



Introduction to Mechanics

Quiz 7

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Quiz Question

Two blocks are connected by a string, as shown. The inclined surface makes an angle of 42° with the horizontal, and the block on the incline has a mass of 6.7 kg. (The pulley is assumed to be ideal.)

- (a) Suppose the surface is frictionless. Find the mass m of the hanging block that will cause the system to be in equilibrium.
- (b) Now suppose the incline is rough, so that the coefficient of static friction between the block and the slope is $\mu_s = 0.5$. What is the minimum value of m that will keep the system in static equilibrium?

