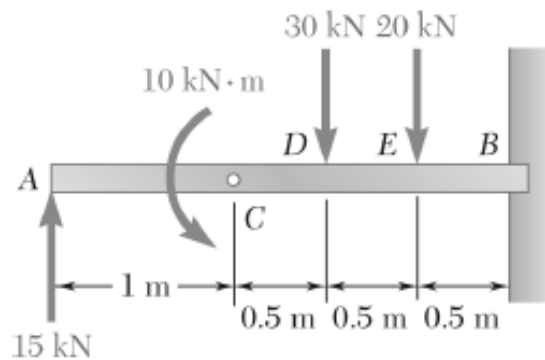


Q3) (25 pts)



For the beam and loading shown, (a) draw the shear and bending-moment diagrams, (b) determine the maximum absolute values of the shear and bending moment.

Q4) (25 pts)



For the beam and loading shown, (a) draw the shear and bending-moment diagrams, (b) determine the maximum absolute values of the shear and bending moment.