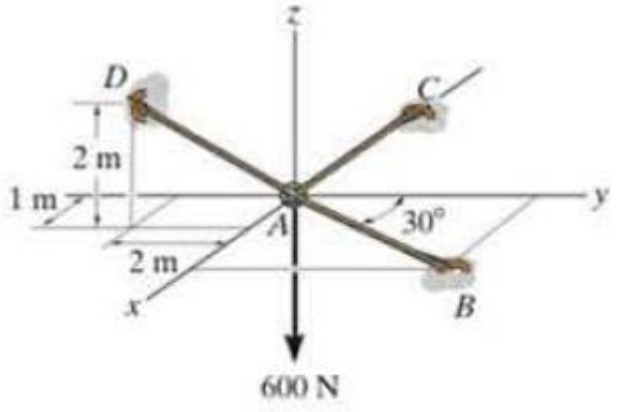
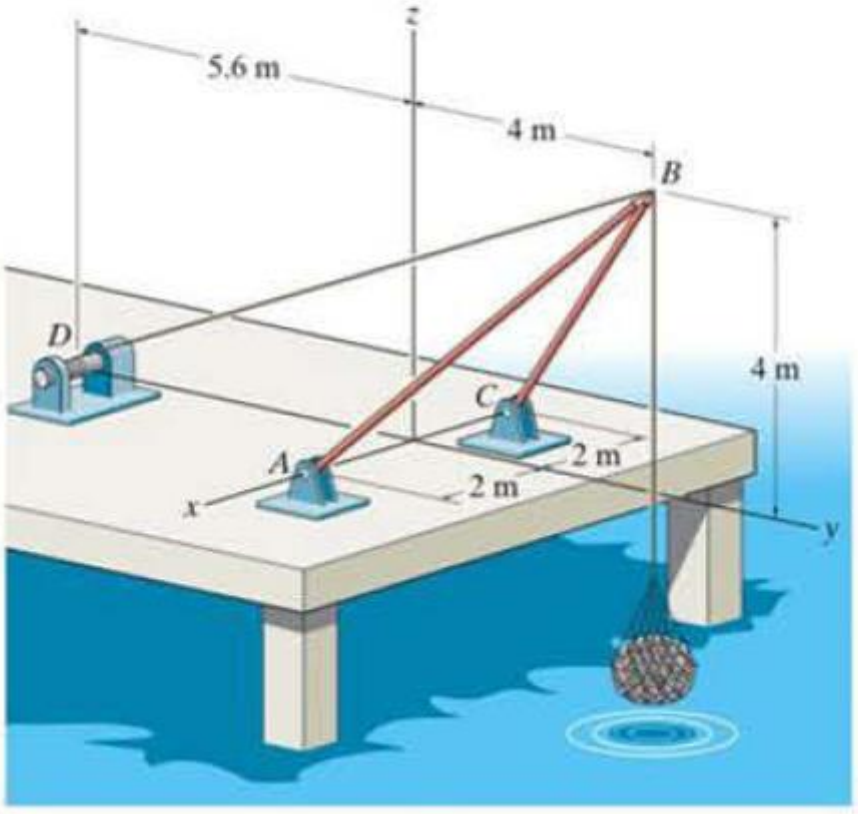
CHAPTER III EQUILIBRIUM OF A PARTICLE

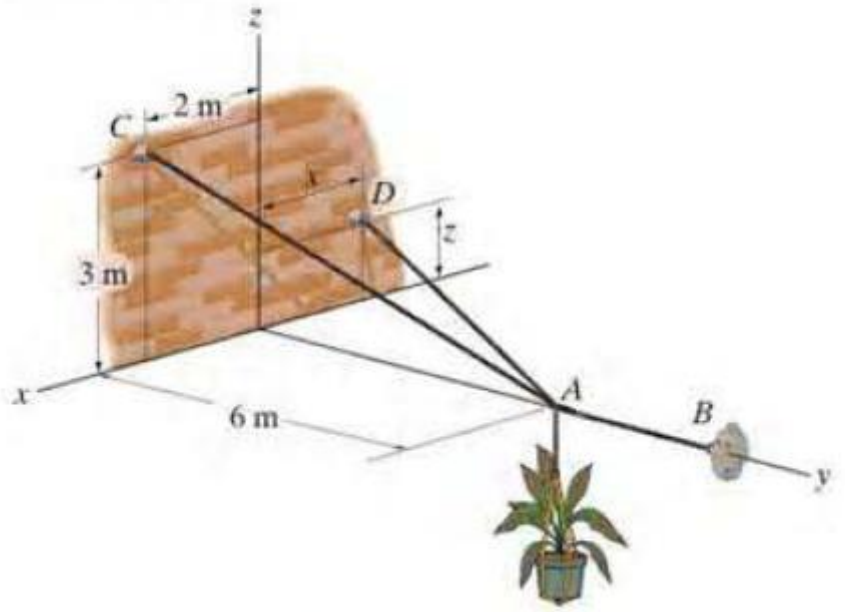
F3–9. Determine the tension developed in cables AB, AC, and AD.



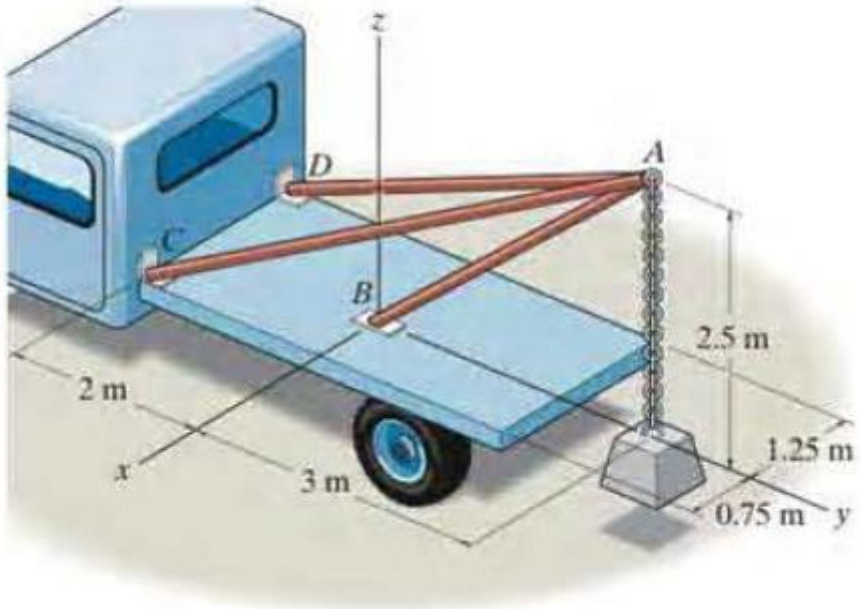
3–47. The shear leg derrick is used to haul the 200-kg net of fish onto the dock. Determine the compressive force along each of the legs AB and CB and the tension in the winch cable DB. Assume the force in each leg acts along its axis.



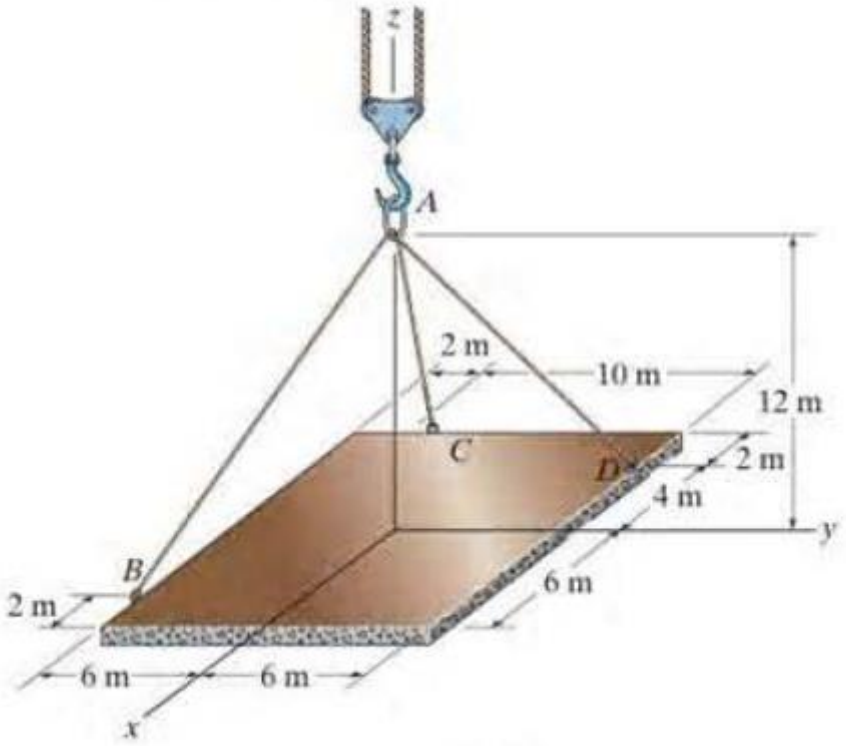
3–55. If the mass of the flowerpot is 50 kg, determine the tension developed in each wire for equilibrium. Set $x = 2$ m and $z = 1.5$ m.



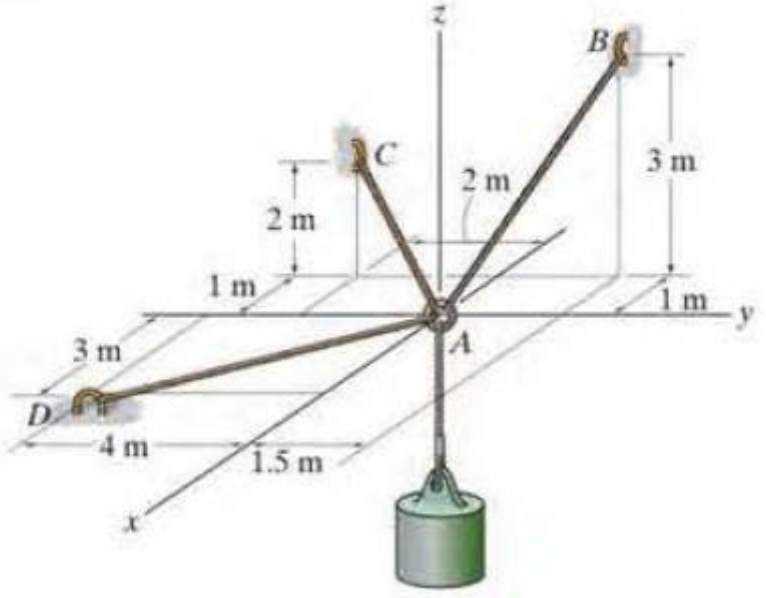
•3–53. Determine the force acting along the axis of each of the three struts needed to support the 500-kg block.



•3–57. The ends of the three cables are attached to a ring at A and to the edge of the uniform plate. Determine the largest mass the plate can have if each cable can support a maximum tension of 15 kN.



3–59. If each cable can withstand a maximum tension of 1000 N, determine the largest mass of the cylinder for equilibrium.



3–74. The lamp has a mass of 15 kg and is supported by a pole AO and cables AB and AC. If the force in the pole acts along its axis, determine the forces in AO, AB, and AC for equilibrium.