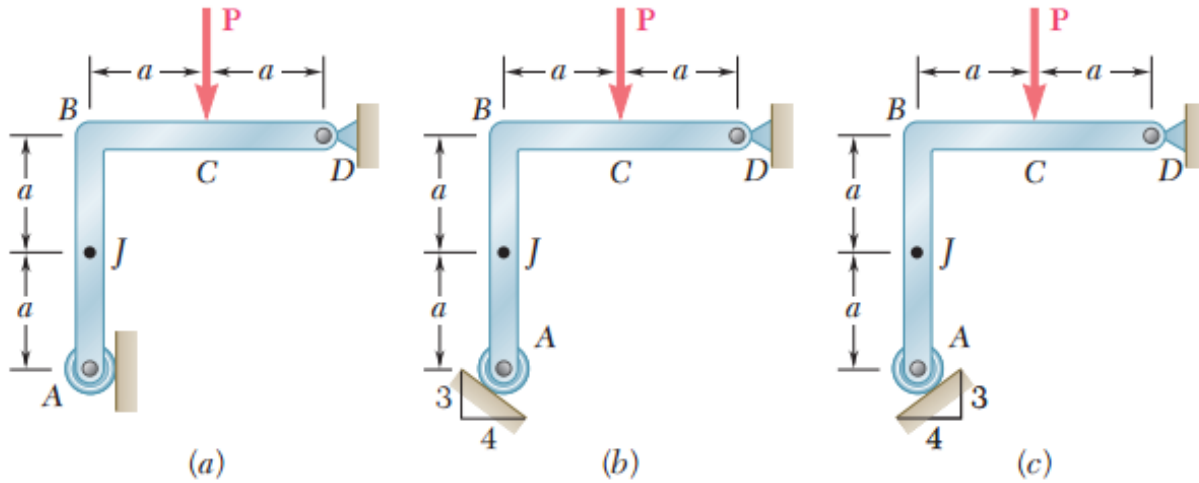


## ME 2120 Recitation 7

*Questions Taken from 9<sup>th</sup> Edition*Useful Equations

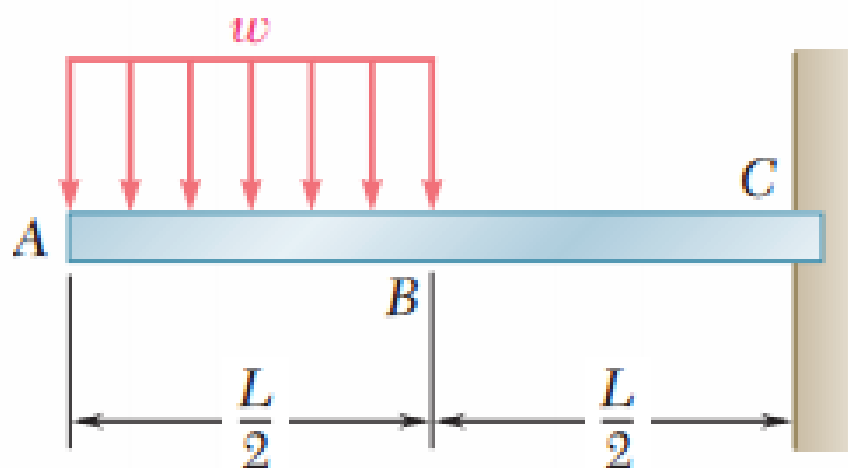
$$\sum \vec{F} = 0 \quad \sum \vec{F}_x = 0 \quad \sum \vec{F}_y = 0 \quad \sum \vec{F}_z = 0$$
$$\sum \vec{M} = 0$$

**7.21 and 7.22** A force  $\mathbf{P}$  is applied to a bent rod that is supported by a roller and a pin and bracket. For each of the three cases shown, determine the internal forces at point  $J$ .



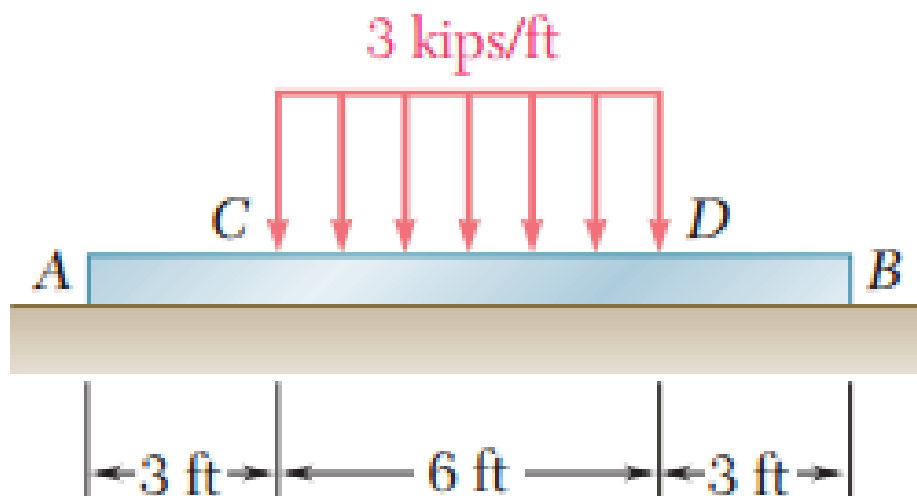
**Fig. P7.21**

**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. P7.32**

**7.45 and 7.46** Assuming the upward reaction of the ground on beam  $AB$  to be uniformly distributed, (a) draw the shear and bending-moment diagrams, (b) determine the maximum absolute values of the shear and bending moment.



**Fig. P7.46**