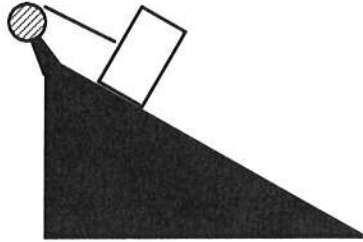


1. A block with mass $m = 7.00 \text{ kg}$ is attached by a physics string to a pulley of mass of 10.0 kg , radius $R=0.250 \text{ m}$, and moment of inertia 0.400 kgm^2 . The block is released and slides down a frictionless incline plane with a 60° angle of inclination with respect to the ground.



a) Draw free-body diagram for the block and the pulley.

b) What is the acceleration of the block?

c) What is the tension in the string?

d) What is the angular speed of the pulley after the block had been sliding for 5 seconds?