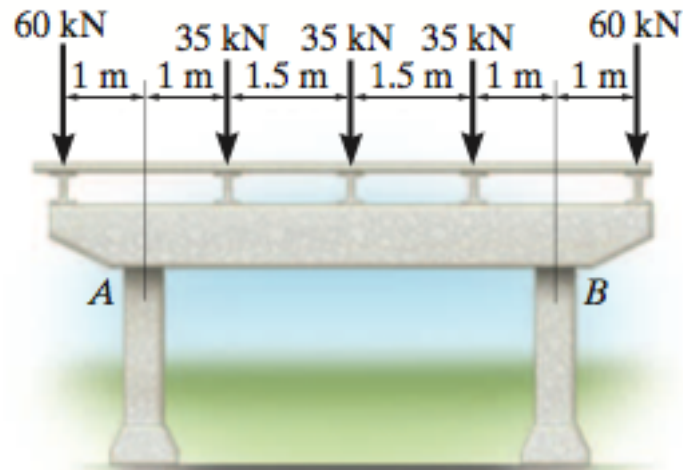
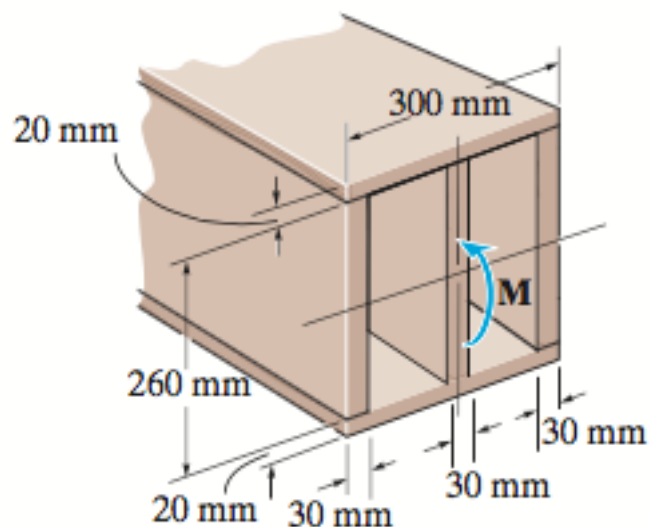


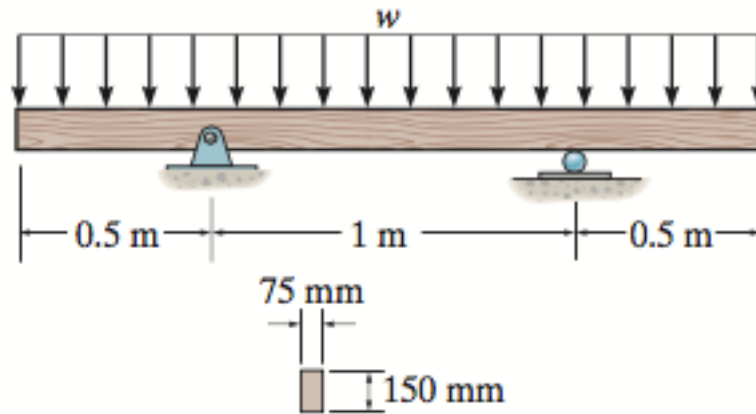
***6-12.** A reinforced concrete pier is used to support the stringers for a bridge deck. Draw the shear and moment diagrams for the pier when it is subjected to the stringer loads shown. Assume the columns at *A* and *B* exert only vertical reactions on the pier.



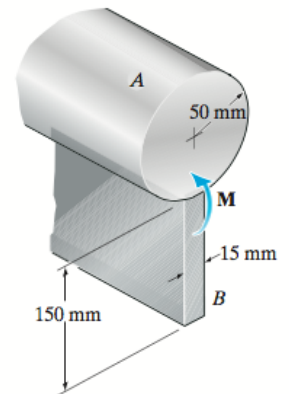
***6-76.** Determine the moment **M** that must be applied to the beam in order to create a maximum stress of 80 MPa. Also sketch the stress distribution acting over the cross section.



***6-104.** If $w = 10 \text{ kN/m}$, determine the maximum bending stress in the beam. Sketch the stress distribution acting over the cross section.



•6-137. If the beam is subjected to an internal moment of $M = 45 \text{ kN}\cdot\text{m}$, determine the maximum bending stress developed in the A-36 steel section A and the 2014-T6 aluminum alloy section B .



***6-140.** The low strength concrete floor slab is integrated with a wide-flange A-36 steel beam using shear studs (not shown) to form the composite beam. If the allowable bending stress for the concrete is $(\sigma_{\text{allow}})_{\text{con}} = 10 \text{ MPa}$, and allowable bending stress for steel is $(\sigma_{\text{allow}})_{\text{st}} = 165 \text{ MPa}$, determine the maximum allowable internal moment \mathbf{M} that can be applied to the beam.

