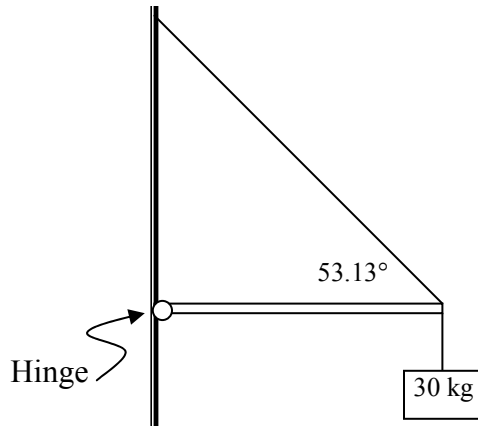


W4.02**STATIC EQUILIBRIUM – Bars & Cables**

$$\Sigma F = 0 \quad \& \quad \Sigma \tau = 0$$

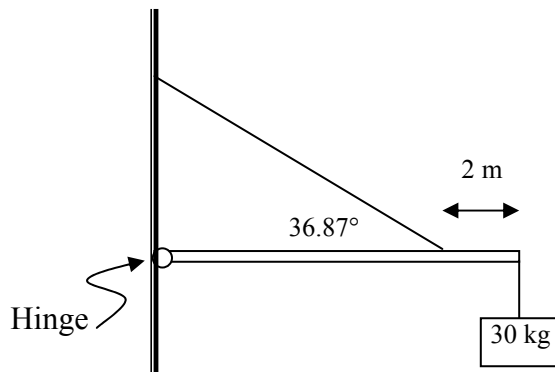
[1] Find the tension in the cable and both the horizontal and vertical components that the hinge supplies to the bar (remember direction).

Note: The bar is 20 kg & 10 meters long



[2] Find the tension in the cable and both the horizontal and vertical components that the hinge supplies to the bar (remember direction).

Note: The bar is 20 kg & 10 meters long

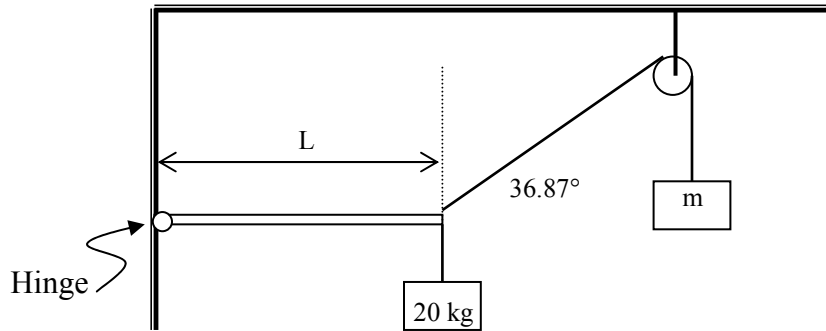


STATIC EQUILIBRIUM – Bars & Cables

$$\Sigma F = 0 \quad \& \quad \Sigma \tau = 0$$

[3] Find the mass of the box labeled “m” and both the horizontal and vertical components that the hinge supplies to the bar (remember direction).

Note: The bar is 50 kg



[4] Find the minimum coefficient of friction (μ) required between the end of the bar and the wall in order to maintain static equilibrium.

Note: The bar is 600 N & 8 meters long.

Hint: normal force is like horizontal component of a hinge
friction needed is like vertical component of a hinge

