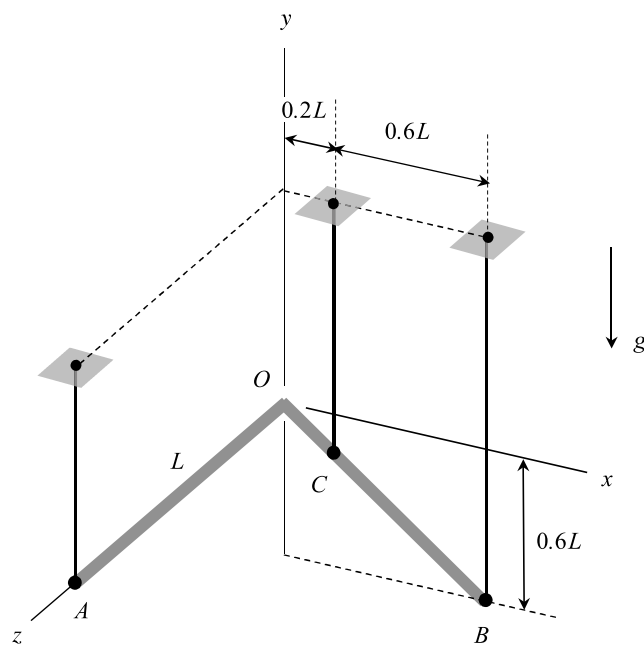


Homework H11.A

Given: A L-shaped bar is made up of straight segments AO and OB joined together at O. Each segment was a weight of W , with the center of mass of each segment at its midpoint. The bar is supported by vertical cables at locations A, C and B, with segment AO aligned with the z -axis and segment OB in the xy -plane.

Find: Determine the tension in each cable in order for the bar to be in equilibrium. Express your answers in terms of W .



Homework H11.B

Given: The door is loaded at D with a force F and is supported by a cable CE and hinges at A and B. The cable carries a tension of T_{CE} . The hinge at B *carries* a load in the x-direction and the hinge at A *does NOT* carry a load in the x-direction. The weight of the plate is negligible compared to the applied load at D.

Find:

- Determine the load F .
- Determine the reactions at hinges A and B.

Use the following parameters in your analysis: $T_{CE} = 250$ N, $h = 0.80$ m and $d = 1$ m.

