

Nombre:
Luis Angel Garcia Merida

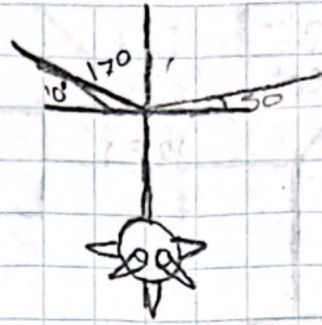
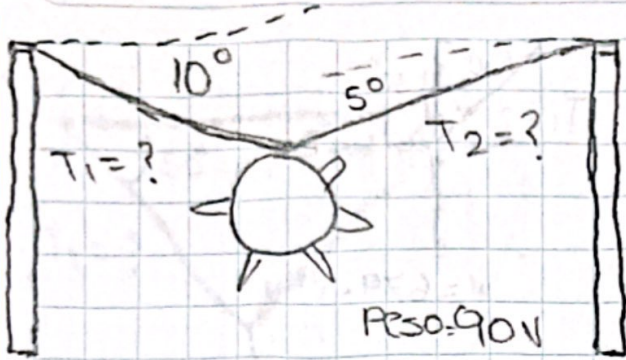
Materia:
fisica

Docente:
Ojeda

Cuatrimestre:
4

Fecha:
30/10/2024

1



$$T_{1x} = T_1 \cos 170^\circ$$

$$T_{1x} = -0.98$$

$$T_{1y} = T_1 \sin 170^\circ$$

$$T_{1y} = 0.17$$

$$\sum T_x = 0$$

$$T_{1x} + T_{2x} = 0$$

$$-0.98T_1 + 0.99T_2 = 0$$

$$\sum T_y = 0$$

$$T_{1y} + T_{2y} = W$$

$$(0.17T_1 + 0.08T_2 = 90 \text{ N}) \quad (0.98)$$

$$(-0.98T_1 + 0.99T_2 = 90) \quad (0.17)$$

$$T_{2x} = T_2 \cos 5^\circ$$

$$T_{2x} = 0.99$$

$$T_{2y} = T_2 \sin 5^\circ$$

$$T_{2y} = 0.08$$

$$0.16T_1 + 0.67T_2 = 88.2 \text{ N}$$

$$-0.16T_1 + 0.16T_2 = 0$$

$$0.23T_2 = 88.2 \text{ N}$$

$$T_2 = \frac{88.2 \text{ N}}{0.23} \quad T_2 = 383.47$$

$$-0.98T_1 + 0.99(383.47) = 0$$

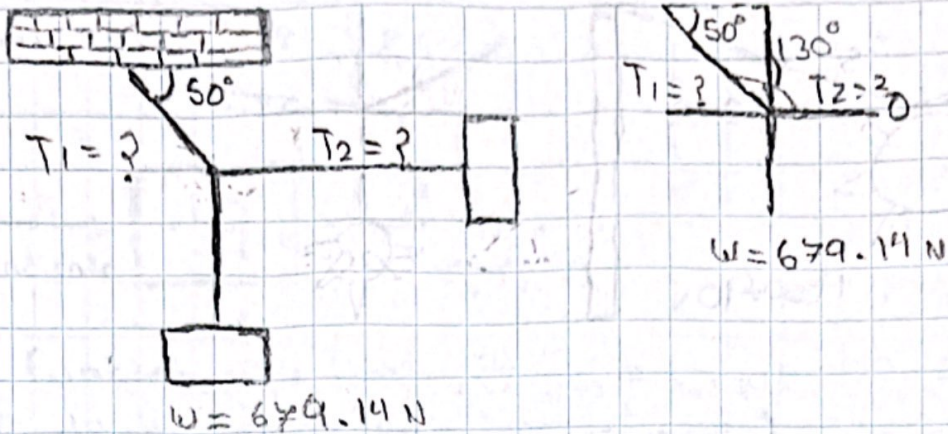
$$-0.98T_1 + 379.63 = 0$$

$$-0.98T_1 = -379.63$$

$$T_1 = \frac{-379.63}{-0.98} = 387.3$$

$$T_1 = 387.3 \text{ N}$$

(2)



$$T_{1x} = T_1 \cos 130^\circ$$

$$T_{1x} = -0.64$$

$$T_{1y} = T_1 \sin 130^\circ$$

$$T_{1y} = 0.76$$

$$\sum T_x = 0$$

$$T_{1x} + T_{2x} = 0$$

$$-0.64T_1 + 0T_2 = 0$$

$$\sum T_y = 0$$

$$T_{1y} + T_{2y} = W$$

$$0.76T_1 = 679.14 \text{ N}$$

$$T_{2x} = T_2 \cos 0^\circ$$

$$T_{2x} = 1$$

$$T_1 = \frac{679.14}{0.76} = 893.60$$

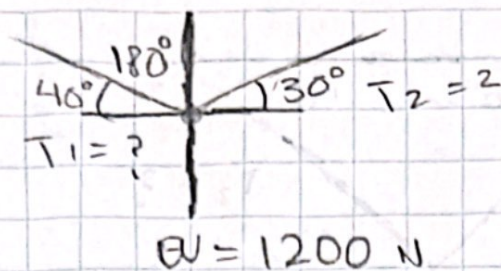
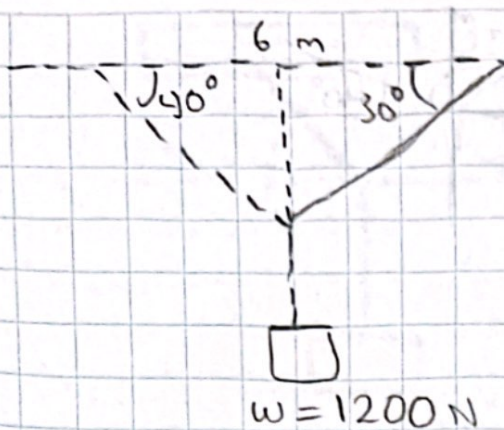
$$T_1 = 893.60$$

$$-0.64T_1 + T_2 = 0$$

$$-0.64(893.60) + T_2 = 0$$

$$-571.9 + T_2 = 0$$

$$T_2 = 571.9 \text{ N}$$



$$T_{1x} = T_1 \cos 140^\circ$$

$$T_{1x} = -0.76 T_1 \quad T_{1x} + T_{2x} = 0$$

$$T_{1y} = T_1 \sin 140^\circ \quad -0.46 T_1 + 0.86 T_2 = 0$$

$$T_{1y} = 0.64 T_1$$

$$\sum T_y = 0$$

$$T_{2x} = T_2 \cos 30^\circ \quad T_{1y} + T_{2y} = w$$

$$T_{2x} = 0.86 T_2 \quad 0.64 T_1 + 0.5 T_2 = 1200 \text{ N}$$

$$T_{2y} = T_2 \sin 30^\circ$$

$$T_{2y} = 0.5 T_2 \quad (-0.76 T_1 + 0.86 T_2 = 0) (0.64)$$

$$(0.64 T_1 + 0.5 T_2 = 1200) (-0.46)$$

$$-0.48 T_1 + 0.55 T_2 = 0$$

$$-0.48 T_1 + 0.38 T_2 = -912$$

$$0.17 = -912$$

$$T_2 = \frac{-912}{0.17} = T_2 = -5364.7$$

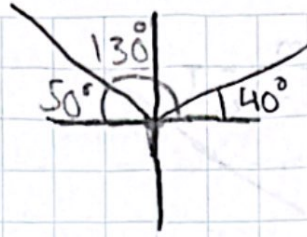
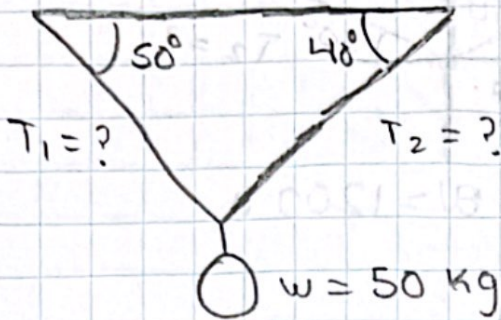
$$0.64 T_1 + 0.5 (-5364.7) = 1200$$

$$0.64 T_1 - 2682.35 = 1200 \text{ N}$$

$$0.64 T_1 = 1200 + 2682.35$$

$$T_1 = \frac{3882.35}{0.64} = T_1 = 6066.17$$

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$$\sum T_x = 0$$

$$T_{1x} + T_{2x} = 0$$

$$-0.64T_1 + 0.76T_2 = 0$$

$$T_{1x} = T_1 \cos 130^\circ$$

$$T_{1x} = -0.64$$

$$T_{1y} = T_1 \sin 130^\circ$$

$$T_{1y} = 0.76$$

$$\sum T_y = 0$$

$$T_{1y} + T_{2y} = w$$

$$0.76T_1 + 0.64T_2 = 50 \text{ kg}$$

$$T_{2x} = T_2 \cos 40^\circ$$

$$T_{2x} = 0.76$$

$$T_{2y} = T_2 \sin 40^\circ$$

$$T_{2y} = 0.64$$

$$(-0.64T_1 + 0.76T_2 = 0) (0.76)$$

$$(0.76T_1 + 0.64T_2 = 50 \text{ kg}) (-0.64)$$

$$-0.48T_1 + 0.57T_2 = 0$$

$$-0.48T_1 + 0.40T_2 = -32$$

$$0.17 = -32$$

$$T_2 = \frac{-32}{0.17} = T_2 = -188.23$$

$$0.76T_1 + 0.64(-188.23) = 50 \text{ kg}$$

$$0.76T_1 + -120.46 = 50 \text{ kg}$$

$$0.76T_1 = 50 \text{ kg} + 120.46$$

$$T_1 = 224.28$$

$$T_1 = \frac{170.46}{0.76}$$