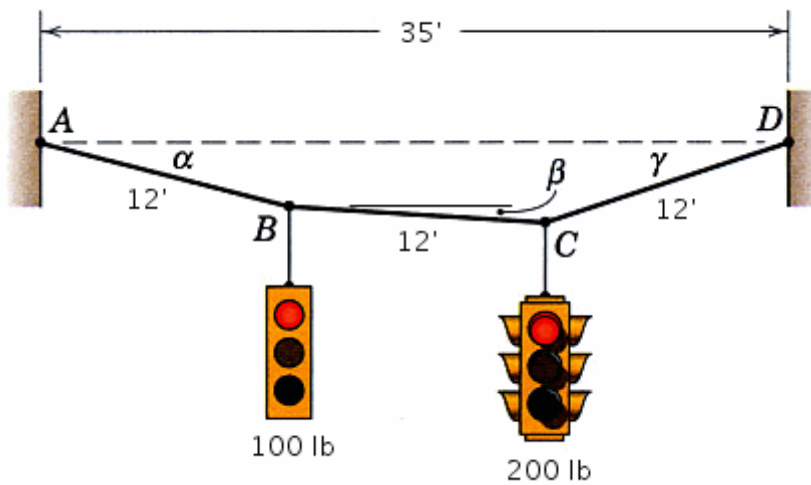# 1. Chapter 3, Problem 3/119

Two traffic signals are attached to the 36-ft support cable at equal intervals as shown. Determine the equilibrium configuration angles a, β, and γ, as well as the tension in each cable segment.
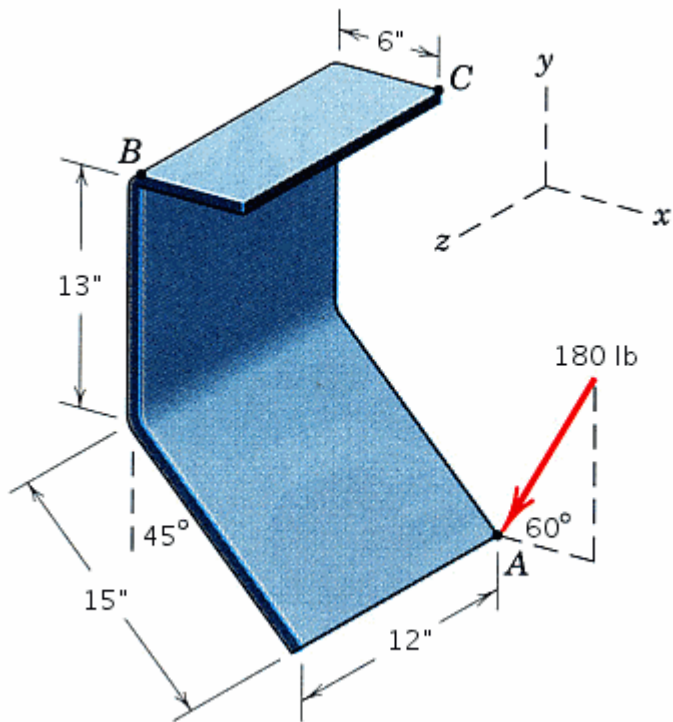
2. Chapter 2, Supplemental Problem 2/42

The unstretched length of the spring is b. Determine the force which the spring exerts on point B of the space frame if $b = 0.30$ m. The magnitude of the spring force is the spring constant k multiplied by the deflection (lengthening or shortening) of the spring.
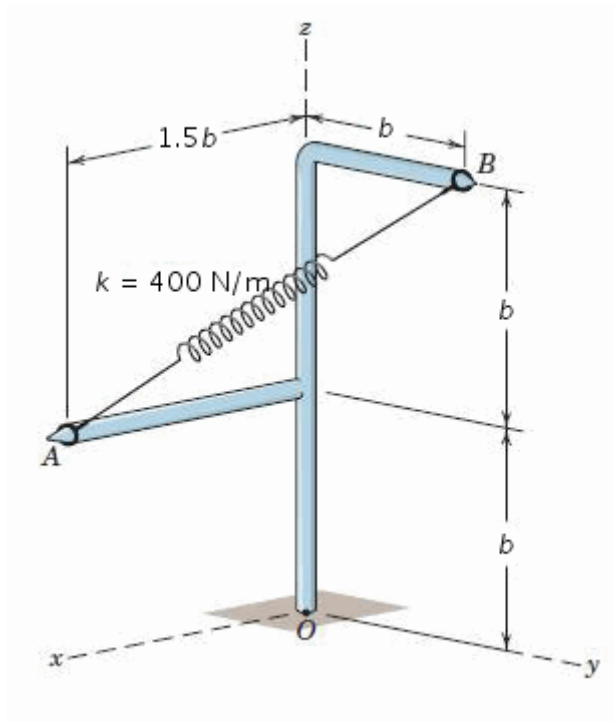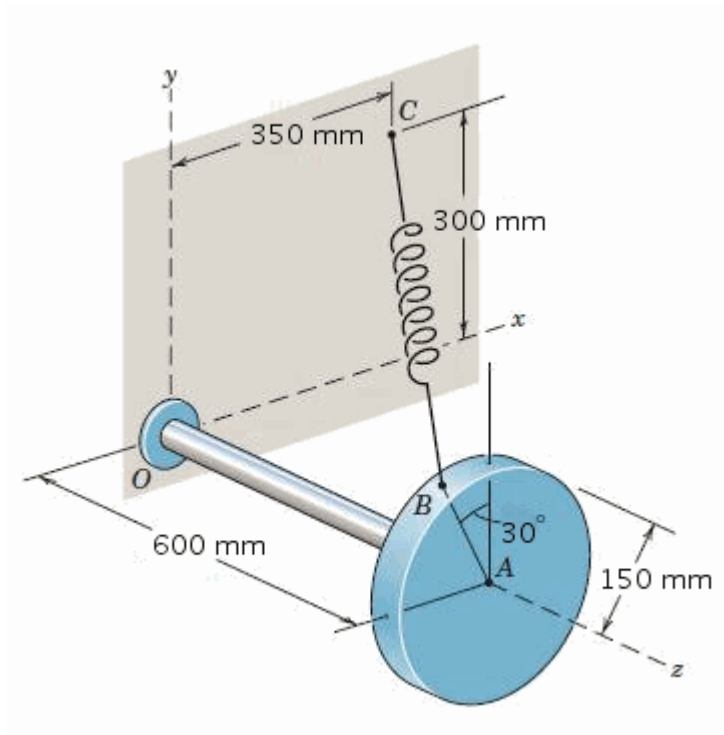
3. Chapter 2, Supplemental Problem 2/62

The 180-lb force is applied at point *A* of the bracket. Determine the moments of this force about point *B*, about point *C*, and about the line *BC*.

4. Chapter 2, Supplemental Problem 2/81

The spring which connects point *B* of the disk and point *C* on the vertical surface is under a tension of 500 N. Write this tension as it acts on point *B* as a force vector **T** in terms of the unit vectors **i**, **j**, and **k** and determine the moment M_z of this force about the shaft axis *OA*.

5. Chapter 2, Supplemental Problem 2/67

The concrete slab supports the six vertical loads shown. Determine the *x*- and *y*-coordinates of the point on the slab through with the resultant of the loading system passes.

Dimensions in meters