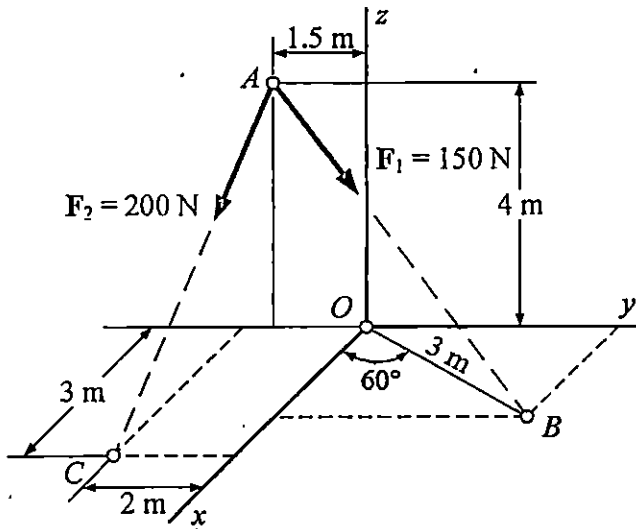
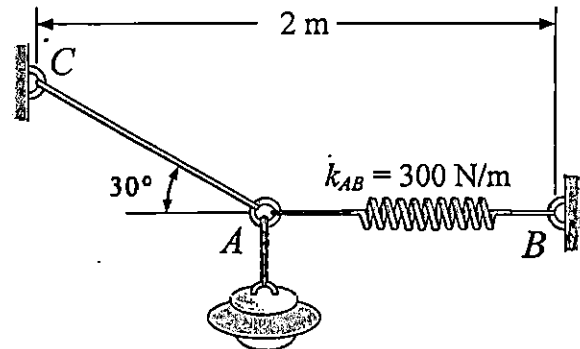




- 1] Determine the magnitude and coordinate direction angle of the resultant force acting at point A. [5 degrees]

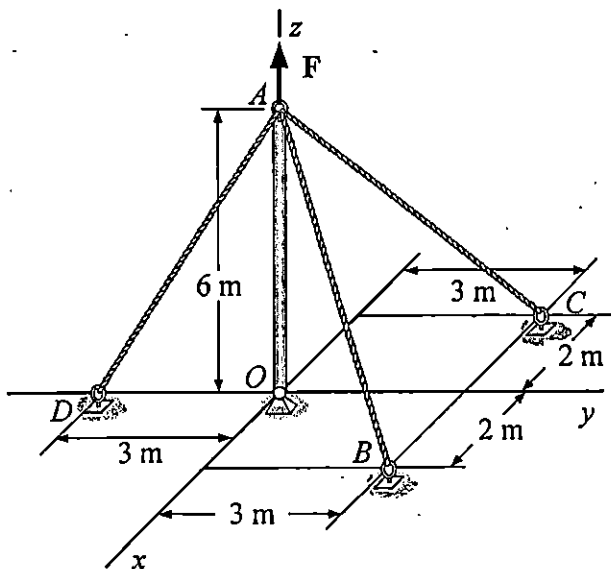


Prob. (1)

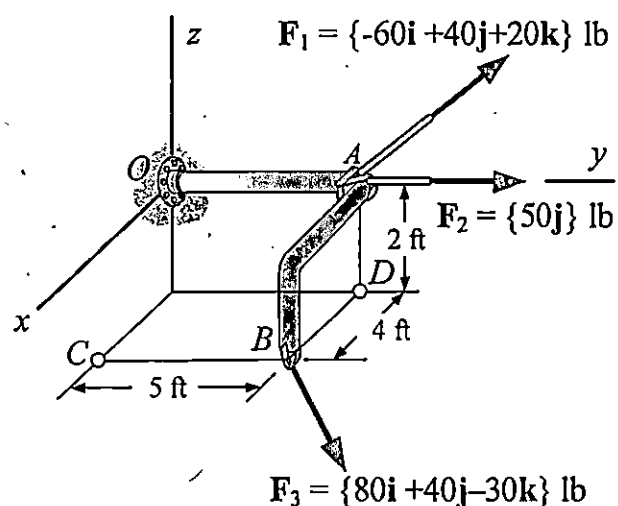


Prob. (2)

- 2] Determine the required length of cord AC in the figure so that the 8 kg lamp is suspended in the position shown. The undeformed length of the spring AB is  $l_0 = 0.4$  m, and the spring has a stiffness of  $k_{AB} = 300$  N/m. [5 degrees]
- 3] The mast OA exerts a vertical force of  $F = 1200$  N on the collar at A. Determine the tension in each of the cables for equilibrium. [5 degrees]



Prob. (3)



Prob. (4)

- 4] Three forces act on the rod shown. Determine the resultant moment they create about the flange at O and the coordinate direction angles of the moment axis. [5 degrees]