Physics 122: Problem Assignment #2 Name _____

Due: Friday, May 17, 2013 /30

a) Derive a formula for tension, T, as a function of beam length, r, given the beam is 350 kg (no matter its length), the mass at the end is 500 kg, and the wire attaches at a point, h, 11 m above the left end of the beam.

b) Calculate the maximum length of the beam and the angle the wire makes with the beam if the wire breaks under a tension of 19300 N.