• 3D Force
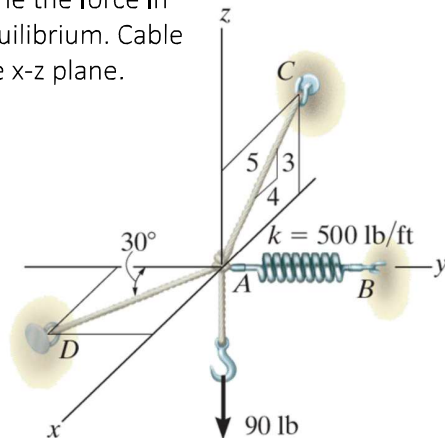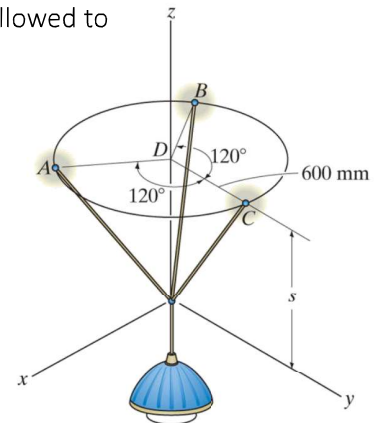
○ **Problem 1** If a 90 lb load is supported by two cables and a spring having a stiffness k = 500 lb/ft, determine the force in the cables and the stretch of the spring for equilibrium. Cable AD lies in the x-y plane and cable AC lies in the x-z plane.

• 3D Force

○ **Problem 2** The 10 kg lamp is suspended from the three equal-length cords. Determine the smallest vertical distance s from the ceiling if the force developed in any cord is not allowed to exceed 50 N.

• 3D Force

○ **Problem 3** Determine the tension developed in cables AB, AC, and AD.