Name: Tension Force and Friction Assignment

1. a. Find the acceleration of the following system given that the µ=0.12. (4 marks)

17kg

42kg

b. Find the tension in the rope.(2 marks)

1. Using the system in question 1, what must be the coefficient of friction between the surface and 17kg mass be so that the system does not move? (4 marks)
2. a. Find the acceleration of the following system. (3 marks)

5.0kg

9.0kg

b. Find the tension in the rope.(2 marks)

4. An object sits at the edge of a table top with a mass of 123 kg. It is connected by a fine strong thread to a mass via a pulley which is hanging in the air below the edge of the table top. The friction coefficient between the 123 kg mass and the table is 0.300 and the tension in the thread is 790. N, find the acceleration of the system and the mass of the other block!! (2 marks)