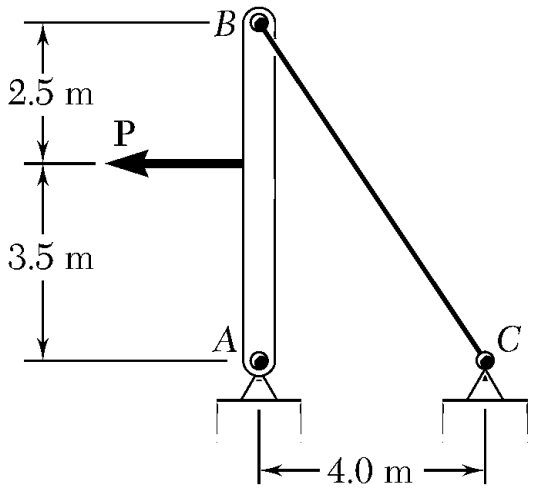
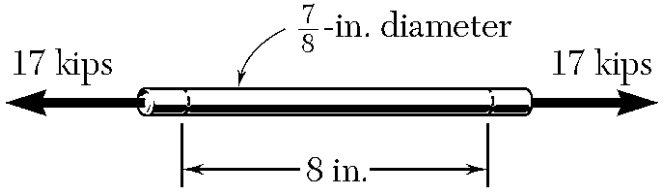
1) GIVEN: A 4.8ft long steel wire with ∅0.25in is subjected to a 750-lb tensile load. ($E_s = 29x10^6$ psi)
REQ'D: (a) Elongation of the wire.
(b) Corresponding normal stress. (B9.1)

2) GIVEN: ∅4mm steel guy wire *BC* as shown. $E_s = 200$ GPa
REQ'D: Maximum load, P, if max stress and elongation in the wire must not exceed 190 MPa and 6 mm. (B9.11)



3) GIVEN: A steel rod with ∅7/8in is tensile tested as shown.
(ν = 0.3 and E = 29x10^6 psi for steel)
REQ'D: (a) Elongation in the 8in. gage length.
(b) Change in diameter of the rod. (B9.49)



4) GIVEN: Two solid cylindrical rods are joined at B and loaded as shown.
Rod AB is steel (E = 29x10^6 psi). Rod BC is brass (15x10^6 psi).
REQ'D: (*a*) Total deformation of the composite rod *ABC*.
(*b*) Deflection of point *B*. (B9.16)