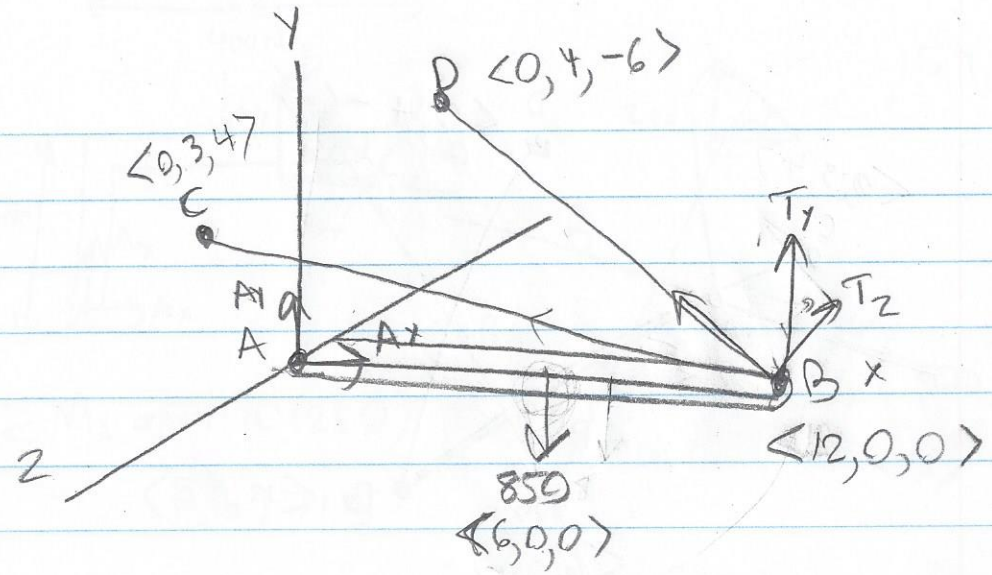

$$\vec{T}_{BC} = T_{BC}\langle 0,3,4\rangle - \langle 12,0,0\rangle$$

$$= T_{BC}\frac{\langle -12,3,4\rangle}{13}$$

$$\vec{T}_{BD} = T_{BD}\langle 0,4,-6\rangle - \langle 12,0,0\rangle$$

$$= T_{BD}\frac{\langle -12,4,-6\rangle}{14}$$

$$\Sigma F_z = \frac{4}{13}T_{BC} - \frac{3}{7}T_{BD} = 0 \qquad \frac{4}{13}T_{BC} = \frac{3}{7}T_{BD}$$

$$T_{BD} = \frac{28}{39}T_{BC}$$

$$\Sigma F_y = \frac{3}{13}T_{BC} + \frac{2}{7}\left(\frac{28}{39}T_{BC}\right) + A_y - 850 = 0$$

$$\Sigma F_x = \frac{-12}{13}T_{BC} - \frac{6}{7}\left(\frac{28}{39}T_{BC}\right) + A_x = 0$$

$$\Sigma M_A = 0 \qquad -850(6) + \underbrace{\frac{3}{13}T_{BC}(12) + \frac{4}{14}\left(\frac{28}{39}T_{BC}\right)(12)}_{T_y \text{ of cables}} + \underbrace{\frac{4}{13}T_{BC}(12) - \frac{6}{14}(}_{T_z \text{ of cables}}$$