2. To the ends of a massless thread that goes around a pulley one fixes two masses m_1 and m_2. There is friction between the thread and the pulley such that the thread starts sliding over the pulley when the ratio between the masses is $m_2/m_1 = \eta_0$.
(i) Find the friction coefficient μ.
(ii) Find the acceleration of the masses if $m_2/m_1 = \eta > \eta_0$.