PHYS 191 Fall 2003

Quiz 10

A massless strut of length *L* supports a 50 kg mass with the help of a horizontal cable which is attached at the strut's midpoint as shown below.

1) Draw a diagram showing (and naming) every force acting on the strut. Label the origin you are using for torques.

2) Write down the three equations of static equilibrium: $\Sigma F_x = 0$, $\Sigma F_y = 0$, $\Sigma \tau = 0$

3) Calculate the tension *T* in the cable.