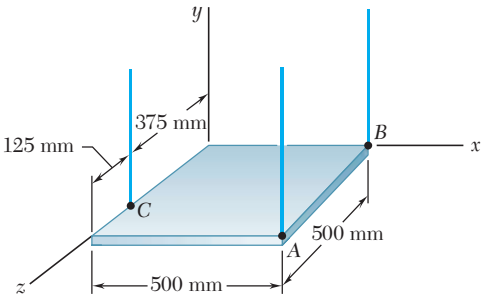

Fig. P4.59

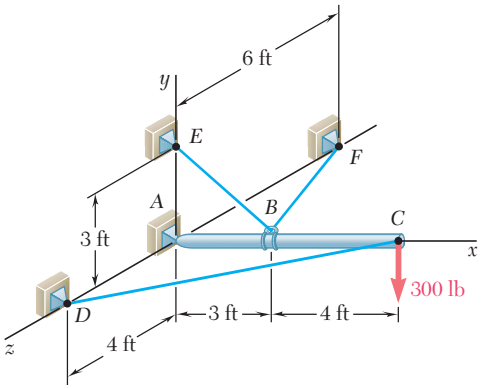

Fig. P4.63

4.59 The 20-kg square plate is supported by the three wires shown. Determine the tension in each wire.

4.60 Determine the mass and location of the smallest block that should be placed on the 20-kg plate of Prob. 4.59 if the tensions in the three wires are to be equal.

4.61 The 12-ft boom AB is acted upon by the 850-lb force shown. Determine (a) the tension in each cable, (b) the reaction of the ball and socket at A.

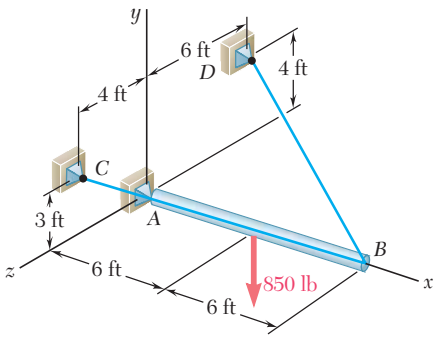

Fig. P4.61

4.62 Solve Prob. 4.61 assuming that the 850-lb load is applied at point B.

4.63 A 7-ft boom is held by a ball and socket at A and by two cables EBF and DC; cable EBF passes around a frictionless pulley at B. Determine the tension in each cable.

4.64 A 300-kg crate hangs from a cable that passes over a pulley B and is attached to a support at H. The 100-kg boom AB is supported by a ball and socket at A and by two cables DE and DF. The center of gravity of the boom is located at G. Determine (a) the tension in cables DE and DF, (b) the reaction at A.

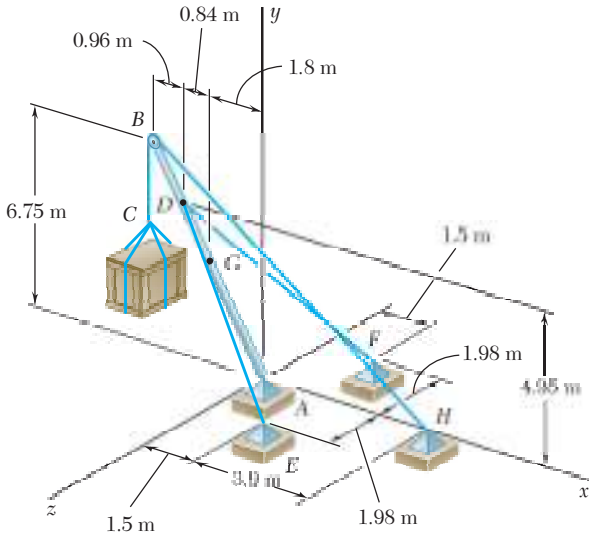

Fig. P4.64