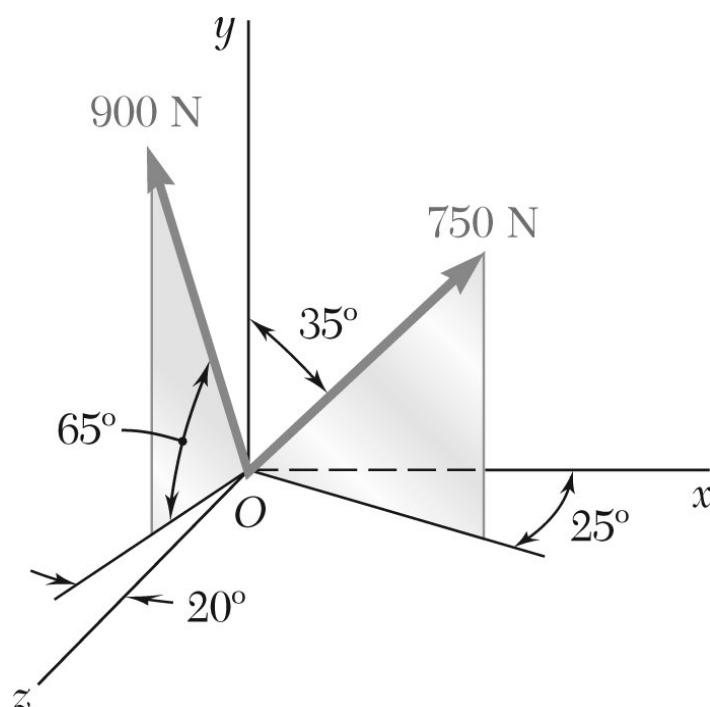# FIGURAS DE LOS EJERCICIOS DE FUERZAS EN EL ESPACIO

Ex. 2.71 Determine (*a*) the *x*, *y*, and *z* components of the 900-N force, (*b*) the angles θ_x, θ_y, and θ_z that the force forms with the coordinate axes.


Ex.273

A gun is aimed at a point *A* located 35° east of north. Knowing that the barrel of the gun forms an angle of 40°with the horizontal and that the maximum recoil force is 400 N, determine (*a*) the *x*, *y*, and *z* components of that force, (*b*) the values of the angles θ_x, θ_y, and θ_z defining the direction of the recoil force. (Assume that the *x*, *y*, and *z* axes are directed, respectively, east, up, and south.)
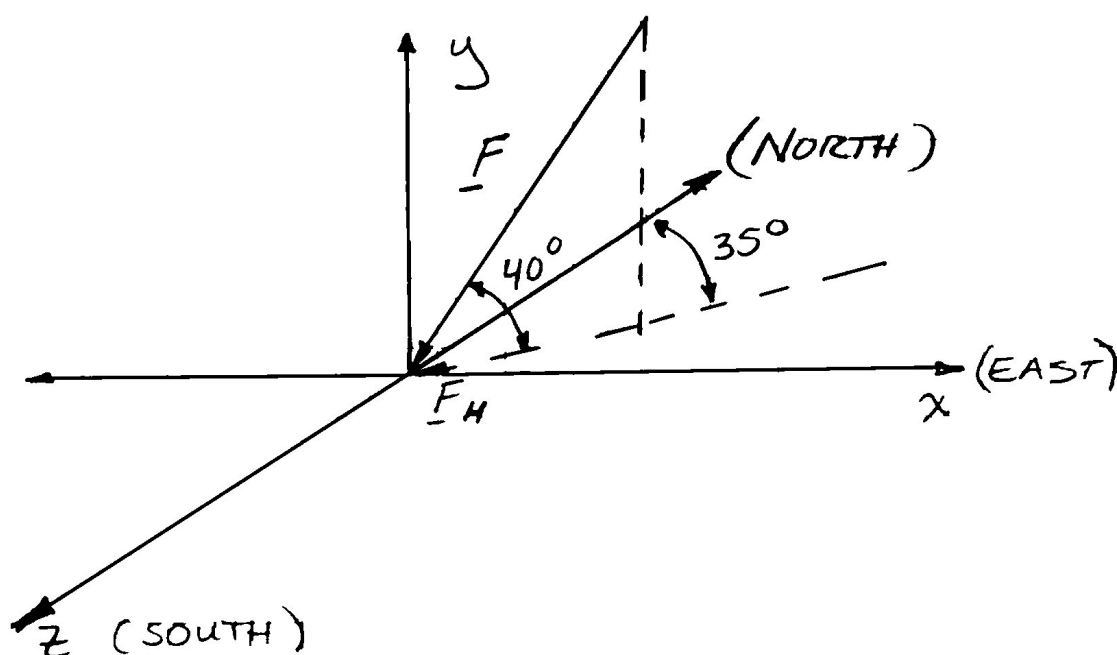
Ex. 2.75 Cable *AB* is 65 ft long, and the tension in that cable is 3900 lb.
Determine (*a*) the *x*, *y*, and *z* components of the force exerted by the cable on the anchor
B, (*b*) the angles , θ_x , θ_y and θ_z defining the direction of that force.
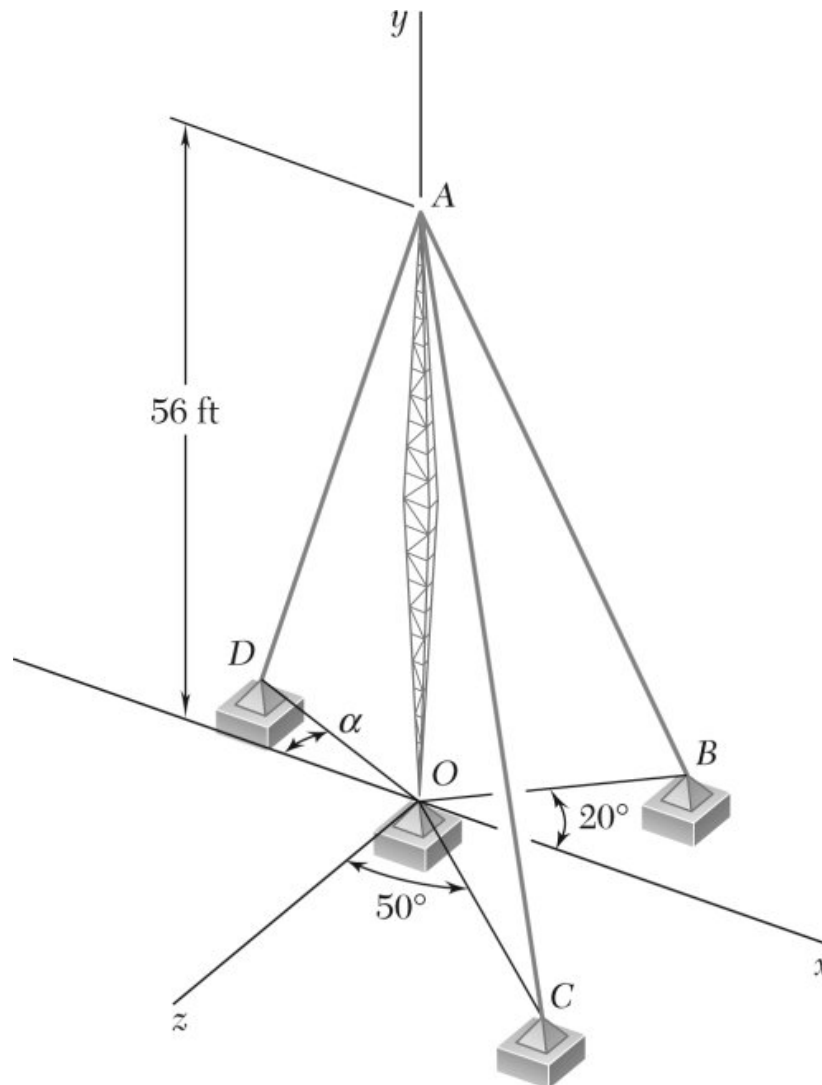
Ex. 2.76 Cable *AC* is 70 ft long, and the tension in that cable is 5250 lb. Determine (*a*)
the *x*, *y*, and *z* components of the force exerted by the cable on the anchor *C*, (*b*) the
angles θ_x, θ_y, and θ_z defining the direction of that force.

Ex. 2.79 Determine the magnitude and direction of the force:
$$\mathbf{F} = (690 \text{ lb})\mathbf{i} + (300 \text{ lb})\mathbf{j} - (580 \text{ lb})\mathbf{k}.$$

Ex. 2.81 A force acts at the origin of a coordinate system in a direction defined by the
angles $\theta_x = 75°$ and $\theta_z = 130°$. Knowing that the *y* component of the force is +300 lb,
determine (*a*) the angle θ_y, (*b*) the other components and the magnitude of the force.