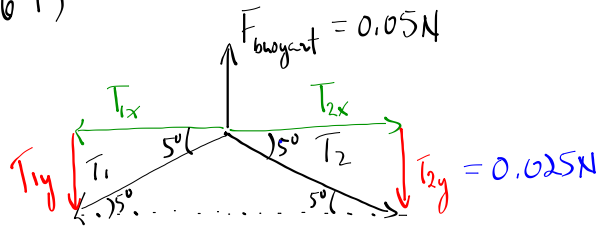


FOP (86-1)

3.



Horizontally

$$T_{1x} = T_{2x}$$

$$T_1 \cos 5^\circ = T_2 \cos 5^\circ$$

$$T_1 = T_2$$

Vertically

$$T_{1y} + T_{2y} = F_{\text{buoyant}}$$

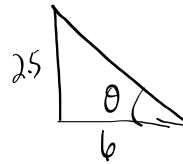
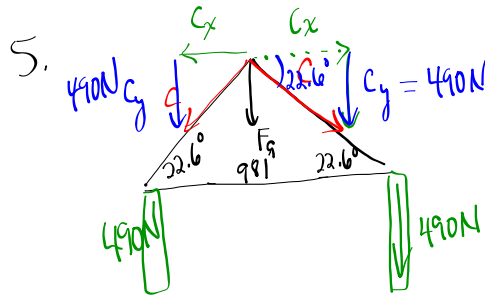
$$T_1 \sin 5^\circ + T_2 \sin 5^\circ = 0.05 \text{ N}$$

$$T_2 \sin 5^\circ + T_2 \sin 5^\circ = 0.05 \text{ N}$$

$$2T_2 \sin 5^\circ = 0.05 \text{ N}$$

$$T_2 = \frac{0.05 \text{ N}}{(2 \sin 5^\circ)} = T_1$$

$$T_2 = 0.29 \text{ N}$$

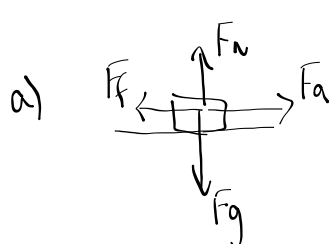


$$\tan \theta = \frac{2.5}{6}$$

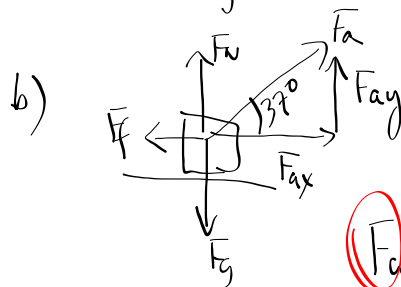
$$\theta = 22.6^\circ$$

FOP (86-2)

1.



$$F_a = F_f$$



$$F_{ax} = F_f$$

$$F_a \cos 37^\circ = \mu F_n$$

$$F_a \cos 37^\circ = \mu (F_g - F_{ay})$$

$$F_a \cos 37^\circ = \mu m g - \mu (F_a \sin 37^\circ)$$