



Nombre de alumno: Alejandra Gómez Santiz

Nombre del profesor: Arq.: ABEL ESTRADA DICHI

Nombre del trabajo: TENSION DE CUERDAS

Materia: ESTATICA PARA LA ARQUITECTURA

Grado: 3°

Grupo: Arquitectura

$$1 \text{ TON M} \text{ ——— } 1000 \text{ KG}$$

$$2 \text{ TON M} \text{ ——— } X$$

$$2,000 \text{ KG}$$

$$F = M \cdot G$$

$$F = (2,00 \text{ KG}) (9.81 \text{ M/S})$$

$$F = 19,620 \text{ N}$$

$$\cos \alpha = \frac{C.A}{H}$$

$$C.A = H \cos \alpha$$

$$T_{X1} = T_1 \cos \alpha$$

$$\sum F_Y = 0$$

$$T_{X1} = T_{X2} = 0$$

$$T_{X1} = T_{X2}$$

$$T_1 \cos 35^\circ = T_2 \cos 53^\circ$$

$$T_1 0.819 = T_2 0.601$$

$$T_1 = T_2 \frac{0.601}{0.819}$$

$$T_1 = T_2 0.733$$

$$T_1 = (36,266.17 \text{ N}) (0.733)$$

$$T_1 = 26,583.10$$

$$\sin \alpha = \frac{C.O}{H}$$

$$C.O = H \sin \alpha$$

$$T_{Y1} = T_1 \sin \alpha$$

$$T_{Y1} + T_{Y2} - 19,620 \text{ N} = 0$$

$$T_{Y1} + T_{Y2} = 19,620 \text{ N}$$

$$T_1 \sin 35^\circ + T_2 \sin 53^\circ = 19,620 \text{ N}$$

$$T_1 0.573 + T_2 0.121 = 19,620 \text{ N}$$

$$(T_2 0.733) 0.573 + T_2 0.121 = 19,620 \text{ N}$$

$$T_2 0.420 + T_2 0.121 = 19,620 \text{ N}$$

$$T_2 0.541 = 19,620 \text{ N}$$

$$T_2 = \frac{19,620 \text{ N}}{0.541}$$

$$T_2 = 36,266.17 \text{ N}$$