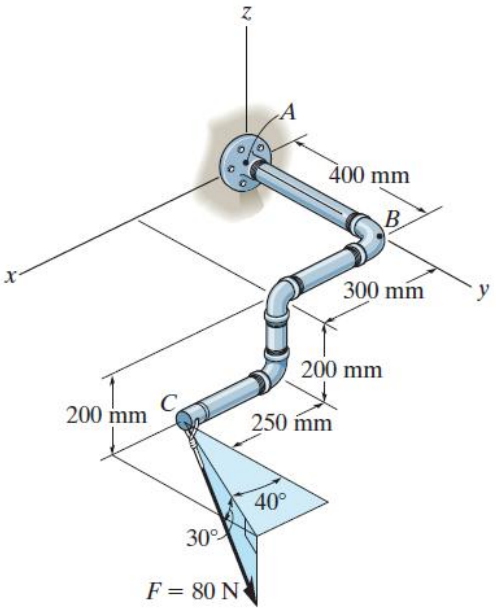
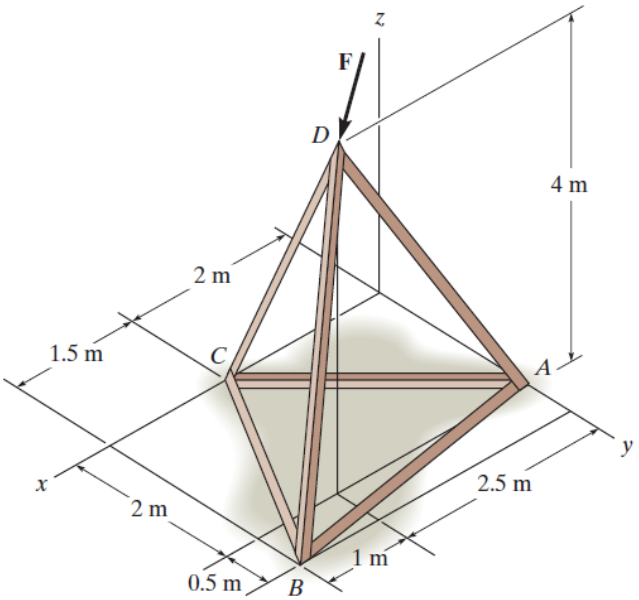
TOBB EKONOMİ VE TEKNOLOJİ ÜNİVERSİTESİ

1.

a. The pipe assembly is subjected to the 80 N force. Determine the moment of this force about point A.

b. The pipe assembly is subjected to the 80 N force. Determine the moment of this force about point B.



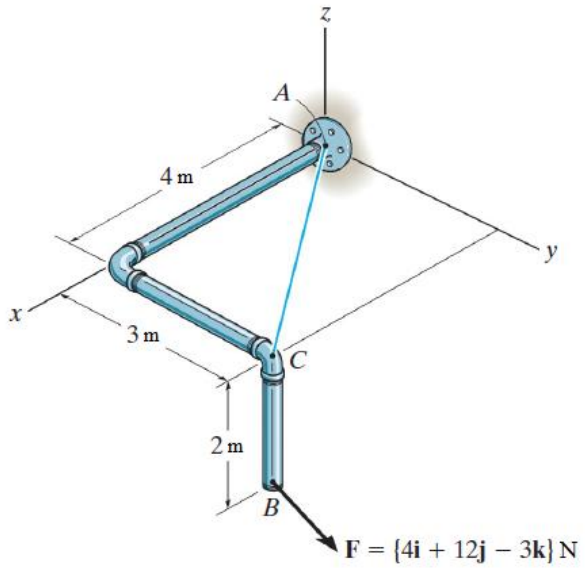


2. Determine the magnitude of the moment of the force **F** = {50**i** - 20**j** - 80**k**} N about the base line CA of the tripod.

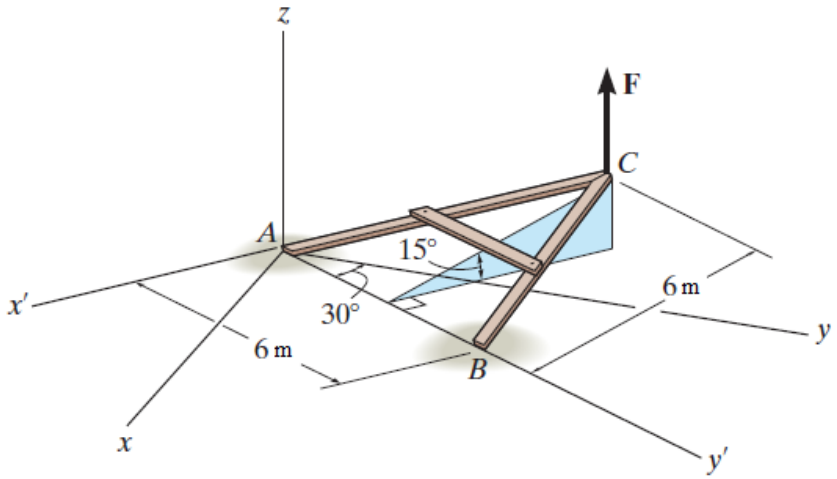
3.

a. Determine the magnitude of the moments of the force **F** about the *x*, *y*, and *z* axes. Solve the problem **a)** using a Cartesian vector approach and **b)** using a scalar approach.

b. Determine the moment of this force **F** about an axis extending between *A* and *C*. Express the result as a Cartesian vector.



4. The A-frame is being hoisted into an upright position by the vertical force of $F = 80$ N. Determine the moment of this force about the *y* axis when the frame is in the position shown.



5. Determine the magnitude of the moment of each of the three forces about the axis AB. Solve the problem **a)** using a Cartesian vector approach and **b)** using a scalar approach.