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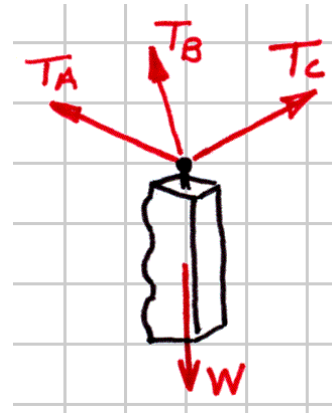
The components of the forces are

$$\mathbf{W} = -100(9.81)\mathbf{k} = -981\mathbf{k} \text{ N}$$

$$\begin{aligned}\mathbf{T}_A &= T_A \frac{4\mathbf{i} - 8\mathbf{j} + 5\mathbf{k}}{\sqrt{4^2 + 8^2 + 5^2}} \\ &= 0.39036T_A\mathbf{i} - 0.78072T_A\mathbf{j} + 0.48795T_A\mathbf{k}\end{aligned}$$

$$\begin{aligned}\mathbf{T}_B &= T_B \frac{-6\mathbf{i} - 8\mathbf{j} + 5\mathbf{k}}{\sqrt{6^2 + 8^2 + 5^2}} \\ &= -0.53666T_B\mathbf{i} - 0.71554T_B\mathbf{j} + 0.44721T_B\mathbf{k}\end{aligned}$$

$$\mathbf{T}_C = T_C \frac{8\mathbf{j} + 5\mathbf{k}}{\sqrt{8^2 + 5^2}} = 0.84800T_C\mathbf{j} + 0.53000T_C\mathbf{k}$$



Then the x -, y -, and z -components of the force equilibrium equation give

$$x: \quad 0.39036T_A - 0.53666T_B = 0$$

$$y: \quad -0.78072T_A - 0.71554T_B + 0.84800T_C = 0$$

$$z: \quad 0.48795T_A + 0.44721T_B + 0.53000T_C - 981 = 0$$

$$T_A = 603.139 \text{ N} \cong 603 \text{ N} \quad \text{..... Ans.}$$

$$T_B = 438.716 \text{ N} \cong 439 \text{ N} \quad \text{..... Ans.}$$

$$T_C = 925.473 \text{ N} \cong 925 \text{ N} \quad \text{..... Ans.}$$