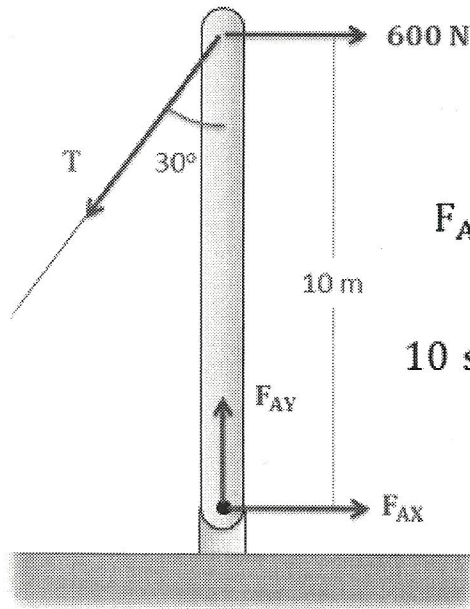


The equilibrium equations for the body shown below are listed on the right. Convert the system of equations into a single matrix equation and solve for the unknowns.



$$F_{AX} - \sin(30)T + 600 = 0$$

$$F_{AY} - \cos(30)T = 0$$

$$10 \sin(30)T - (600)(10) = 0$$

$$F_{AX} - \sin(30)T = -600$$

$$F_{AY} - \cos(30)T = 0$$

$$10 \sin(30)T = 6000$$

$$\begin{matrix} & A & & & \\ \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix} & \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix} & \begin{bmatrix} -\sin(30) \\ -\cos(30) \\ 10 \sin(30) \end{bmatrix} & \begin{bmatrix} F_{AX} \\ F_{AY} \\ T \end{bmatrix} & = & \begin{bmatrix} -600 \\ 0 \\ 6000 \end{bmatrix}
 \end{matrix}$$

$$\begin{bmatrix} F_{Ax} \\ F_{Ay} \\ T \end{bmatrix} = \begin{bmatrix} 0 \\ 1039,2 \\ 1200 \end{bmatrix} \text{ N}$$

$$F_{Ax} = 0$$

$$F_{Ay} = 1039,2 \text{ N}$$

$$T = 1200 \text{ N}$$