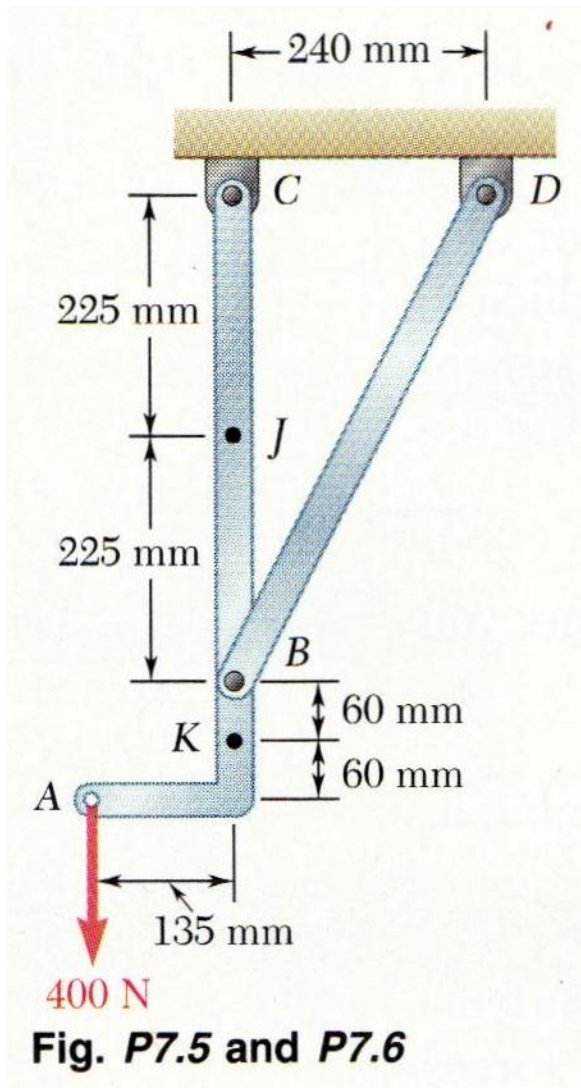


Statics Homework Handout 7:

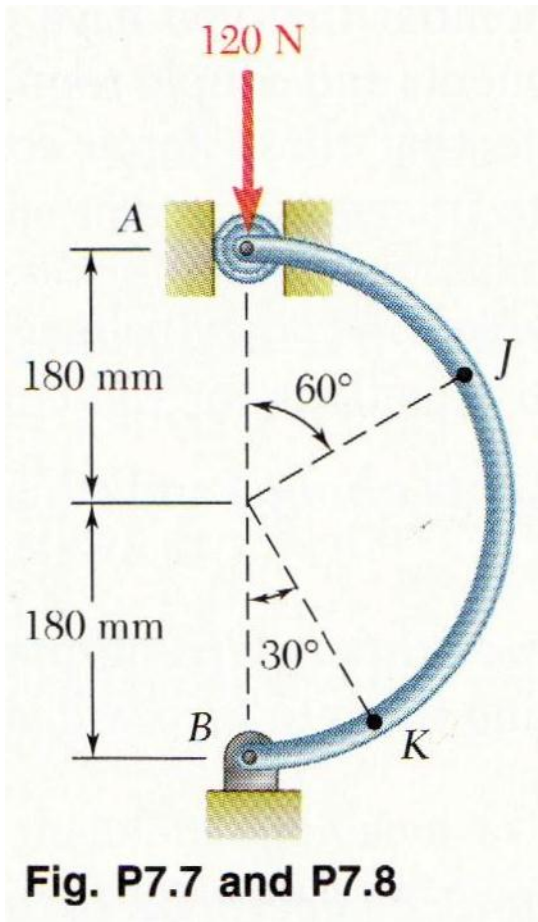
Homework Assignment #7: 7.7, 7.16, 7.40, 7.52, 7.80

**7.5** Determine the internal forces at point *J* of the structure shown.



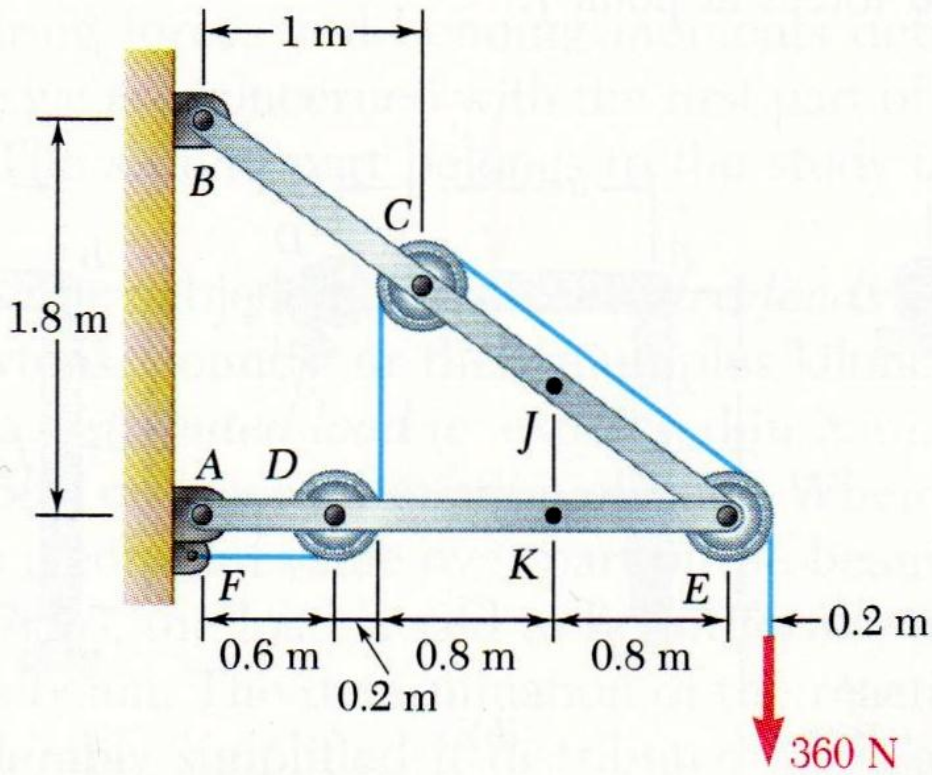
**7.6** Determine the internal forces at point *K* of the structure shown.

**7.7** A semicircular rod is loaded as shown. Determine the internal forces at point  $J$ .



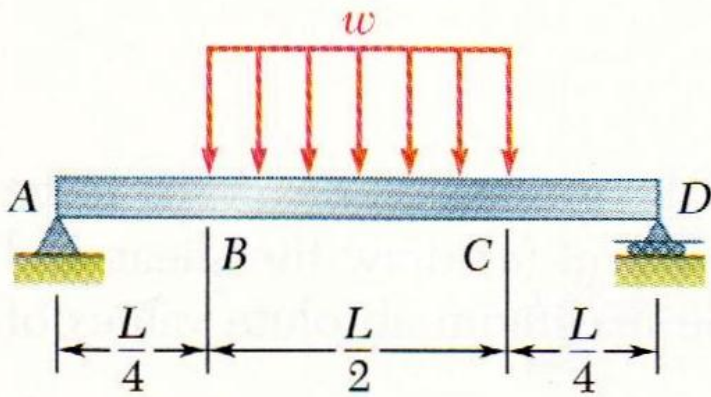
**Fig. P7.7 and P7.8**

**7.16** Knowing that the radius of each pulley is 200 mm and neglecting friction, determine the internal forces at point  $K$  of the frame shown.



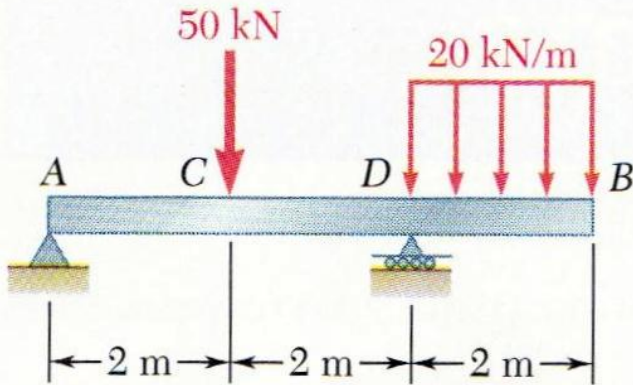
**Fig. P7.15 and P7.16**

**7.29 through 7.32** 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.

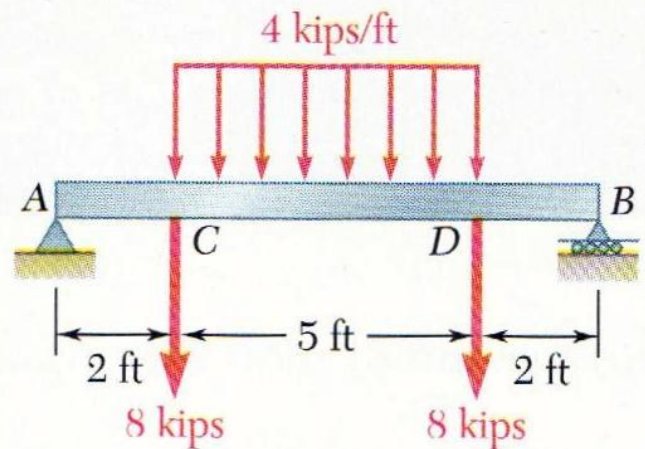


**Fig. P7.30**

**7.39 through 7.42** 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.

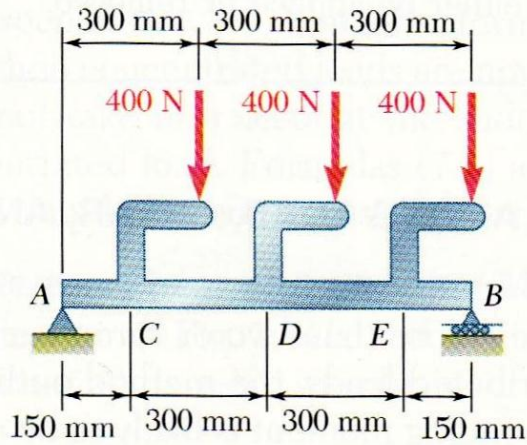


**Fig. P7.40**

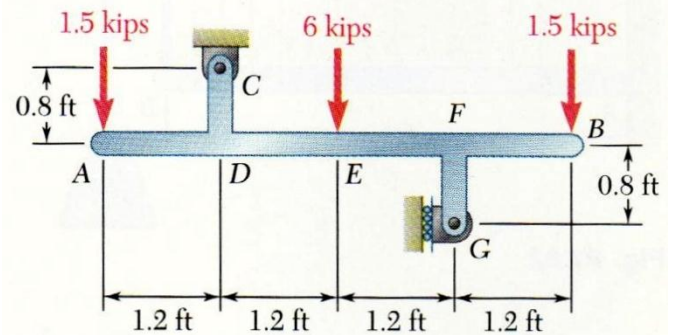


**Fig. P7.41**

**7.52 through 7.54** Draw the shear and bending-moment diagrams for the beam  $AB$ , and determine the maximum absolute values of the shear and bending moment.

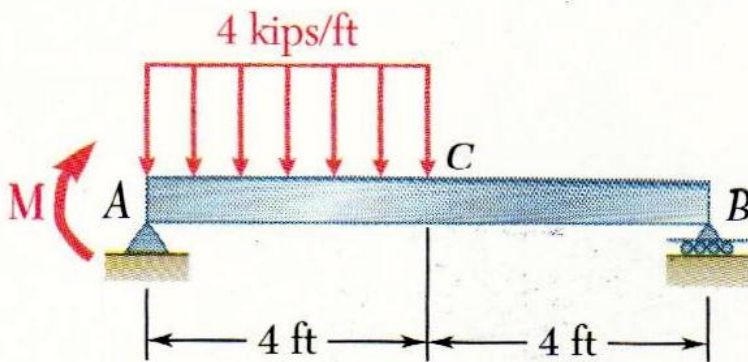


**Fig. P7.52**



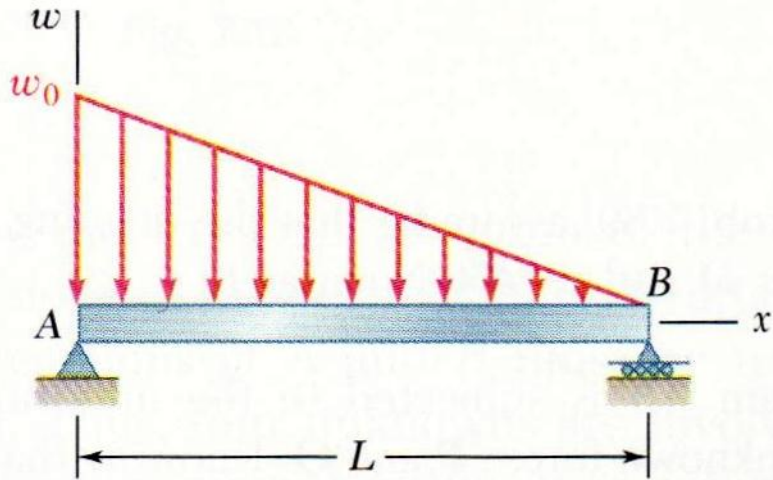
**Fig. P7.53**

**7.80** For the beam shown, draw the shear and bending-moment diagrams, and determine the magnitude and location of the maximum absolute value of the bending moment, knowing that (a)  $M = 0$ , (b)  $M = 24\text{ kip}\cdot\text{ft}$ .



**Fig. P7.80**

**7.85 and 7.86** For the beam and loading shown, (a) write the equations of the shear and bending-moment curves, (b) determine the magnitude and location of the maximum bending moment.



**Fig. P7.85**