

Paper Homework No. 05 (Spring 2018)

PHYS 205A: University Physics

Due date: Wednesday, 2018 Feb 28, 12.00pm, in class

(Name)

(Signature)

Instructions

1. Your submission should include only this page. Other forms of submissions will not be accepted. Please print this page, and write your solution on the back side.
2. Show your thought process in detail and organize it clearly.
3. Make sure your answer has the correct units and the right number of significant digits.

Question

A block of mass m is projected up on an incline, with coefficient of static friction $\mu_s = 0.80$ and coefficient of kinetic friction $\mu_k = 0.50$, with initial speed v_0 . The angle the incline makes with the horizontal is $\theta = 30.0^\circ$. Will the block slide back down? (Describe your thought process. That is, identify the forces, draw a force diagram, deduce the relevant equations from Newton's law, and analyse the equations.)