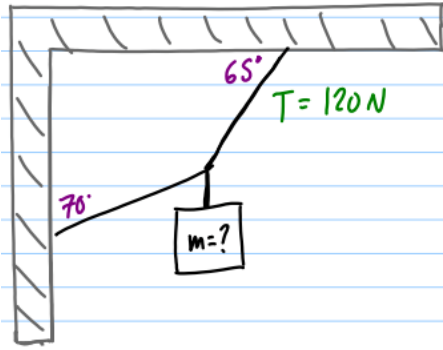
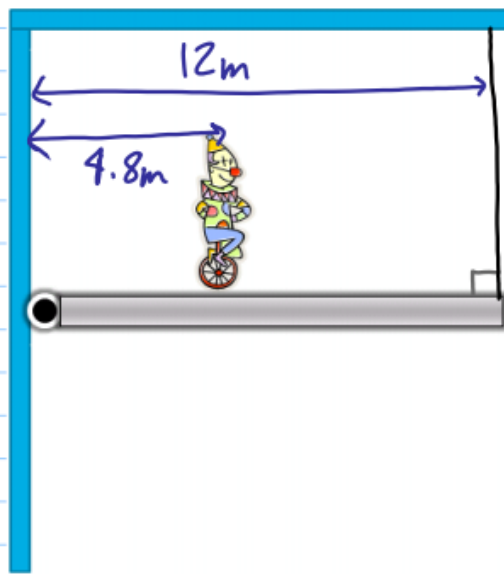


1. If the tension in the right hand rope is 120 N, determine the mass of the hanging object. (2 mark)



Mass: _____

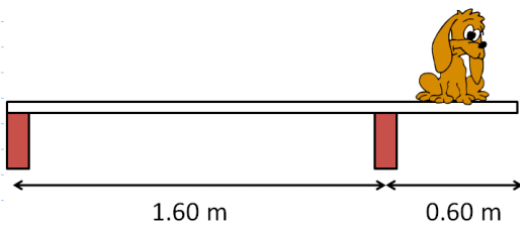
2. A 65kg clown rides along a 25kg beam. What is the tension in the rope at the end of the beam and the supporting force provided by the hinge? (4 mark)



Tension: _____

Force by Hinge: _____

3. A uniform 2.20m long 4.0 kg board rests on two bricks as shown below
 a) How far could a 6.0 kg dog walk past the right hand brick before the board starts to tip upwards? (2 mark)



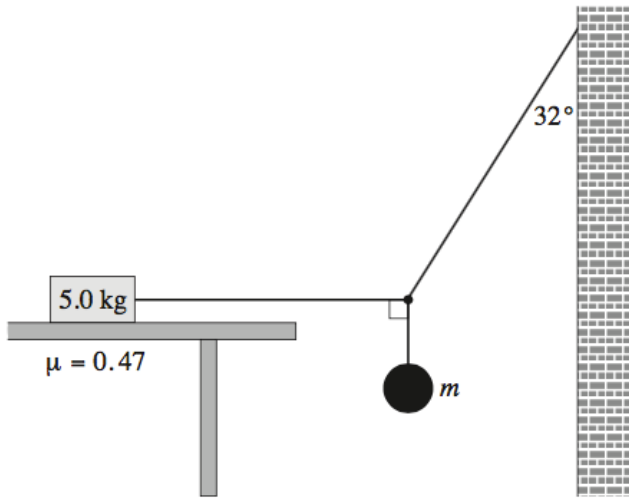
distance past the right brick: _____

b) At that exact moment what are the magnitudes of the supporting forces provided by the bricks? (2 mark)

Right brick: _____

Left brick: _____

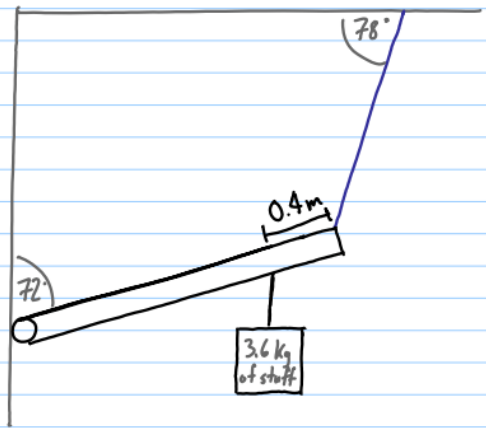
4. An object of mass, m , is suspended by two cords connected to a wall and to a 5.0 kg block resting on a table.



A coefficient of friction of 0.47 exists between the 5.0 kg block and the table. What is the maximum mass, m , that can be hung from the cords before the 5.0 kg block begins to move? (2 mark)

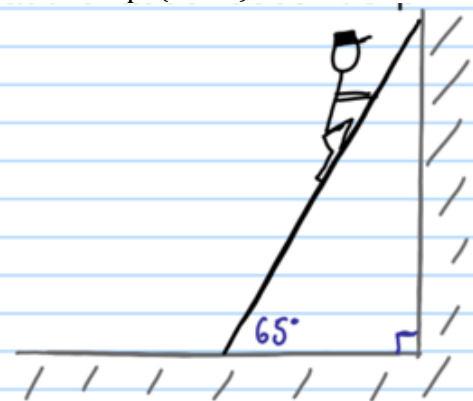
mass: _____

5. A 3.6 kg mass is hung from a uniform 1.6 m long 2.0 kg beam as shown. Find the tension in the cable. (2 mark)



Tension: _____

6. A 3.0 m long, 12 kg ladder leans against a frictionless wall as shown. A 55 kg painter climbs 2.2 m up the ladder. What is the minimum coefficient of friction between the ladder and the ground such that the ladder doesn't slip? (2 mark)



μ : _____